

**Documentation of statistics for  
Structure of Earnings 2018**

## 1 Introduction

The purpose of the structure of earnings statistics is to provide detailed information about employees' earnings analysed by level of education, occupation, region, industry and age for the entire labour market. The structural statistics on earnings form part of Statistics Denmark's coherent statistical system for earnings and labour costs. The system covers the public sector as well as corporations and organizations.

The structure of earnings statistics constitute an aggregation of earnings statistics for the private sector, earnings statistics for the general government and earnings statistics for the local governments. The statistics were published in their present form for the first time in 2010. Figures are accessible via Statistics Denmark's database StatBank Denmark from 2009. In 2013 the sectoral division used in National Accounts was implemented, and therefore the sectors are termed "central government", "local government" and "corporations and organizations" from 2013 and onwards.

## 2 Statistical presentation

The statistics include all employees in the entire labour market. The statistics cover all business enterprises in the public sector. For the corporations and organizations sector, all business enterprises, with the exception of agriculture and fisheries, employing 10 or more full-time employees are included in the statistics. The statistics only cover employees with permanent employment comprising a lower limit for the scope of work. The delimitation is conducted in accordance with the rules contained in the Act on contracts of employment. This implies that the employee must have been employed for more than one month. The statistics only comprise people employed in accordance with the so-called "normal terms". Consequently, the following groups are excluded from the statistics:

### 2.1 Data description

The statistics include all employees in the entire labour market. The statistics cover all business enterprises in the public sector. For the corporations and organizations sector, all business enterprises, with the exception of agriculture and fisheries, employing 10 or more full-time employees are included in the statistics. The structure of earnings statistics only comprise people employed in accordance with the so-called "normal terms". Consequently, the following groups are excluded from the statistics:

#### Statistical Unit

The statistical unit is the individual job, which is defined as a person employed with a specific employer and engaged in a specific occupation. A new job is established where there are any changes in an employee's employer, workplace, occupation or other personal characteristics

Consequently, an employee can be included with several observations in the statistics.

#### Concepts

There are two main concepts. Earnings per hour worked and standardized hourly earnings.

Earnings per hour worked: Earnings per hour worked is earnings related to the number of hours worked. Earnings per hour worked indicate the employer's wage cost per hour in employing a given employee.

Earnings comprise each employee's total earnings in connection with his/her job, including the employee's as well as the employer's share of any contributions to pension schemes and income in

the form of fringe benefits subject to taxation.

The number of hours worked is the number of hours actually performed by an employee, including overtime hours worked, but exclusive of hours off in connection with public holidays and hours of absence due to sickness, maternity, etc.

**Standardized hourly earnings:** Standardized hourly earnings are standardized earnings related to the standardized paid hours worked. The standardized hourly earnings are the concept of earnings that is the closest concept with regard to the wages and salaries that have been "agreed" between employee and employer. The concept indicates the amount that an employee has received per hour worked, irrespective of the number of days in which the employee has been absent due to sickness or has worked hours in addition to the working time agreed.

Consequently, the standardized earnings are earnings less payments for overtime hours and absence.

The standardized paid hours are not a homogeneous hourly concept. In order to obtain the standardized hourly earnings, the standardized earnings must be related to the number of hours worked. Some elements of the standardized earning are achieved exclusively during those hours in which the employee is at his/her job, other components of earnings are also achieved during the employee's absence, and others are again achieved in connection with working overtime hours. In contrast to earnings per hour worked, it is, however, not sufficient to be content with one single number of hours worked in the compilation of the standardized hourly earnings

**Number of fulltime employees in the earnings statistics:** The number of fulltime employees in the earnings statistics is measured on the basis of a 37 hour working week, and thus 1924 hours per year.

The number of fulltime employees does not show the number of employed, but adjust the total sum of employment contracts in either an upwards or downwards direction in order to calculate the corresponding number of fulltime employees in the earnings statistics.

The number of fulltime employees only show the number of fulltime employees among the enterprises in the earnings statistics, i.e. those enterprises who are required to report to Statistics Denmark, and whose reports are found to uphold a quality which makes them suitable for annexation in the earnings statistics.

The number of fulltime employees is therefore NOT applicable as a measure of employment.

## 2.2 Classification system

- Education: [DISCED-15](#)
- Occupation: DISCO-o8 in Structure of Earnings: [Disco-o8 LØN](#)
- Industry: [DBo7](#)
- Sectors: [ESR sectors](#)

## 2.3 Sector coverage

The statistics covers all the sectors in the Statistics Denmark's Statistical Business Register [ESR sectors](#) that Danish registered companies can be assigned (i.e. all sectors excluding rest of the world and foreign-controlled entities).

## 2.4 Statistical concepts and definitions

**Earnings per Hour Worked:** Earnings per hour worked is earnings related to the number of hours

worked. Earnings per hour worked indicate the employer's wage cost per hour in employing a given employee. Earnings comprise each employee's total earnings in connection with his/her job, including the employee's as well as the employer's share of any contributions to pension schemes and income in the form of fringe benefits subject to taxation. The number of hours worked is the number of hours actually performed by an employee, including overtime hours worked, but exclusive of hours off in connection with public holidays and hours of absence due to sickness, maternity, etc.

**Basic Earnings per Hour Worked:** Basic earnings, such as basic, qualification and functional earnings, etc. as well as holiday and public holiday allowances, special holiday allowance, gross allowances and optional scheme.

**Holiday Payments per Hour Worked:** Holiday payments include payments for holidays and public holidays, as well as the special holiday allowance for fixed salary-earners.

**Special Holiday Allowance per Hour Worked:** Special holiday allowance (only for fixed salary-earners).

**Overtime Payment per Hour Worked:** Overtime payment, overtime bonus and not the total overtime payment

**Sickness with Pay per Hour Worked:** Sickness with pay etc., earnings and other payments in connection with absence, including payments for days off due to sickness, holidays, special holidays, care, etc.

**Nuisance Bonuses per Hour Worked:** Nuisance bonuses, e.g. special payments for shift-work or work at odd hours and extra payment due to work related nuisances of various kinds.

**Fringe Benefits per Hour Worked:** Fringe benefits, only include fringe benefits, which are included in A-income, i.e. the value of free cars, telephones, internet, board and lodging free of charge.

**Irregular Payments per Hour Worked:** Irregular payments, e.g. bonus payments, payments for surpluses readjustments of earnings, etc.

**Pension Including ATP per Hour Worked:** Pension contributions - both employee's and employer's contributions, including ATP (The Danish Labour Market Supplementary Pension Fund).

**Standardized Hourly Earnings:** Standardized hourly earnings are standardized earnings related to standard hours. The standardized hourly earnings are the concept of earnings that is the closest concept with regard to the wages and salaries that have been "agreed" between employee and employer. The concept indicates the amount that an employee has received per hour worked, irrespective of the number of days in which the employee has been absent due to sickness or has worked hours in addition to the working time agreed. Consequently, the standardized earnings are earnings less payments for overtime hours and absence.

**Basic Earnings per Standard Hour:** Basic earnings, such as basic, qualification and functional earnings, etc. as well as holiday and public holiday allowances, special holiday allowance, gross allowances and optional scheme.

**Holiday Payments per Standard Hour:** Holiday payments include payments for holidays and public holidays, as well as the special holiday allowance for fixed salary-earners.

**Special Holiday Allowance per Standard Hour:** Special holiday allowance (only for fixed salary-earners).

**Nuisance Bonuses per Standard Hour:** Nuisance bonuses per standard hour

**Fringe Benefits per Standard Hour:** Fringe benefits, only include fringe benefits, which are included in A-income, i.e. the value of free cars, telephones, internet, board and lodging free of charge.

**Irregular Payments per Standard Hour:** Irregular payments, e.g. bonus payments, payments for surpluses readjustments of earnings, etc.

**Pension Including ATP per Standard Hour:** Pension contributions - both employee's and employer's contributions, including ATP (The Danish Labour Market Supplementary Pension Fund).

**Standardized Monthly Earnings:** Standardized monthly earnings are derived from the standardized hourly earnings by calculating monthly earnings based on a 37-hour workweek. Standardized monthly earnings are calculated by multiplying the standardized hourly earnings by 160,33. Each standardized earnings component can be calculated accordingly, and can be deducted from the standardized monthly earnings if fewer components are desired.

**Number of fulltime employees in the earnings statistics:** The number of fulltime employees in the earnings statistics is calculated on the basis of a 37-hour workweek, hence 1924 working hours per year. Thus, the number of fulltime employees does not show the number of employees or employments, but is a summarization of what the employments account for in terms of fulltime employment within a given year. The number of fulltime employees only indicates the number of fulltime employees that are included in the earnings statistics. Therefore, the number of fulltime employees is NOT useful as an employment indicator.

## **2.5 Statistical unit**

The counting unit is the individual employment relationship in a public or private enterprise or organization. An individual employment relationship is defined as a person's affiliation with the same establishment with the same terms of employment.

## **2.6 Statistical population**

The statistics include all employees in the entire labour market. The statistics cover all business enterprises in *General government*. In *Corporations and organizations*, all business enterprises employing 10 or more full-time employees are included in the statistics, except for enterprises in the industry group *Agriculture and fishing*. Also some employment relationships are not included in the wage structure statistics, including employment relationships of very short duration, very few weekly hours, special staff categories, or where it is not possible to determine the number of possible working hours.

## **2.7 Reference area**

The statistics cover the entire geographical Denmark, excluding Greenland, the Faroe Islands and foreign enterprises or organizations on Danish territory.

## **2.8 Time coverage**

The current series cover the years from 2013-.

## 2.9 Base period

Not relevant for these statistics.

## 2.10 Unit of measure

The unit of measure is earnings per worked hour and earnings per standard hour.

## 2.11 Reference period

01-01-2018 - 31-12-2018

## 2.12 Frequency of dissemination

The statistic is published annually.

## 2.13 Legal acts and other agreements

The information is collected in accordance with the Act on Statistics Denmark, as amended by Act no. 610 of May 30, 2018.

The collected information forms the basis for EU's [Structure of Earnings Survey](#) (SES) and EU's [Labour Cost Survey](#) (LCS). Both surveys are conducted every fourth year. The Structure of Earnings Survey was conducted for the first time for the year 2002 and the Labour Cost Survey for the first time for the year 2000. The legal basis of these two surveys is [Council Regulation \(EC\) No. 530/1999 Statistics on Wages and Labour Cost Structures](#). To this is added that annual updating of the surveys are submitted in accordance with the so-called gentlemen's agreement.

## 2.14 Cost and burden

The design of the survey implies that great emphasis is widely attached to making use of existing administrative data stored by the business enterprises in their own wage systems.

The private sector: The system for data collection is designed to explore the potentials of the latest computer technology for efficient and rational reporting of data. In this respect, a Standard for Electronic Statistical Reporting has been developed, which is used by wage agencies and respondents utilising standard systems and by business enterprises, which have developed their own wage system. Most respondents make use of an electronic system for reporting data. The administrative response burden for reporting data to the earnings statistics in the private sector amounted to DKK 5.33 mio in 2010.

## 2.15 Comment

Further information about structure of earnings is available on <https://www.dst.dk/loen>

### 3 Statistical processing

Annually payroll information is collected for the entire *General government* sector as well as for companies in the private sector with 10 or more full-time employees. The public sector is considered full deck while the total population of private sector is only comprised of enterprises with 10 or more full-time employees.

#### 3.1 Source data

\*Corporations and organizations: For the part of the statistics which covers the majority of the private sector, the primary data is reported by business enterprises employing 10 or more full-time employees. Annual data about each individual employee's earnings and conditions of employment are reported for the calendar year under survey by these business enterprises. The primary data is collected in collaboration with the Danish Employers' Confederation and the Danish Employers' Association of the Financial Sector. The information is collected by the organisations from their affiliates and is passed on to Statistics Denmark. Information is also collected by Statistics Denmark from non-affiliates.

\*General government \*: For the part of the statistics which covers the majority of the public sector, the primary data is accessed from the public wage transfer systems. For the central government sector, data on absence is reported by the Agency for the Modernisation of Public Administration.

#### 3.2 Frequency of data collection

Data is collected once a year - in January - for \*Corporations and organizations \*. Data for *General government* are collected on monthly basis.

#### 3.3 Data collection

The design of the survey implies that great emphasis is widely attached to making use of existing administrative data stored by the business enterprises in their own wage systems.

-\*Corporations and organizations \*: The data collection system is designed to explore the potentials of the latest computer technology for efficient and rational reporting of data. In this respect, a Standard for Electronic Statistical Reporting has been developed, which is used by wage agencies and respondents utilizing standard systems and by business enterprises, which have developed their own wage system. Most respondents make use of an electronic system for reporting data. Respondents without an electronic system fill data in an Excel based worksheet to report.

-*General government*: For the part of the statistics which covers the majority of the public sector, the primary data is accessed from the public wage transfer systems. For the central government sector, data on absence are reported by the Agency for the Modernisation of Public Administration.

### 3.4 Data validation

The submitted material is inspected for errors. In this control both the reported individual employment relationship but also an overall assessment of the company compared to previous periods is addressed. If there are significant changes in the reported data compared to previous years the respective company is consulted regarding the correctness of the submitted material. It must be assumed that not all errors in the reports are found when troubleshooting, why the statistics may be subjected to some uncertainty. The uncertainty is likely to lie especially in the calculation of hours worked. Especially the reporting of compensated absences may be deficient. In addition, there may be errors in period demarcations, which is of great importance for the calculation of both rendered and agreed work hours. The quality of data is constantly improved through feedback to businesses, as well as through general updating and improving.

### 3.5 Data compilation

The statistics include all employees in the entire labour market. The statistics cover all business enterprises in *General government* sector. For the sector group *\*Corporations and organizations\**, all business enterprises, with the exception of *Agriculture and fisheries*, employing 10 or more full-time employees are included in the statistics.

The statistics only cover employees with permanent employment comprising a lower limit for the scope of work. The delimitation is conducted in accordance with the rules contained in the Act on contracts of employment. This implies that the employee must have been employed for more than a month.

The statistics only comprise people employed in accordance with the so-called "normal terms". Consequently, the following groups are excluded from the statistics:

- Employees who are paid an exceptionally low wage rate due to disablement or the like.
- Employees who are paid on a commission basis.
- Employees who are not liable to tax in accordance with the general regulations in Denmark, including, e.g. sailors working on ships recorded in the international shipping register.
- Foreign residents working in Denmark but who are liable to tax in accordance with the taxation rules of their country of origin.
- Danish residents stationed abroad, who are paid in accordance with local rules. While Danish residents working abroad who are paid and liable to tax in accordance with the usual rules in Denmark, are included in the statistics.

The primary data for the public sector exclude data reported on earnings for persons in employability enhancement measures (sheltered jobs) and for persons who are paid on a fee basis, conscripts, Ph.D. students, some groups of temporarily engaged teachers, student assistants, and a few other groups.

Persons in employability enhancement measures (sheltered jobs) who are employed on normal terms are included in the statistics for the private sector. This does not have an effect on hourly earnings as they are employed on normal terms. It is not possible to distinguish these persons via the data reported for the statistics.

There are relatively great differences in the degree of coverage in the various industries in the private sector. Consequently, the occupations included in the statistics have been weighted. The enterprises are classified by industry and size on the basis of data from the Central Business Register. The degree of coverage is established for each industrial size group and using this as basis a weight is calculated, which is subsequently linked to each occupation in the group in question. The weights are used for raising figures vis-à-vis the entire target group for the purpose of achieving representative and close to complete coverage of the statistics among the enterprises.

Although the degree of coverage is slightly higher in the public sector compared to the private sector, there are also here observations, which due to a low quality, are excluded from the statistics.



The statistical unit is the individual job, which is defined as a person employed with a specific employer and engaged in a specific occupation. A new job is established where there are any changes in an employee's employer, workplace, occupation or other personal characteristics

Consequently, an employee can be included with several observations in the statistics.

There are different types of employment and terms of employment for employees. Some employees receive pay during holidays as well as during public holidays, while others save up holiday pay and/or public holiday pay. Some employees are paid during sickness, while others claim sickness benefits. Some employees have a pension schemes financed by their employer, while others have a pension scheme where the contributions are fully or partially paid by the employees themselves. For some employees, earnings are calculated on the basis of the number of hours worked, while others receive a fixed monthly salary, etc.

For purposes of comparing earnings, regardless of the type of employment and terms of employment, some concepts of wages and salaries have been defined in order to ensure data comparability.

There are two main concepts. Earnings per hour worked and standardized hourly earnings.

**Earnings per hour worked:** Earnings per hour worked is earnings related to the number of hours worked. Earnings per hour worked indicate the employer's wage cost per hour in employing a given employee.

Earnings comprise each employee's total earnings in connection with his/her job, including the employee's as well as the employer's share of any contributions to pension schemes and income in the form of fringe benefits subject to taxation.

The number of hours worked is the number of hours actually performed by an employee, including overtime hours worked, but exclusive of hours off in connection with public holidays and hours of absence due to sickness, maternity, etc.

In the statistics, earnings are divided into the following components per hour worked: •Overtime payment, overtime bonus and not the total overtime payment. •Sickness with pay etc., earnings and other payments in connection with absence, including payments for days off due to sickness, holidays, special holidays, care, etc. •Nuisance bonuses, e.g. shift-work bonuses and various forms of bonus for dirty work. •Fringe benefits, only include fringe benefits, which are included in A-income, i.e. the value of free cars, board and lodging free of charge. •Pension contributions - both employee's and employer's contributions, including ATP (The Danish Labour Market Supplementary Pension Fund). •Irregular payments, e.g. bonus payments, payments for surpluses readjustments of earnings, etc. •Basic earnings, such as basic, qualification and functional earnings, etc. as well as holiday and public holiday allowances, special holiday allowance, gross allowances and optional scheme. •Special holiday allowance (only for fixed salary-earners) •Holiday payments, which includes payments for holidays and and pubic holidays, but not the special holiday allowance which is calculated manually.

Earnings per hour worked can be used for many purposes. When earnings are related to the number of hours worked, it provides the employer with an indication of the average wage costs per hour worked. One advantage of this concept of earnings is that it takes into account the underlying terms of earnings and employment reported to the statistics when comparisons across occupations are being made. For example, an additional day off will give rise to higher earnings per hour worked.

While earnings per hour worked are suited for conducting analyses of wage costs, earnings are less suited for showing which earnings an individual person has achieved as the result of being employed as an employee. For this purpose, it would be expedient to apply the standardized hourly earnings.

**Standardized hourly earnings:** Standardized hourly earnings are standardized earnings related to the hours worked. The standardized hourly earnings are the concept of earnings that is the closest concept with regard to the wages and salaries that have been "agreed" upon between the employee and employer. The concept indicates the amount that an employee received per hour worked, irrespective of the number of days in which the employee has been absent due to sickness or hours worked in addition to the working time agreed.

Consequently, the standardized earnings are earnings without payments for overtime hours and absence.

The standardized paid hours are not a homogeneous hourly concept. In order to obtain the standardized hourly earnings, the standardized earnings must be related to the number of hours worked. Some elements of the standardized earning are achieved exclusively during those hours in which the employee is at his/her job, other components of earnings are also achieved during the employee's absence, and others are again achieved in connection with working overtime hours. In contrast to earnings per hour worked, it is, however, not sufficient to be content with one single number of hours worked in the compilation of the standardized hourly earnings

For a detailed description of how each individual component of earnings is standardized, reference is made to chapter 4.5.2 of the publication entitled "Lønstatistik - metode og nye begreber" (Earnings statistics - methodology and new concepts).

In the statistics, the standardized hourly earnings are divided into the following components per standardized paid hour worked: Nuisance bonuses, e.g. shift-work bonuses and various forms of bonus for dirty work. Fringe benefits, only include fringe benefits, which are included in A-income, i.e. the value of free cars, board and lodging free of charge. Pension contributions - both employee's and employer's contributions, including ATP (The Danish Labour Market Supplementary Pension Fund). Irregular payments, e.g. bonus payments, payments for surpluses readjustments of earnings, etc. Basic earnings, such as basic, qualification and functional earnings, etc. as well as holiday and public holiday allowances, special holiday allowance, gross allowances and optional scheme. Special holiday allowance (only for fixed salary-earners) Holiday payments, which includes payments for holidays and and public holidays, but not the special holiday allowance which is calculated manually.

**Standardized monthly earnings:** The advantage of the standardized hourly earnings is that they can be converted into monthly earnings based on a weekly working time of 37 hours. All components related to earnings per standardized paid hour can be converted into a monthly basis by multiplying by 160.33.

**Statistical concepts:** The average figures published in the statistics are weighted. The weights consist of the number of hours worked in each individual job and - with regard to employees in the private sector - the share of the raising that has been allocated to the employee.

The earnings for a given group of employees can be described in greater detail by means of, e.g. the median and quartiles. The median and quartiles must be considered as a supplement to the average earnings per hour, where extremely high or low values have an impact.

The median earnings indicate the "mid-point" earnings and are defined as the earnings that divide the group, implying that half of the group has higher earnings and the other half has lower earnings. In other words, one half of the employees receive earnings above the median and the other half receives earnings below the median.

The lower quartile indicates the earnings achieved by the lowest paid one-fourth of the employees or less, whereas the upper quartile indicates the earnings achieved by highest paid one-fourth of the employees or above. This implies that earnings for half of the employees range between the lower and the upper quartiles.

In distributing earnings to the median and quartiles, it is possible to obtain an overview of how earnings are distributed, and at the same time it is ensured that very high earnings don't give rise to biased earnings.

Number of fulltime employees in the earnings statistics

The number of fulltime employees in the earnings statistics is measured on the basis of a 37 hour working week, thus 1924 hours per year.

The number of fulltime employees does not show the number of employed, but adjust the total sum of employment contracts in either an upward or downward direction in order to calculate the corresponding number of fulltime employees in the statistics of earnings.

The number of fulltime employees only show the number of fulltime employees among the enterprises in the statistics of earnings, i.e. those enterprises who are required to report to Statistics Denmark, and whose reports are found to uphold a quality which makes them suitable for annexation in the statistics of earnings.

The number of fulltime employees is therefore NOT applicable as a measure of employment.

### **3.6 Adjustment**

No adjustments are made other than what is already described under data validation and data compilation.

## **4 Relevance**

Users of statistics are wide-ranging from national and international organizations , ministries , municipalities and regions for private companies and individuals. The structure of earnings statistics cannot be used as an employment indicator. For this purpose one should instead use the employment statistics.

### **4.1 User Needs**

Users: National and international organizations, ministries, municipalities, regions, private business enterprises and private individuals.

### **4.2 User Satisfaction**

No survey on user satisfaction is conducted.

### **4.3 Data completeness rate**

Data meets all requirements of regulations and guidelines related to the EU passes.

## **5 Accuracy and reliability**

The margins of statistical errors are especially linked to hours of work. Especially data reported on paid absence can be subject to inaccuracies. In addition to this, there may be errors in the periodic delimitation, which are essential to the compilation of hours worked as well as the agreed working time. However, efforts are continuously made to improve the data quality through feedback to the enterprises and through updating and improvement of the production systems.

The statistical uncertainty is not calculated.

### **5.1 Overall accuracy**

The reliability with respect to the level of detail of the published statistics is considered reasonably high.

### **5.2 Sampling error**

Not relevant for these statistics.

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

The margins of statistical errors are especially linked to hours of work. Especially data reported on paid absence can be subject to inaccuracies. In addition to this, there may be errors in the periodic delimitation, which are essential to the compilation of hours worked as well as the agreed working time. However, efforts are continuously made to improve the data quality through feedback to the enterprises and through updating and improvement of the production systems.

### **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 reliability with respect to the level of detail of the published statistics is considered reasonably high.

## 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 figures are published.

## 6 Timeliness and punctuality

The structure of Earnings is published on a yearly basis at the end of September following the reference period. The information is normally published without delay compared to schedule.

### 6.1 Timeliness and time lag - final results

The statistics on earnings are published annually, and before the end of the year following the reference year.

### 6.2 Punctuality

- The statistics for the reference year 2018 were published in September 2019.
- The statistics for the reference year 2017 were published in September 2018.
- The statistics for the reference year 2016 were published in October 2017.
- The statistics for the reference year 2015 were published in September 2016.
- The statistics for the reference year 2014 were published in September 2015.
- The statistics for the reference year 2013 were published in December 2014.
- The statistics for the reference year 2012 were published in October 2013.
- The statistics for the reference year 2011 were published in October 2012.
- The statistics for the reference year 2010 were published in December 2011.

## 7 Comparability

These statistics are in its current form, comparable from 2013 and onwards. Structural changes from year to year must be taken into account, when comparing the level of earnings over time. Annual data are transmitted to Eurostat by all EU Member States, and the statistics *Structure of Earnings Survey (SES)* are compiled on the basis of these data.

### 7.1 Comparability - geographical

Annual data are submitted to Eurostat by all EU Member States, and the statistics "Structure of Earnings Survey" are compiled on the basis of these data. There is consistency between the concepts and methods used by each national statistical institute in the EU, which makes it possible to conduct comparisons between the levels of earnings in each EU member state.

### 7.2 Comparability over time

#### 2018

*New pension rates for public/civil servants with Public Service Pensions:*

From 2018 there has been implemented a new model for calculating pension rates for public/civil servants with Public Service Pensions. The pension rates are based on sector-specific pensions schemes, and with regards to a percentage of each public/civil servant's salary. This only affects the public/civil servants that are member of a Public Service Pension Scheme, who are predominantly employed in the sector "Government including social security funds".

*Automatic data validation and feedback to Corporations and Organizations:*

Automatic and manual feedback has contributed to an increase in the number of fulltime employees in the statistics.

*Reallocations of certain occupation codes:*

Automatic and manual feedback has entailed an improved quality with regards to occupation codes, which has brought about a few changes within some occupation codes in the sector Corporations and Organizations in 2018.

In 2014, the wage and salary administrations in the municipal and regional government were able to report occupation codes for their employees in the pay systems (before this Statistics Denmark recoded other information to the occupation code). This still results in changes within a few occupation codes in 2018.

**2017**

*Automatic data validation and feedback to corporations and organizations:*

Automatic and manual feedback has contributed to an increase in the number of fulltime employees in the sector corporations and organization. There is an increase of approximately 35.000 fulltime employees between 2016 and 2017.

*Reallocation of certain local units between sectors:*

Privatization of some parts of the sector general government has led to reallocations with regards to some occupation groups and industries. This means that some units that previously belonged to the sector general government now belongs in the sector corporations and organizations.

*Reallocations of certain occupation codes:*

Automatic and manual feedback has entailed an improved quality with regards to occupation codes, which has brought about a few changes within some occupation codes in the sector corporations and organizations in 2017.

In 2014, the wage and salary administrations in the municipal and regional government were able to report occupation codes for their employees in the pay systems (before this Statistics Denmark recoded other information to the occupation code). This still results in changes within a few occupation codes in 2017.

*Reallocation of certain education groups:* Between 2016 and 2017 there have been changes in the education nomenclature. These changes mainly concern the sector Government including social security funds. The main change is associated with one specific education group that was previously placed in Medium-cycle higher education. In 2017 this education group is instead placed in Short-cycle higher education.

**2016**

*Improved automatic data validation of reports from companies and enterprises on two levels:*



There has been developed an improved data validation procedure, which has enabled imputation of missing or correction of unrealistic data, based on each employment record as a whole.

There has also been developed an automatic feedback evaluation system, which has reported back to companies and enterprises regarding the data in their reports. This has improved the quality of the reports from the companies and enterprises that chose to re-report, and is expected to contribute to a higher quality of reported data onwards, from the corporations and organizations that have received an automatic feedback.

The above described procedures have, together with usual report feedback, made it possible for an increase of approximately 75.000 fulltime employees in the sector Corporations and Organization compared to the structure of earnings statistics 2015.

*Displacements of certain local work units:* In 2016 an evaluation of local work units in relation to sectorial placement has led to displacements with regards to some occupation groups and industries. This means that some units of companies and enterprises that previously were registered as a part of the sector *corporations and organizations* now belong in the public sector and vice versa.

*Displacements of certain occupation groups:* In 2014 the wage and salary administrations for the municipal- and regional sector were able to report occupation codes for their employees. This still brings about a few dislocations within a few occupation groups in 2016.

#### 2015

*New classification of education:* In 2015 the Denmark Statistics' education statistics started using a new classification of education called DISCED-15, which replaced the previous, DUN and Forspalte1. This causes a break in the time series, thus the series LONS10 is discontinued. The new series for earning by highest level of education is called LONS11, from where tables for 2015 and beyond may be extracted. DISCED-15 is the Danish version of the ISCED 2011 classification, which was developed by UNESCO in consultation with relevant international organizations and partners, such as Eurostat and the Organisation for Economic Cooperation and Development (OECD). The ISCED-classification is meant to contribute to the production of even more reliable and comparable international statistics on education, reflecting the ongoing evolution of education systems worldwide.

*Special holiday allowance:* With the release of the structure of earnings statistics for 2015, revisions of the statistics for 2013 and 2014 have been made. The revision regards the manner in which the holiday payments in DKK per hour worked is presented. The component special holiday allowance in DKK per hour worked is now included in the overall holiday payments in DKK per hour worked. Previously the component was subtracted from the overall holiday payments in DKK per hour worked, to be presented separately. This change enables better comparisons between fixed salary-earners and workers paid by the hour with regards to holiday payments in DKK per hour worked. The change is implemented for all sectors.

*Displacements of certain occupation groups:* In 2014 the wage and salary administrations for the municipal- and regional sector were able to report occupation codes for their employees. This still brings about a few dislocations within a few occupation groups.

The quality of reported absence for PhD students has been improved, and therefore PhD students have become comparable in relation to other occupations, and, hence, they are included in the sector Government including social security funds, in the structure of earnings statistics for 2015. The effect can primarily be seen with regards to the occupation sub-major group 23 (Teaching Professionals). There are more fulltime employees within the group, and since PhD students typically earn less than other occupation types within the same sub-major group, it has an effect on the level of average earnings, when comparing 2015 to 2014 and to 2013.

2014

*Modified in 2014:*

Two new reporting fields are introduced for companies and organizations Employee and employer contributions to retirement savings , etc. schemes . The fields contain the employee and employer contributions before tax for employer-administered retirement savings , etc. arrangements outside were disregarded.

Between 2013 and 2014 some changes were made in the education nomenclature. As a result, a few education groups have been relocated. One of the significant changes is associated with one specific education group in the sector Government including social security funds.

Now all municipal payroll systems has given their users themselves, to insert occupation codes on their employees. Previously, we used the grade of the employee. This allows shifts in some occupation groups in 2014.

*Modified by sector in 2013:* This publication presents the salary structure for the first time in accordance with the new European national accounting manual ESA2010 . The naming of sectors has changed so private sector has been for companies and organizations , and government- , municipal and regional sector , the General Government for government, municipalities and regions. In addition to naming changed , happens to sector definitions also some substantive changes (see News from Statistics Denmark 2014 no. 270 [Nyt](#) and News from Statistics Denmark 2014 no. 321 [Nyt](#)).

*Municipalities 2013:* Due to the lockout of certain groups of teachers in the spring of 2013, the quality of the monthly earnings is not satisfactory for these groups. Statistics Denmark has tried to identify the relationships that have been covered by the lockout . The weeks when lockout has occurred, are excluded from the data for the identified employment . From all EU member states delivered annually to Eurostat , which in consequence publish statistics ' Structure of Earnings Survey ' (SES ) . There are between countries ' statistical agencies created consistency between concepts and methods , so that the data can be used to compare countries' wage levels between.

It is possible to conduct comparisons of the level of earnings in the statistics, taking into account the structural changes that may occur among the years. For example, the industrial changes, but also the general change in the composition of the labour force has a great impact on comparability over time.

### **Specific changes**

- *2013:* From 1 January 2013 . New rules about the value of free telephone, computer and internet have been implemented instead together with employer-paid health insurance and treatments.
- *2012:* Multimedia has been abolished from 1 January 2012 . New rules about the value of free telephone, computer and internet have been implemented instead.
- *2010:* From 2010 multimedia are included in the fringe benefits.

*New classification of occupations:* Classification of employees by occupations is conducted on the basis the nomenclature DISCO-08, which is the Danish version of the ILO's official nomenclature for occupations ISCO-08. DISCO-08 is a revised version of the previously used nomenclature DISCO-earnings. Subsequently, DISCO-08 is used for the first time in the structural statistics on earnings. For further details see [Disco](#). There is no homogeneous conversion key between DISCO-earnings and DISCO-08. Consequently, earnings distributed by occupations are not comparable backwards in time.



*Region and municipalities:* New information on the payment of the 6th holiday week for 2010 showed a significantly underreporting of the utilization of the 6 holiday week. The new information forms the basis of the establishment of data on absence, which was conducted in 2010. This implies a higher level of absence, which contributes to a higher level of earnings per hour worked in 2010.

*Region and municipalities:* The special holiday rate, which is a basic rate, has been changed from 1.5 pct. in 2009 to 1.95 pct. in 2010, contributing to a higher level of holiday and public holiday allowances. For certain groups of employees, a higher rate than the basic rate is used. Unlike earlier years, this has been taken into account from 2010, which has further resulted in a higher level for holiday and public allowances in 2010

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

KRL is, an actor in the municipal sector, they publishes a statistic structure of earnings for the municipality and the regional sector based on the same data that the statistics from Statistics Denmark is based on. However, the methods and definitions differs and consequently the results of the two statistics are not comparable. For further information see <http://www.krl.dk>

Moderniseringsstyrelsen (The Agency for the Modernisation of Public Administration) publishes a statistic structure of earnings for the central government sector. Due to differences in methods results of the two statistics are not comparable. For further information see <http://www.modst.dk>

Danish Employers' Confederation (DA) and Danish Employers' Association of the Financial Sector (FA) publish a statistics structure of earnings for their members. The data submitted to these two organizations is the basis for the statistics of absence together with the absence data submitted to Statistics Denmark. For further information see <http://www.da.dk> or <http://www.fanet.dk>

### **7.4 Coherence - internal**

Not relevant for these statistics.

## **8 Accessibility and clarity**

These statistics are published annually in a Danish press release, at the same time as the tables are updated in the StatBank. In the StatBank, these statistics can be found under [Structure of earnings](#). For further information, go to the [subject page](#).

### **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**

These statistics are published annually in a Danish press release.

#### **8.5 Publications**

These statistics are described in a comprehensive Danish [publication](#) on earnings and labor cost statistics from 2011.

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

The statistics are published in the StatBank under the subject [Structure of earnings](#) in the following tables:

- [LONS11](#): Earnings by education, sector, salary, salary earners, components, sex and time
- [LONS20](#): Earnings by occupation, sector, salary, salary earners, components, sex and time
- [LONS30](#): Earnings by region, sector, salary, salary earners, components, sex and time
- [LONS40](#): Earnings by industry (DB07), sector, salary, salary earners, components, sex and time
- [LONS50](#): Earnings by age, sector, salary, salary earners, components, sex and time

With the exception of [LONS11](#), the four other tables are compiled from 2013 and onwards. These four tables are compliant with the newest internationally compatible EU accounting framework for National and Regional Accounts [ESA2010](#). [LONS11](#) is compiled in compliance with the International Standard Classification of Education [ISCED](#) with 2015 as the starting year.

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

The data are available at the level of individuals and may be used in connection with compiling more detailed statistics or in coupling data from other statistics.

#### **8.8 Other**

All EU-member states transmit data to Eurostat on this subject, who publishes the statistics [Structure of Earnings Survey \(SES\)](#).

#### **8.9 Confidentiality - policy**

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

## **8.10 Confidentiality - data treatment**

When the structure of earnings 2011 was published Statistics Denmark implemented a new rule which did not allow the statistics about structure of earnings in the Danish Statbank regarding 2011 to be based on a data material with less than 50 fulltime employed and 3 enterprises. This was a tightening of the restrictions compared to the structure of earnings 2010, where the requirements were 50 employed. The tightening of restrictions was also imposed the years 2009 and 2010 in the Danish Statbank, data for a range and groups for these two years is thus no longer available. Furthermore the number of employed in the different cells must represent at least 3 enterprises before published, except for public enterprises.

The rules stated above still applies.

The above restrictions on published data does not apply the tasks regarding earnings statistics performed for external customers. However, a requirement of confidentiality apply. When performing external tasks Statistics Denmark does not show the contents in cells with less than 3 employed and 3 enterprises.

## **8.11 Documentation on methodology**

The methodology for these statistics are described in a comprehensive Danish [publication](#) on earnings and labor cost statistics from 2011.

## **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 this statistics is in the division of Personal Finances and Welfare. The persons responsible are Christian Törnfeldt, tel.: +45 39 17 34 47, e-mail: [cht@dst.dk](mailto:cht@dst.dk), Michèle Naur, tel.: +45 39 17 34 14, e-mail: [mln@dst.dk](mailto:mln@dst.dk), and Charlotte Wind von Bennigsen, tel.: +45 39 17 30 47, e-mail: [cwb@dst.dk](mailto:cwb@dst.dk).

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