

Coherences in the Working Time Accounts

Statistical integration

Information from various sources is used in the creation of the Working Time Accounts (WTA). The information is adjusted and integrated to ensure that the data is mutually consistent. Integration of data from various data sources includes four main points:

1. Harmonisation of concepts,
2. enumeration to the same population,
3. adjustments pertaining to the accuracy of the sources and
4. adjustments for errors of measurement.

A number of other sets of statistics include the same variables which are central to the Working Time Accounts. Overview table 1 shows the most essential sets of statistics containing information on employment, jobs, compensation of employees and hours of work - the variables of the Working Time Accounts.

Overview table 1.

Table of selected labour market statistics

| | The statistics contain information about | | | |
|---|--|--|--|--|
| | Employment | Jobs | Compensation of employees | Hours worked |
| The Register-based Labour Force Statistics (RAS) | Year | | | |
| Establishment-related Employment Statistics (ERE) | | Year | Year | Year ¹ |
| Structure of Earnings Statistics (SES) | | | Year Quarter | (Year) ² |
| The Labour Force Survey (LFS) | Quarter | | | Quarter |
| Employment Statistics for Employees (BfL) | Quarters ³ Months ³ | (Quarter) ² (Month) ² | (Quarter) ² (Month) ² | (Quarter) ¹ (Month) ² |
| The National Accounts (NA) | Year Quarter | | Year Quarter | Year Quarter |

Note: The Employment Statistics for Employees as well as the Labour Market Accounts are based on data from the elncome (elndkomst) system. Since the Register-based Labour Force Statistics, the Establishment-related Employment Statistics and the Working Time Accounts are all based on the Labour Market Accounts, these sources are indirectly based on elncome.

¹ In elncome, data is available on paid hours of work for employees. However, this information is not published directly in the mentioned statistics. Paid hours of work for employees can be deduced, however, from the Establishment-related Employment Statistics and Employment Statistics for Employees based on information about the number of full-time employees.

The compensation of employees in the Establishment-related Employment Statistics (ERE) is based on information from elncome on remuneration of employees, but the compensation of employees in the ERE is adjusted as reimbursements to employers of sickness and parental benefits are deducted and earned contributions to funded labour market pension schemes are added. The compensation of employees in the WTA is identical with the one published in the ERE. However, the ERE operate with an activity threshold which is not applied by the WTA.

² The data is collected and used in connection with calculations in the statistics (and in the WTA), but is not published directly.

³ Since November 2014, the number of persons with employee jobs has been published monthly with data back to 2008. Quarterly statements including number of persons with employee jobs are also published in Statbank Denmark. The number of persons with employee jobs is higher than the number of employed employees, since some persons with employee jobs have a primary job as a self-employed person.

Several statistics are dealing with the same subject but for different purposes. Where the quarterly statistics are mainly prepared for the purpose of outlining the short-term trend, the annual statistics can provide a more detailed view of the structures. The numerous independent statistics make increasing demands on the users of the statistics, as this makes it more difficult to keep track of how the correlation is – and should be – between the individual assessments. They apply different populations, different definitions and different production methods. For a more detailed description of differences in concepts between the employment statistics, click the [employment website](#).

Main principles

To improve the coherence of labour market statistics and in this way provide an improved overview of the development in the labour market, integrated statistical systems are developed, such as the Working Time Accounts, which:

1. create a complete framework for the description of the various parts of the labour market,
2. document the relationship between the various concepts and
3. create statistics quicker than before with a wider focus through the combination of the detailed breakdowns of the structure statistics and the speed of the short-term statistics.

Only existing data sources are used for the WTA, as the different information is selected from the most reliable data source. There is no collection of new information, which contributes to minimise the response workload and costs.

Relations in the Working Time Accounts (WTA)

Easier to use

In the Working Time Accounts (WTA), the necessary adjustment and reconciliation between the variables is made *before* the figures are published. The advantage for the users of the statistics is that the development in a given variable can be seen immediately in a broad perspective – without the need for making adjusting calculations or reservations for differences in methods of assessment.

Basic accounting relations

For employees, self-employed persons as well as assisting spouses, there are a number of accounting-related, definitional relations between hours worked, jobs, compensation of employees and employment. The following applies:

Basic accounting relations

The average employment consist of the average number of persons who have each day during a period had earnings as self-employed persons, assisting spouses or employees in their primary employment. Employment (and jobs) also includes subsidised employment provided that the person is on the payroll. Persons who are temporarily absent for any reason but are attached to an establishment in the form of a job to return to are also included in the employment. Persons who have not been on the payroll for up to 45 days but have subsequently returned to the same employer are included in the period where they were not on the payroll. Leave from employment includes persons on parental leave and sick leave. Until 2010 leave also included persons on child-care leave.

Since it is possible to be on part-time leave, it is possible that the various periods of leave and employment overlap.

For this reason, the number of persons on the various types of leave can no longer be summarised with the number of primary jobs to provide a basis from which to deduce the employment.

number of employed persons ≤
number of primary jobs
 +*number of persons on childcare leave*
 +*number of persons on sick leave*
 +*number of persons on parental leave*

number of persons on leave ≤
number of persons on childcare leave
 +*number of persons on sick leave*
 +*number of persons on parental leave*

number of sideline employed ≤
number of sideline jobs
 +*number on childcare leave from sideline job*
 +*number on sick leave from sideline job*
 +*number on parental leave from sideline job*

Job

The average number of jobs includes the employees' primary employment as well as any sideline jobs the person may hold. Persons who have not been on the payroll for up to 45 days but have subsequently returned to the same employer are included in the period where they were not on the payroll. Persons who are temporarily absent from their job due to leave are not included in the assessment of jobs in the WTA. Employment of less than one hour of paid work per week does not fall within the definition of jobs. The same requirement applies for the definition of employed persons. However, it is not required that you have at least one paid hour per week while on leave. Accordingly, the following relation exists between the number of jobs and the employment:

number of jobs = *number of primary jobs* + *number of sideline jobs*

Hours worked

The hours worked are defined as employer-paid hours worked, including hours worked during part-time leave as well as paid overtime hours and excluding paid hours of absence. Paid lunch breaks are considered to be standby time and are included in the hours worked. Overtime hours are defined as the number of paid hours of work in addition to the normal paid working time and also include extra hours for part-time employees without separate overtime bonus. Hours worked include employer-paid hours worked, including the hours pertaining to jobs that are not the person's main job.

Hours worked in the month are calculated based on the following relation:

Number of hours worked in the month

= *Number of hours paid in the month*

* $\left(\frac{\text{Hours worked in the year}}{\text{Hours paid in the year}} \right)$

* $\frac{\text{Average number of hours worked per job in the month}}{\text{Average number of hours worked per job in the year}} \bigg/ \frac{\text{Average number of hours paid per job in the year}}{\text{Average number of hours paid per job in the month}}$

The first part, number of hours paid in the month, is information obtained by the WTA from the [Labour Market Accounts \(LMA\)](#) for all employed persons. In the projection period, the WTA obtain information about hours paid per month from the [Employment Statistics for Employees](#).

The second part, the relation between hours worked and hours paid in the year, is calculated based on the [structural earnings statistics \(SES\)](#) in order to convert the concept of hours paid to hours worked, and in this way take into account that all hours paid are not necessarily worked, since the employee may have paid absence.

The last part is a redistribution of hours across the year taking into account that the development in hours paid does not follow the development in hours worked across the months of the year, since absence such as holidays, sickness, public holidays are not evenly distributed across the months of the year.

It is not possible to obtain detailed information about unpaid hours worked nor criminal hours (including moonlighting). Accordingly, unpaid hours and criminal hours are not included in the assessment of hours worked in the Working Time Accounts (WTA)¹.

Wage and salary

The compensation of employees in the WTA includes payment in terms of money and benefits-in-kind paid by the employer to an employee for work performed in a period. The compensation of employees in the WTA is identical with the one published in the Establishment-related Employment Statistics (ERE). However, the population is different, as the ERE operate with an activity threshold which is not applied by the WTA.

The compensation of employees in the WTA consists of income of which to pay labour market contribution, i.e. salaries, fees etc., including holiday allowances, wages and salaries during sickness and leave, wage subsidies of any kind, remuneration to board members, committee members etc. as well as pension-like payments to former employees, all amounts inclusive of labour market contributions. ATP contributions (statutory labour market pension contributions) and the tax value of fringe benefits are also included in the compensation of employees. Furthermore, it includes the total actual contributions to pension schemes from SKAT's (the Danish tax authorities') Central Pensions System (CPS). Reimbursement of the employer for parental and sickness benefits has been deducted in the calculation of the compensation of employees in the WTA.

The compensation of employees in the WTA only includes earned labour market pensions in pension funds, but so far not of civil servant earned pension. The reason for this is that Statistics Denmark is not yet able to unequivocally identify economically active civil servants and persons employed on terms similar to those of civil servants, nor does Statistics Denmark have a system for calculation of imputed earned contributions on an individual level for these groups. Once this system has been developed, earned contributions to civil servant's pension will be incorporated as part of the compensation of employees in the WTA.

In general, the WTA includes the earnings components available at job level, while the compensation of employees in the National Accounts also includes adjustments of the compensation at an aggregate level. For a description of the transition from the WTA's compensation of employees to the compensation of employees in the National Accounts, please refer to the National Accounts publications.

The crucial factor of the per se very simple relations is that they can be applied for chaining information from various sources. In addition to the accounting identities enabling quality checking of the primary sources by comparison, the equations also allow gaps to be filled in the existing statistical basis through calculation of new variables.

Eventuelle henvendelser rettes til

¹ In the National Accounts, on the other hand, additions are made for unpaid overtime as well as criminal work.

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