

Differences in concepts between employment statistics

Contents

1. Introduction	2
1.1. Short description of concepts.....	2
1.2. Key statistics on employment and working time	2
Key table of differences in employment statistics.....	5
2. Employment	6
2.1. The Register-based Labour Force Statistics.....	6
2.2. The Labour Force Survey (LFS).....	7
2.3. The Working Time Accounts (WTA)	8
2.4. The National Accounts	9
2.5. Employment in construction.....	9
2.6. Employment Statistics for Employees (ESE)	10
3. Jobs	11
3.1. Establishment-related Employment Statistics.....	11
3.2. The Working Time Accounts (WTA)	12
4. Full-Time Employment	13
4.1. Full-time employment in the Establishment-related Employment Statistics	13
4.2. Full-time Employment Statistics for Employees.....	14
4.3. Public Employment Statistics.....	15
4.4. The Labour Market Accounts (LMA)	16
5. Hour statistics	17
5.1. The Labour Force Survey (LFS).....	18
5.2. The Working Time Accounts (WTA)	19
5.3. The National Accounts	19
5.4. Agricultural Accounts Statistics	20
6. The commuting statistics.....	21
Appendix: For stakeholders with special interests:.....	23
A. Registration of working time from interviews with the persons in employment	23
B. Registration of working time based on enterprise information (administrative data from the payroll systems)	24
List of references	27

1. Introduction

The purpose of the memo is to describe concepts relating to employment and working time, and how these concepts are measured in various sets of statistics.

1.1. Short description of concepts

Employment is stocktaking of the number of persons (headcount) employed at a given point in time or as an average over a period. You are employed if you are attached to an establishment in the form of a job where you have a minimum of one hour of paid work per week in the reference period. This includes persons who are temporarily absent, regardless of the reason for their absence.

Number of jobs indicates the number of active jobs (exclusive of temporary absence, e.g. maternity leave or other types of leave) at a given point in time or as an average over a period. A job is defined as a person's attachment to an establishment. The same person may have several jobs (in various establishments) at the same time.

Working time is a volume indicating the number of hours worked. Working time can be stated in the form of contractual, paid, normal or performed/actual¹ hours. Hours of work are not an indicator of the amount of hours worked in the form of production output. On the contrary, hours of work reflect the time used for (or allocated to) the job.

Full-time employment is a way to convert work volume in the form of hours of work to something to which it is easier to relate. It is difficult to relate to millions of hours of work. However, the number of full-time employees is still a measure for work volume, which employment is not, since employment describes the number of people involved in the work, not the time they have spent on it.

Commuting is the activity of persons moving back and forth between their residence and work, residence and establishment not being at the same address. The commuting distance is the shortest distance between these two places, measured one way only.

1.2. Key statistics on employment and working time

The Register-based Labour Force Statistics (RLFS) are applied when you want to document the employment of small groups and to have many background variables available. Furthermore, the RLFS have very long time series starting in 1981 (November 1980).

The Labour Market Accounts (LMA) are applied when you want to focus on full-time employment broken down by a number of person-related background variables. In the LMA, the population is rated in relation to a full-time standard of 37 hours per week. This means that hours in addition to 37 hours per week are not included.

¹ In the labour force survey (LFS), performed hours, i.e. hours actually worked, are called actual hours.

The LMA also exist in a version without standardisation of hours (a register called the AMR-UN), which is not published separately, however. In the non-standard-time LMA (AMR-UN), hours beyond 37 hours per week are included. The AMR-UN provides the primary data for the Register-based Labour Force Statistics (RLFS), the Establishment-related Employment Statistics and the Working Time Accounts (WTA). The AMR-UN as well as the LMA are made available through Statistics Denmark's research scheme. The LMA starts in 2008.

The Labour Force Survey (LFS) is a questionnaire survey and is applied in connection with international comparisons. The definition of employment in the LFS is a minimum of one hour of paid work in the reference week (the week that the interview concerns). The LFS can shed light on conditions that have not been registered in the administrative systems, such as requests for change in working time and work outside standard hours. The hour statistics in the LFS are weekly hours. The LFS is applied for calculation of the number of hours per person in employment. The LFS has been prepared since the first quarter of 1995 and data is available from the first quarter of 1996.

The Working Time Accounts (WTA) are applied when you want an unbroken time series for employment, job and hours worked. The WTA are applied when you want overall statistics of hours of work per quarter or year broken down by industry at a relatively detailed level. The series goes back to the first quarter of 1995. After conversion to eIndkomst (eIncome) sources, a new time series has been started from the first quarter of 2008 onwards.

Establishment-related Employment Statistics are applied when you want to examine jobs or full-time employment for all sectors. Establishment-related Employment Statistics have been compiled from 1990 onwards.

Employment Statistics for Employees are applied when you want a quick indicator of total employee employment. Data goes back to early 2008.

The Public Employment Statistics state the number of full-time employees within *general government*. As the only one of the labour market statistics, the public employment statistics allow breakdown by COFOG group, which is the National Accounts' breakdown of public expenses according to purpose. The statistics were converted in 2013, and now they use the same primary data as the Employment Statistics for Employees. This data goes back to the first quarter of 2008. Historic data exists for the period from the first quarter of 2002 until the fourth quarter of 2012 based on the previous primary data and old sector division. Previously, the primary data was the reporting from the public payroll systems for the earnings statistics along with a number of supplementary sources.

The employment in construction is a statistical statement of the number of persons employed in establishments with construction activities. The employment in construction is a quick economic indicator, and it is the only indicator focusing on the activity broken down by new buildings, repairs, construction etc. The employment in construction series goes back to the first quarter of 2000.

The National Accounts state the average employment and number of hours worked which is comparable to the remaining part of the National Accounts.

The statistics are used in connection with economic analyses incorporating the consumption of labour. The National Accounts series go back to 1966 for annual statistics and 1990 for quarterly statistics.

Agricultural Accounts Statistics are not employment statistics, but include an assessment of hours of work spent on the farms. In Statbank Denmark and in the extended tables under the documentation on the accounts statistics website, hours of work are indicated as an average per farm. The accounts statistics are annual statistics and are based on samples, where the farmers' accountants report all of their clients' accounts. Information on working time is not part of the accounts, which is why the accountants report hours of work as supporting data.

The commuting statistics state the number of persons living in one place and working in another. Statistics Denmark compiles commuting between place of residence and work within the borders of Denmark (including an assessment of commuting distances) as well as commuting across the Oresund strait. Commuting distances are assessed as from 1 January 2003. The commuting across Oresund was first assessed in November 1997 and covers employees living in the Swedish part of the Oresund region and working in the Danish part or vice versa. The Oresund region includes the Capital Region of Denmark, Region Zealand and the Scania region.

Key table of differences in employment statistics

Statistics	Unit	Reports / method	Population	Publications
Register-based labour force statistics (RLFS)	Persons in employment (headcount)	Register-based statistics	Population living in DK and working in Danish enterprises	Annually since 1980.
The Labour Market Accounts (LMA)	Persons in full-time employment based on paid hours of work. Standardised based on 37 hours per week.	Register-based assessment	The total Danish population	Annually since 2008.
The labour force survey (LFS)	Persons in employment (headcount) and various types of hours of work (agreed, normal and actual)	Survey (personal interviews)	Population aged 15-74 in Denmark – published in quarterly and annual publications (15-64 year olds).	Quarterly and annually since 1995. Data available by quarter from the first quarter of 1996 and annually from 2000. Monthly figures published since the autumn of 2013 with figures back to January 2007.
Establishment-related Employment Statistics	Jobs, full-time based on paid hours of work, compensation of employees	Register-based statistics	Jobs for persons working in enterprises in Denmark.	Annually since 1990.
The Working Time Accounts (WTA)	Persons in employment (headcount), jobs, hours worked as well as compensation of employees	Mainly register data	WTA (based on the eIncome Register/LMA with data from 2008): Population working in Danish enterprises, including persons living abroad.	Quarterly and annually since 2008.
The National Accounts	Persons in employment (headcount), hours worked and compensation of employees	Mainly Working Time Accounts (WTA)	Persons contributing to the production within Denmark's economic territory.	Quarterly and annually since 1966 (annual statistics)/ 1990 (quarterly statistics).
Employment Statistics for Employees	Persons with employee jobs and full time based on paid hours of work	Register-based statistics	Employees working in Danish enterprises, including persons living abroad.	Monthly and quarterly since 2008. Quarterly figures first published in 2011, monthly figures first published in 2014.
Public employment statistics	Full-time based on paid hours of work	Register-based statistics	Full-time employees within <i>general government</i> , including persons living abroad.	Quarterly since 2008. (Quarterly historic time series for the period 2002-2012).
Employment in construction	Persons in employment (jobs)	Survey (enterprise questionnaire)	Employees and proprietors in Danish enterprises on the midmost Wednesday of the quarter.	Quarterly since 2000.
Agricultural accounts statistics	Farms	Random sample (complete set of accounts reported)	Agriculture (farms and horticultural enterprises) with a standard output in excess of EUR 15,000 as well as farms with more than 10 ha under cultivation	Annually since 1916 and with information about working time since 1966.
The commuting statistics	Persons in employment (headcount)	Register-based statistics	Commuting across the Oresund strait. Commuting in DK (including distances) between place of residence and work	Annually since 1997 (Oresund) Annually since 2003 (within DK).

2. Employment

Employment consists in *stocktaking* of the number of persons (headcount) in employment at a given point in time. You are in employment if you are attached to an establishment in the form of a job where you have a minimum of one hour of paid work per week in the reference period².

This means that work that is strictly *voluntary work* (i.e. without payment) does not count as employment. The employment does not indicate the type of compensation – whether it should be in the form of registered pay, in kind, moonlighting or illegal labour³.

As a person in employment, you may be *temporarily absent*, e.g. in connection with maternity leave or other types of leave, as long as you are attached to an enterprise, in the form of legislation giving you the right to return to work after your leave of absence.

Being in employment *says nothing about how much you work* (e.g., whether you are part-time employed or full-time employed, or more specifically how many hours you work).

Each person in employment may have one or several jobs at the same time. If you have more than one job, you still only count as one person in employment. The job where you have the majority of your working hours will generally be stated as your primary (main) employment.⁴

The industry and sector data related to the employment is the data that is attached to the establishment where the person has his/her primary (main) employment.

2.1. The Register-based Labour Force Statistics

The Register-based Labour Force Statistics (RLFS) make up an overall statement of the population's labour market participation. This means that the number of persons in employment broken down by employee, self-employed person and assisting spouse appears from the Register-based Labour Force Statistics.

² This definition is in accordance with the international guidelines for labour market statistics and national accounts statistics cf. the International Labour Organization (ILO) and System of National Accounts (SNA).

³ However, the employment statistics mentioned in this memo, which are based primarily on labour market statistics, are not geared to measure the extent of moonlighting and illegal work, since most of the statistics are based on register data. In the National Accounts, an addition (adjustment) is made to employment and hours worked explicitly for moonlighting. In the LFS, an attempt is made to measure it from the second quarter of 2010 through an annual point measurement.

⁴ In the LFS, however, this is determined by the person's own assessment of which job is the main job and which one is the sideline activity. This may be due to e.g. the hours in the reference week being atypical compared to a normal week. In case of doubt, the interviewer is instructed to decide that the job with highest number of hours of work is the main job.

In connection with the publication of the Register-based Labour Force Statistics in April 2015, the dating of the Register-based Labour Force Statistics changed so that the population as well as its labour market participation is determined at the end of November. Previously, the population was made up as at 1 January, whereas the labour market participation was made up at the end of November in the year before.

The Register-based Labour Force Statistics were first prepared in 1981, where it concerned the population's labour market participation at the end of November 1980. The statistics are prepared once a year. The long time series includes two major data breaks in the data series in 2003 (November 2002) and 2008. The break in the data series in 2008, which was caused by a change in the source basis, is described in "News from Statistics Denmark" ("Nyt fra Danmarks Statistik") no. 202 from 28 April 2015.

The Register-based Labour Force Statistics are based only on register data.

Applications:

Register-based Labour Force Statistics (RLFS) are applied when you want a high level of detail (e.g. geography, education, ancestry) or a long time series. Since data exist at personal level and establishment level, it is associated with a large amount of background data. Moreover, this data is generally of high quality.

RLFS/LMA constitute the primary data for the integrated database for labour market research (the IDA database).

2.2. The Labour Force Survey (LFS)

The LFS is based on quarterly interviews with approximately 20,000 persons aged 15-74 (approximately 81,000 annually) and is Denmark's most comprehensive continuous interview survey⁵. Interviews are collected as telephone and web-interviews. The labour force survey applies the internationally accepted definitions of employment and unemployment (according to the International Labour Organization guidelines, ILO).

Applications:

The LFS has a wide range of applications with a large and specialised volume of data to describe the population's affiliation to the labour market.

The LFS can shed light on conditions that cannot be determined based on register data. This is the case with issues such as working time arrangements, the extent of home working, matters that concern the potential labour force (how many *would like to get a job*), how people are job hunting etc.

Stakeholders with special interests can purchase labour market surveys focusing on their own questions in the form of a supplementary survey which can be carried out as a part of the interviews for a single quarter. In addition, you can also apply collected labour force survey data in combination with linked register information, e.g. on transfer income.

⁵ Continuously here means that the interviews are performed continuously throughout the year, evenly distributed across all weeks.

The labour force survey is made in all EU countries and in a vast number of other countries based on the same guidelines. For this reason, the labour force survey is the best Danish survey for international comparisons of labour market statistics (see e.g. assessments from [Eurostat](#)).

Moreover, a monthly LFS on employment has been published since the autumn of 2013. The publication is based only on main employment figures broken down by sex and two age groups (15-24 years and 25-74 years). This means that e.g. data on weekly working time is not collected on a monthly basis. The published monthly figures are generated as a moving three-month' average. The last month is a forecast, i.e. an estimate based on information for the whole time series. Because of the moving three-month average, you cannot compare employment from one month to the next, since two consecutive months have a shared data volume. This is why you need to go back three months to compare. The employment figures are revised twice: 1) When the forecasted month has been collected, and 2) when the quarterly figure becomes available, in connection with which employment will be benchmarked against the quarterly figure.

Because the LFS is a survey, it involves a certain amount of sampling errors. As a result, the level of detail is limited. See also [LFS statistics documentation](#).

2.3. The Working Time Accounts (WTA)

The employment in the working time accounts (WTA) is the average employment for the quarter or year (in principle, a statement of the average number of persons in employment per day in the reference period).

The concept is in accordance with the employment statistics in the labour force survey (LFS), which, in principle, also calculates average employment in the reference period, but differs from employment in the register-based labour force statistics, which is determined on a particular day at the end of November. The international guidelines (in the labour market statistics as well as the national accounts statistics) recommend that employment be measured by calculating average employment in the reference period.

In the old WTA, the population was persons above the age of 14 living and working in Denmark. With the conversion of the WTA to apply sources primarily based on eIncome (with data from 2008 onwards), the population is changed to persons working in enterprises in Denmark, including persons living abroad. In September 2016, the WTA were converted to be based on the labour market accounts. For further information, please refer to [WTA's website](#). The statistics now also include persons who are back on the payroll with the same employer after a break of up to 45 days without pay.

Applications:

The WTA are applied when you want an unbroken time series. On the other hand, the breakdown options are limited, since the statistics have been calculated on an aggregate level. However, statistics are available at a relatively detailed industry level, a sectoral breakdown by *general government/enterprises and organisations*, sex and socio-economic status

(whether employees, self-employed persons or assisting spouses are concerned).

Because of the aggregate level of calculation, it is not possible to attach further background data.

2.4. The National Accounts

Employment in the national accounts is the average employment in the reference period (the quarter or the year). As in the previously mentioned labour market statistics, only a person's primary employment is included in the calculation of the number of persons in employment (i.e. the headcount).

Employment in the national accounts includes employed persons who provide labour for the production of goods and services in Denmark, regardless where in the world these persons reside or whether the financial activities are within the framework of the law, as long as the production is within the production cut off for the national accounts.

Employment in the national accounts is economic statistics and not personal statistics. Things like sex and age, educational background etc. are not stated in the national accounts.

The industrial classification of employment in the national accounts differs in some places from the industrial classification in the labour market statistics. This is mainly because movements are made in the national accounts in relation to activity-defined industries; just as the non-market part of the economy is broken down to ensure consistency with the public accounts.

Applications:

The figures from the national accounts can be applied in analyses concerning socio-economic matters. The employment in the national accounts should be applied when you want an unbroken time series that is comparable to e.g. GDP, production and value added in the rest of the national accounts.

The statistics are internationally comparable, since Denmark's national accounts are prepared in accordance with the common EU regulations concerning national accounts statistics.

2.5. Employment in construction

The assessment of the number of persons employed in establishments with construction activities is based on a sample census. At the time of the sampling, the size of the sample was approximately 1,500 enterprises.

The statistics comprise the entire construction sector (industrial classifications 41, 42 and 43 of the Danish Industrial Classifications 2007). The collection unit is kind-of-activity units, which consist of establishments within the same industry. The kind-of-activity units are created on the basis of the establishments for the economic units.

The employment statistics concern a specific day, which is the mid-most Wednesday of the relevant quarter, the so-called census date. The sample is

compiled so that it indicates the overall employment in the industries included in the statistics.

Enterprises with four or less employees are not represented in the sample, whereas all enterprises in the group 40 employees or more have been included in the sample. In the group 5-40 employees, the selection has been made as a stratified sample. The sample is compiled so that it indicates the overall employment in the lines of industry included in the statistics. In the quarterly compilation, the last updated information is applied about construction enterprises from the register of business statistics. In this way, conditions relating to the registration and deregistration of enterprises in construction is taken into account.

Establishments whose main activity is within the following financial activities are included in the construction employment: Building contractors, general contractors, master bricklayers, electricians, plumbers, master carpenters and building joiners, master painters and glaziers and other construction activities. Furthermore, data for employees and working proprietors is broken down by the following types of activities: New buildings, repairs, constructions, other work, not working due to weather, holiday, school attendance etc.

Applications:

The employment in construction is a quick economic indicator, and it is the only indicator focusing on the activity broken down by new buildings, repairs, construction etc.

2.6. Employment Statistics for Employees (ESE)

Employment statistics for employees (ESE) state the average number of persons with employee jobs. These statistics resemble employment statistics in that they are headcounts and break down by the highest priority job, but differ in that they do not include self-employed persons. A person whose main job is as a self-employed person and second job is as an employee will be included in the statistics with his or her highest priority employee job, whereas he or she will be included as a self-employed person in employment statistics. Consequently, the number of persons with employee jobs in Employment Statistics for Employees will be higher than the number of employees in other sets of statistics.

The statistics are based on eIncome and are released with monthly as well as quarterly statements. The population is persons working as employees in enterprises in Denmark, including persons living abroad.

The statistics include persons who are back on the payroll with the same employer after a break of up to 45 days.

Applications:

Employment Statistics for Employees is a relatively quick indicator of the employment and has a limited level of detail. The statistics are broken down by overall industry and sector. Moreover, the quarterly figures can be broken down by overall establishment geography. It is possible to attach further background data to the persons and enterprises.

3. Jobs

A job is defined as a person's affiliation to an establishment where the person has a minimum of one hour of paid work per week in the reference period. Accordingly, the number of jobs is stocktaking of the number of persons employed in a given establishment at a given point in time. The same person may have several jobs at the same time if the person is affiliated to several establishments.

The job statistics do not include temporary leave of absence in the form of maternity leave or other types of leave.

The number of jobs is not affected by a person's short-term sickness, holiday or similar absence from day-to-day work^{6,7}. However, it does not concern the number of jobs, but instead the number of hours of work (see section 5).

A person is attached to an establishment and this means that the person has a job. A given establishment may have different employees. In total, the number of different persons in a given establishment indicates the number of jobs that exist in the relevant establishment. (However, these persons may also have jobs in other establishments). Some establishment information is attached to the individual job held by the person, e.g. industry, sector information and an establishment address. Industry and sector information concerns the main activity of the establishment. In each job, the person puts in some hours of work and receives compensation for his/her contribution to the production output.

3.1. Establishment-related Employment Statistics

The Establishment-related Employment Statistics assess the number of jobs at the end of November each year⁸.

The primary jobs correspond to the person's main job in the Register-based Labour Force Statistics (RLFS), exclusive of jobs from which the person is temporarily absent due to maternity leave and leave. Jobs from which the jobholder is absent for a short term (less than 45 days) are included in the Establishment-related Employment Statistics.

⁶ According to the national accounts statistics (SNA2008: System of National Accounts) from 2008, it is no longer specified that jobs from which job holders are temporarily absent should not be included when calculating jobs. The SNA has previously stated explicitly that temporary absentees should not be considered as having jobs. According to ESA2010 (European System of National Accounts, i.e. the European clarification of the SNA), absentees are not included in the job statistics. So ESA2010 reverted to the job delimitation of the old SNA (1993), and consequently still contrasts with the delimitation of jobs in the other statistical fields.

⁷ According to the business statistics SBS (Structural Business Statistics) and STS (Short Term Business Statistics), jobs from which job holders are temporarily absent must be included when calculating jobs. This means that the business statistics are in agreement with the labour market statistics (ILO), as temporary absentees from a job are not deducted when calculating jobs.

⁸ Before 2008, only a person's primary and secondary jobs at the end of November were included in the Establishment-related Employment Statistics, but with eIncome as a source, all of a person's jobs at the end of November are now included.

Contrary to the RLFS (and the WTA), the Establishment-related Employment Statistics apply an activity limit so that jobs in enterprises below a certain level of activity are not included in the calculation of jobs.

Another difference between the Establishment-related Employment Statistics and the RLFS is that the Establishment-related Employment Statistics only include self-employed persons who are either subject to VAT or liable to pay duty on compensation or are employers, whereas the RLFS also include some self-employed persons who have income during the year from their self-employment activities.

Applications:

The Establishment-related Employment Statistics' jobs are used when you want information about small groups and when you want to have many background variables at your disposal. In addition to the number of jobs, the Establishment-related Employment Statistics also give you information about full-time employment and compensation during the year as well as the number of establishments broken down by size group based on the number of jobs.

3.2. The Working Time Accounts (WTA)

In the Working Time Accounts (WTA), before the general revision in 2012, the average number of primary and secondary jobs per quarter or year was calculated. The basis was the Establishment-related Employment Statistics' number of primary and secondary jobs at the end of November (with data before 2008), which, in the WTA, represented the average number of jobs in the fourth quarter of the year. Development across the year was calculated by projecting the end-of-November statistics with short-term statistics from the monthly reporting of income taxed by the Danish Customs and Tax Administration ("månedlige indberetninger af aindkomst" from SKAT, MIA) and the Labour Force Survey (LFS). The monthly reporting of income taxed was used for a quarterly projection of jobs for employees. The labour force survey (LFS) was applied for projecting jobs for self-employed persons and assisting spouses.

With the revision for eIncome sources in 2012, the average number of jobs and the average number of second jobs across the months of the year were calculated. The basis was the converted (now eIncome-based) Establishment-related Employment Statistics' number of primary jobs and sideline jobs at the end of November, which, in the WTA, represents the average number of jobs in November. The development across the months of the year is calculated in connection with the development in the short-term statistics for Employment Statistics for Employees and the LFS⁹.

After the revision in September 2016, the WTA are based on the labour market accounts (AMR-UN), which include information for all months of the year. Paid hours from the LMA are converted to hours worked based on information from the structural earnings statistics. Short-term statistics are applied for projection

⁹ Learn more about method in the converted WTA in the statistical documentation for the WTA:

<http://www.dst.dk/da/Statistik/dokumentation/statistikdokumentation/det-aarlige-og-det-kvartalsvise-arbejdstidsregnskab>.

of the series in periods for which no LMA data is available yet. Revised time series are available with data starting from 2008. Learn more about the [revisions of the WTA](#). You can also read about the [concepts of the WTA](#).

The activity limit is not applied in the RLFS and WTA because jobs and employment, regardless of extent, should be included in the Labour Market Statistics and the Economic Statistics according to international guidelines.

Applications:

The WTA are useful when you want unbroken time series.

On the other hand, the breakdown options are limited, since the statistics are compiled on an aggregate level. However, statistics are available at a relatively detailed industry level, a breakdown by two sector groups (*general government/enterprises and organisations*), and sex and socio-economic status (whether employees, self-employed persons or assisting spouses are concerned).

Due to the aggregate level, it is not possible to attach further background data.

4. Full-Time Employment

In addition to the mentioned concepts, employment stated in full-time equivalents (so-called full-time employment) is also applied as an employment indicator. In terms of concept, these are not actual employment statistics, since full-time employment is calculated based on volume sizes (amounts or hours) and not on a headcount.

Many users do want a volume concept when they are looking for a measure for the *extent* of employment, and, in this context, full-time employment is an intuitive, easy-to-understand way of stating work volume.

In this way, full-time employment is not an actual employment concept. Consequently, it can be used only as a rough indicator for the development in employment¹⁰.

4.1. Full-time employment in the Establishment-related Employment Statistics

Before 2008, full-time employment in the Establishment-related Employment Statistics was a volume assessment (calculated number of full-time employees) based on the employers' reporting to ATP (which collects statutory labour market pension contributions) for employees between ages 16 and 66 years with at least nine hours of employment per week. Starting from 2008, the full-time assessments in the Establishment-related Employment Statistics are based

¹⁰ Full-time employment can be stated e.g. in cases where the primary sources do not offer a basis for actual employment statistics because they do not comprise all of the labour market (e.g. in the public employment statistics or the former ATP employment indicator). In these cases, it is not possible to prioritise which is the primary of a person's jobs because there is no information as to whether the relevant person has a main job in the part of the labour market which is not incorporated in the statistics (e.g. jobs as a self-employed person or assisting spouse).

on paid hours reported to eIncome. Self-employed persons and assisting spouses are not included in the full-time employment in the Establishment-related Employment Statistics, since these persons are not covered by the ATP scheme nor do they report to eIncome.

Before 2008, these statistics were subject to uncertainty in connection with changes in the scope of the various contribution rates in the public sector. Moreover, employment for employees with less than nine weekly hours of employment was not included.

As a measure for employment volume, an additional uncertainty of the ATP-based full-time employment is the fact that anyone working more than 27 hours per week counts as a full-time employee, regardless how many hours the person works on top of the 27 hours.

Many users have grown accustomed to using the ATP full-time employment through many years. The ATP scheme is a well-established system, but is not a particularly exact measure of work volume, since the statistics do not in general register changes in number of hours of work within the three categories: 9-17 hours per week, 18-26 hours and at least 27 hours per week. ATP full-time employment is calculated by converting ATP amounts within these three categories of scope of work to full-time employment.

The quarterly equivalent of the Establishment-related Employment Statistics' ATP full-time employment has been the ATP employment indicator. The difference is that the Establishment-related Employment Statistics were compiled at establishment level, whereas the reporting for the short-term indicator was based only on the administrative units (SENR level) and, accordingly, this was compiled at enterprise level. Moreover, full-time employment for persons under the age of 16 or over the age of 66 has been added to the establishment-related employment statistics, as these groups are not included in the ATP scheme. The ATP employment indicator was discontinued as a set of statistics after the release of the third quarter 2009 ("Nyt fra Danmarks Statistik" no. 521, 26 November 2009).

After 2008, full-time assessments in the establishment-related employment statistics are based on paid hours reported to eIncome, which is a far more accurate assessment of the volume than that of the previous ATP full-time employment statistics. For more information about paid hours and full-time statistics based on paid hours, please refer to section 4.2.

Applications:

Full-time employment in the Establishment-related Employment Statistics can be broken down in detail by industry.

4.2. Full-time Employment Statistics for Employees

Payroll Employment focuses on the trend in payroll employment in Danish enterprises. The statistics were first published in NYT no. 313 from 30 June 2011 with employment figures for the first quarter of the year 2008 - fourth quarter 2010.

The counting unit is an employee job, which is defined as a person's attachment to an establishment for a period in an enterprise in Denmark. A person may

have several jobs in the same period in various establishments and may have several jobs in the same establishment at different times. Information about employer-paid hours of work (paid hours) and various payroll components is attached to the jobs. In case reported paid hours are missing or regarded as invalid or unlikely, a calculation is made of these. The calculated paid hours constituted approximately 15 per cent of the total number of paid hours in 2008, but is now usually below 5 per cent. The share varies according to industry and sector. Based on total paid hours, the equivalent number of full-time employees is calculated by dividing the total number of hours for a month by 160.33 (corresponding to 37 hours per week). The number of full-time employees in the reference quarter is calculated as an average of the number of full-time employees in the three months of the quarter.

The source for Employment Statistics for Employees is the eIncome Register (eIR) supplemented with data from Statistics Denmark's Business Register and Population Register. The eIncome Register (eIR) is based on income information reported to the IT and Development Agency's (previously the Danish Customs and Tax Administration's) eIncome register (eIncome). The margin of employee jobs is above 99 per cent. The statistics are grossed-up in proportion to non-received reports in the latest quarter.

The employment is broken down by sector and general industry.

Applications:

The uncertainty in connection with the applied sources is considered relatively small in terms of the scope of employment at an overall level.

As for the more detailed employment statistics, in terms of breakdown by industry and geography, the uncertainty is considerably higher. This is due to outstanding reporting of production units in eIncome, especially in the public sector, which has made it difficult to link the activities with the establishments where the persons are employed. At present, quality assessments of the statistics have only been made to a limited extent.

4.3. Public Employment Statistics

The Public Employment Statistics cover the sector *General government*. The statistics were converted in 2013, and they now use the same primary data as the Employment Statistics for Employees. The information is combined with reporting of e.g. account numbers from the public payroll systems.

For information about the counting unit and the source, please refer to Section 4.2 Full-time Employment Statistics for Employees.

Applications:

The statistics are broken down by sector and purpose (COFOG). The Public Employment Statistics are the only labour market statistics with a breakdown by COFOG groups, which is the National Accounts breakdown of public expenses by purpose¹¹.

¹¹ For more information about breakdown by purpose (COFOG), please refer to www.dst.dk/COFOG

4.4. The Labour Market Accounts (LMA)

The Labour Market Accounts (LMA) is a new set of statistics, which Statistics Denmark has been working to develop for several years. These statistics were first released in April 2015 (in “Nyt fra Danmarks Statistik” no. 211, 30 April 2015). The LMA are annual statistics covering the period 2008 to 2015.

The LMA are population accounts of the total Danish population emphasizing labour market-related activities. The labour market participation is calculated in full-time equivalents, which means that the number of persons in full-time employment can also be assessed in the LMA.

The calculation of full-time persons is based on the existing weekly full-time working hour norm, i.e. 37 hours per week. Consequently, a full-time person corresponds to 37 hours per week, and a person can contribute by a maximum of 37 hours per week in the LMA.

This means that if a person has more than 37 hours per week, the hours will be written down/re-allocated according to the validity that the information is estimated to have. When the information is estimated to be valid, employment is given priority. As a result, the number of persons in full-time employment in the LMA corresponds to the persons having worked 37 hours per week.

Applications:

The LMA are applied when you want to assess the labour market affiliation of the population in broad terms (i.e. not necessarily just the number of persons in full-time employment), and base it on the current standard number of hours.

It is possible to break down the LMA by a number of person-related background data (sex, age, area and ancestry).

On the other hand, the LMA cannot be broken down by establishment-related background data (industry, sector, establishment municipality). The reason to omit such breakdowns is the fact that the standard hours have been fixed based on 37 hours per week. It means that the number of persons in full-time employment broken down by e.g. industry will not reflect the real extent of activities in the industry, since hours on top of 37 hours per week are not included. For this reason, the LMA must be regarded primarily as person-related statistics.

In general, LMA data is of high quality. This is owing to e.g. the fact that, in the LMA, a vast number of data sources are integrated and harmonised in a statistics system. This means that the LMA can focus on the labour market much better than the existing individual statistics.

The LMA also exist in a version without standardisation of hours (a register called AMR-UN), which is not published separately, however. In the non-standard-time LMA (AMR-UN), hours beyond 37 hours per week are included. The AMR-UN provides the primary data for the Register-based Labour Force Statistics, the Establishment-related Employment Statistics and the Working Time Accounts, and it is also made available through Statistics Denmark's research scheme.

5. Hour statistics

Working time is a volume indicating the number of hours related to work. Hours of work are not an indicator of the amount of work performed in the form of production output. The hours of work reflect the time used for (or allocated to) the job.

However, there are numerous concepts dealing with working time:

- *Paid hours* indicate the hours of work that the employer is paying for.
- *Agreed hours/contractual hours* indicate the hours agreed (written down or communicated orally) in an agreement or contract between the employer and the employee – for full-time employees this is typically 37 hours per week.
- *Normal hours* indicate the number of hours that you usually work – this will be the agreed paid hours and the normal overtime¹².
- *Hours of absence* are the hours you have missed from work even though they are within the agreed working time.
- *Overtime hours* are the hours worked beyond the agreed time¹³.
- *Hours worked /actual hours of work* indicate the hours that you are working – whether you are working at the office or working from home. Hours worked are exclusive of absence and inclusive of overtime. In this way, hours worked are a measure of the labour input actually used to produce output in a given reference period.¹⁴

When hours and pay are calculated, these are connected with the job (i.e. not just to the main job, but also to hours and pay relating to any sideline jobs held by the person). The same person may have a main job in one industry while at the same time holding a second job in a different industry and perhaps a third job in a yet another line of industry. Hours and pay in the individual industry reflects the number of hours and the pay that has been connected with (main or sideline) jobs in the industry in the reference period.

It is possible to assess how many hours of work the individual persons in employment have. In this way, it is assessed how many hours *the persons* have offered. This would be relevant e.g. if you want to focus on the work-life balance etc.

¹² In the Labour Force Survey (LFS), a distinction is usually made between normally occurring overtime and temporary overtime. The normal overtime is a common part of the hours of work required to hold the job.

¹³ In the LFS, you distinguish between normal overtime (defined by hours usually worked in addition to the agreed working time) and temporary overtime (defined by the actual hours worked in excess of the normal hours of work, where the latter normal hours of work include the normal overtime). The normal overtime is typically unpaid overtime hours. In register statistics, hours of unpaid work and hours of illegal work (including moonlighting) are not included, which is why this distinction is not made in a register context.

¹⁴ Accordingly, hours worked are also applied when you want to measure the effectiveness of the work process. The work productivity is measured by relating the gross value added or gross domestic product at factor cost to the number of hours worked. Changes in work productivity, however, may have other causes than changes in work performance. Capital employment and other factors of production may grow or technological advances be made, i.e. increased output with the same employment of resources. This is one of the reasons that productivity is measured by total factor productivity, which is based on the ratio between gross value added or gross domestic product at factor cost and the total employment of factors of production.

From a corporate perspective, the most interesting thing to know is which jobs and, accordingly, which establishments and industries the person has put his/her effort. The hours of work in a single industry is made up of the main or sideline jobs of various persons.

5.1. The Labour Force Survey (LFS)

For persons in employment, focus in the Labour Force Survey (LFS) is on documenting various aspects of their working conditions. In the LFS, questions are asked about number of hours in the person's main job and most important second job.

In the LFS, questions are also asked about the number of hours that the person *usually* works in the job per week (which includes normal overtime). When normal weekly working time is to be calculated, it will be difficult for some groups to determine this, e.g. persons with periodic work (casual workers, recipients of part-time early-retirement pay and part-time pensioners) and persons with varying or not fixed working time. For these persons, an indication of average working time over the last four weeks is requested.

Furthermore, questions are included about the *agreed* hours of work (i.e. how many hours your employment contract is for – regardless if the contract is written or oral). The contractual hours are exclusive of overtime but include any hours of absence.

The last hour concept asked about in the LFS is the *actual working time* in the week before the interview (the so-called reference week). The actual working time is the number of hours actually worked, exclusive of absence and inclusive of overtime. This applies regardless if the work is paid, unpaid, registered, illegal (including moonlighting) etc.

Applications:

Based on the LFS, it is possible to calculate the average number of actual hours worked per person in employment.

When hour statistics are calculated, the same persons are included in the numerator and denominator when the average number of hours worked per person in employment is calculated. Accordingly, the LFS offers a qualified guess as to the average number of hours worked per person in employment. In other sets of statistics (e.g. the WTA and the national accounts), the total number of hours worked (from all main and sideline jobs) and the average number of persons in employment are calculated. If you try to use these to calculate the average number of hours worked per person in employment, the same units will not be applied in the numerator and denominator.

The LFS can shed light on conditions that are not possible to assess based on register data. This concerns issues such as working time arrangements, hour statistics in normal time and contractual time as well as actual hours worked, the extent of work from home and work at “odd” hours, reasons for temporary absence from work (holiday, sickness, leave), issues pertaining to the potential work force (how many persons *want* to work more or less hours than they do at the time of the interview) etc. Moreover, a supplementary survey is made once a year about moonlighting, which is prepared for the National Accounts.

The LFS is the only source that documents the extent of moonlighting among persons in employment and persons not in employment.

Stakeholders with special interests can purchase labour market surveys focusing on their own questions in the form of a supplementary survey which can be carried out as a part of the interviews for a single quarter. See also section 2.2. For stakeholders with special interests, there is an appendix to the present memo describing the differences between hour statistics in the LFS (data provided directly by the persons in employment) and the earnings statistics (from the enterprises' administrative payroll systems).

5.2. The Working Time Accounts (WTA)

The Working Time Accounts (WTA) assess working time in the form of hours worked and is based on e.g. the number of paid hours in the Labour Market Accounts (LMA) combined with information about the relationship between hours worked and paid hours from the structural earnings statistics. The data has been projected in the period for which structural LMA data does not yet exist, primarily by means of information from Employment Statistics for Employees.

The WTA form the basis for assessments of hours worked and average employment in the National Accounts.

Because the WTA are based on administrative data, the hour concept is exclusive of unpaid hours and illegal labour (including moonlighting). Learn more about WTA's concepts and revisions [here](#).

Applications:

The WTA are applied when you want overall statistics of hours of work per quarter or year broken down by industry at a relatively detailed level.

5.3. The National Accounts

Employment in the National Accounts includes hours worked as the hours actually worked in connection with the production of goods and services in Denmark, regardless where in the world the workers reside, or whether the financial activities are legal, as long as the production is within the production cut off of the national accounts.

Hours from the primary job as well as any other jobs and hours of unpaid overtime and illegal activity are included in hours worked.

The National Accounts' working time is economic statistics and not social statistics. Things like sex and age, educational background etc. are not stated in the national accounts.

The industrial classification of working time in the National Accounts differs in some respects from the industrial classification in the labour market statistics. This is mainly because movements are made in the national accounts in terms of activity-defined industries; just as the non-market part of the economy is broken down to ensure consistency with the public accounts.

Applications:

As figures applied in analyses concerning socio-economic matters. Apply the working time of the national accounts when you want an unbroken time series that is comparable to e.g. GDP, production and value added in the rest of the national accounts.

If you want to look into the work force performance in the production of the national accounts, you should use the national accounts' consumption of labour measured in hours worked rather than persons in employment, as the hours reflect more accurately the volume of the labour consumption in the national accounts.

The statistics are internationally comparable, since Denmark's National Accounts are prepared in accordance with the common EU regulations concerning national accounts statistics.

5.4. Agricultural Accounts Statistics

In the agricultural accounts statistics, a distinction is made between full-time farms and part-time farms, and this split is based on the farm's total working time (hours of work). A full-time farm is defined as involving 1,655 hours or more, corresponding to one annual work unit, whereas part-time farms are defined as involving less labour than one annual work unit. An annual work unit is defined as 45 weeks * 37 hours = 1,665 hours (which corresponds to 1,924 hours if holidays and public holidays were included in the calculation, i.e. 52 weeks * 37 hours). In accounts statistics from before the accounting year 2010, standard hours of work are used for breaking down the farms in the sample into full-time and part-time farms.

The agricultural accounts statistics apply the concept of "annual work unit" as a term for full-time employment. Since annual work units are calculated on the basis of total working time on the farm relative to 1,665 hours, the farmer as well as other persons working on the farm may account for more than one annual work unit. In addition, the statistics release key figures, stated per hour, for which the background is also total working time spent on the farm.

In the primary data of the agricultural accounts statistics, information about labour includes the total hours of work during the year for the farmer (the farmer himself/herself), the farmer's spouse, other family members in full-time or seasonal employment without compensation as well as hired labour such as farm managers and other persons in permanent or seasonal employment. In this way, the total hours of work for a farm consists of paid (employees) and unpaid (farmer + farmer's family) labour. The primary data also includes information about the number of persons in permanent employment as well as the year of birth and education and training of the farmer and – if relevant – the farm manager.

As the statistics are based on a sample, the results are subject to some level of uncertainty. The indication of hours of work for the farm family is based on an

estimate from the farmer/accountant, whereas working time for employees is regarded as more reliable, as this often relies on a record of the number of hours.

There is no information in the primary data as to whether farmers or employees are employed elsewhere. In addition, there is no information as to whether the work is the person's primary job or a sideline job.

When grossing up to population level, standard hours of work are applied for the farms in the population. The standard hours of work reflect the average consumption of labour and is the sum of the individual activities (e.g. wheat, barley, dairy cows, cattle for fattening, fur animals etc.). Based on the statistics Economics of Agricultural Activities, the number of hours required per unit to produce that unit, i.e. the number of hours that an average farm spends on e.g. cultivating 1 ha of wheat or tending to 1 dairy cow.

The population of the accounts statistics include farms with a Standard Output of at least EUR 15,000 or at least 10 ha under cultivation. I.e. farms with a Standard Output of less than EUR 15,000 are included in the statistics if they cultivate in excess of 10 ha. In the same way as standard hours of work, standard output is calculated per unit (ha or livestock). Standard output roughly corresponds to gross output in the statistics tables. The standard output coefficients have been calculated on the basis of a reference period of five years.

The sample constitutes 6-7 per cent of the population.

Applications:

Working time from the agricultural accounts statistics can be used to say something about the average hours of work per farm and per farm within each type of farming. The hours of work are broken down on employees and the farm family, respectively. These statistics are not useful in terms of employment (number of persons in employment at a given point in time) or the number of jobs.

Statbank Denmark has a time series starting in 2008 as well as a terminated time series in which standard hours of work is the basis of the breakdown into full-time and part-time for the period 1990-2010. As far as agriculture is concerned, the accounts statistics were started way back in 1916, and since 1966, detailed data has been compiled on working time.

6. The commuting statistics

A commuter is defined as a person who does not live and work at the same address. The commuting is often a daily commute between the place of residence and the establishment, but it may also involve a commute that is made less frequently. The statistics do not include information about the frequency of the commuting, nor which means of transport the commuter is using.

Statistics Denmark records:

- Commuting between place of residence and work within the borders of Denmark (including an assessment of commuting distances)
- Commuting across the Oresund strait

The statistics applied for the commuting statistics are the Register-based Labour Force Statistics.

The commuting distance is calculated as the shortest road distance from the employee's place of residence to the establishment address. The trip home is not included in the commuting distance.

[The commuting across the Oresund strait](#) concerns the commute between Eastern Denmark and Scania in Sweden for persons living in one of the countries and having their main job in the other.

In order to count as a work commuter, the person must have been an employee in the neighbouring country in November of the relevant year and any income in the home country must not exceed the income in the establishment country.

There are approximately 20 background variables in the Oresund strait commuting.

Applications:

Just as for the Register-based Labour Force Statistics, the information exists at personal level and has numerous background variables attached.

For the Oresund strait statistics, the variables concern the municipality of residence, age, sex, level of education, country of birth or region of birth and payroll income of the commuter as well as the industry, size and regional location of the establishment.

Appendix: For stakeholders with special interests:

A. Registration of working time from interviews with the persons in employment

In the LFS, weekly number of hours of work is assessed. The interviews take place across the year. This means that absence is also picked up (e.g. in connection with holidays and sickness and similar forms of absence). In this context, it is important to note whether fully absent persons in employment or only persons in employment who have had a minimum of one hour of paid work in the reference week are included in assessments of average working time. The latter figure will naturally give a higher average weekly number of hours. Actual working time inclusive of as well as exclusive of fully absent persons in employment is published in StatBank Denmark¹⁵.

There is a difference in level between working time assessed in the LFS and in the register-based sources, where the LFS is at a higher level.

There are several reasons for this difference in level. In the LFS, the persons in employment are asked directly, as opposed to the register-based statistics where the information comes from the employers' payroll systems. Unpaid overtime and moonlighting, for example, will not be included in the register-based working time, whereas these forms of work may be included in the information that the person provides for the LFS. There may be measuring problems in the LFS if the respondent does not remember exactly how many hours he or she worked in the reference week. This is why there may be overestimating as well as underestimating of working time as well as absence¹⁶.

Analyses of the working time in the LFS show e.g. that there is a problem with rounding in the LFS, since working time is currently stated in whole hours. Consequently, persons with e.g. 37.5 hours of work will tend to round this up to 38 hours.

In addition, a number of conceptual differences may affect the various levels. Unpaid overtime and moonlighting, for example, will not be included in the register-based working time. The LFS's information is derived from telephone and web interviews with the persons in employment. This means that the hours registered rely on the memory and willingness of the interviewees to state them correctly (which may depend on e.g. the type of hours concerned), just as they may depend on how skilled the interviewers are (and the time they are granted) to explain the concepts to the reporting persons. This may result in biased information. This does not necessarily constitute a problem if you use the LFS for comparisons with other groups covered by the LFS, as long as the incorrect data does not vary systematically between the groups that are being compared.

¹⁵ In this way, it is possible to meet the employment definition in the LFS even though you have not worked during the week in question if short-term, limited absence due to holiday, sickness, leave or similar is concerned. The essence of the matter is whether you are still attached to the establishment.

¹⁶ Source – SCB 2012 – in a special study of the Swedish LFS, the hours of overtime as well as absence were found to be underreported.

In connection with comparisons of *weekly hour information between employees, self-employed persons and assisting spouses*, there is reason to assume that systematic bias exists. For example, results from Finland suggest that self-employed persons tend to over-report their hours of work in labour force surveys¹⁷. We suspect that this over-reporting is higher in those cases where the establishment for the self-employed person (and the assisting spouse) is the self-employed person's place of residence, since there is reason to suppose that the relationship between working time and spare time is rather blurry. This is especially the case for agricultural employment etc. and other minor enterprises within the retail and commercial business.

Also *within each of the groups*: employees, self-employed persons and assisting spouses, there may be systematic errors in the information provided by the respondents for the LFS. For instance, surveys from time studies in the USA suggest that persons working long hours tend to over-report their hours of work¹⁸. Furthermore, surveys suggest that conventional LFS measurements of working time tend to underestimate absence during the week ("part-week absence from work") as well as overtime, if you compare it with data from administrative registers. Similar surveys have not been performed for Danish data, but the problem may be reasonably supposed to apply for the LFS in general.

Another type of measuring error may be caused by the interviewees not knowing exactly which activities that are included in the concept "work" and for this reason may include time spent on activities that are not consistent with the international definitions of work. This may be because the activity is considered to be work in their establishment or because they are paid to do so. People may also fail to report time spent on activities which are in fact work, e.g. because they are not paid to do so^{19 20}.

Furthermore, the respondents may deliberately give incorrect information, e.g. leave out information that is compromising or socially unacceptable, or they may fail to report unauthorised absence.

Finally, information from the LFS, like other sample surveys, is subject to sampling error. The more detailed the breakdown, which is made on the basis of the labour force survey, the higher the risk of sampling error.

B. Registration of working time based on enterprise information (administrative data from the payroll systems)

Only registered hours paid by the employer are reported for the earnings statistics. Employers tend only to register information of hours in which they have an interest for payroll purposes, i.e. the number of hours for which they pay wages or salaries or for which they receive a refund from the public coffers²¹.

¹⁷ Source: OECD (1998), pp. 6-7.

¹⁸ Source: OECD (1998), p. 7.

¹⁹ Source: Mata Greenwood (2001).

²⁰ See the [ILO resolution concerning the measurement of working time](#).

²¹ Source: OECD (1998), p. 5.

Information in the administrative systems of the enterprises is used e.g. for reporting to SKAT (the Danish Customs and Tax Administration). Illegal hours (including moonlighting) are not registered.

For employees with time-based pay, the difference between paid hours and paid absence will typically be hours worked.

However, this correlation will not be that clear for fixed pay employees, where the reported paid hours will most often be the normal hours, i.e. not hold information about unpaid *overtime hours*, i.e. *actual hours will be relatively underestimated for fixed pay employees*.

Unpaid hours are not reported, i.e. partly the hours that are worked on a *voluntary basis*, but also hours that you are expected to work in order to hold the relevant job (and here the expectations may well be that you work e.g. 50 hours per week, even though the agreement says 37 hours working week)²². When *the overtime which is part of the normal working time in certain jobs* (and accordingly no separate pay supplements are paid which require registration in the earnings statistics) is not reported for the earnings statistics, the working time for these jobs is underestimated. Since these characteristics apply particularly for high-paying jobs, the actual hours of work are underestimated for this group²³.

Overtime which is remunerated in the form of a bonus at the end of the year (where e.g. a flexitime credit is reset) is not registered on the time sheet²⁴.

Many employees are paid for their *lunch hour*. In the payroll systems, it is not possible to segregate time spent on lunch. If the employer pays for the lunch break, this is included in the stated number of hours from the earnings statistics. Quite a few argue that the employer often pays the lunch break because, in return, they expect the employees still to be available in their lunch break and on call, if necessary²⁵. In Denmark, this is particularly relevant, since it is not common to take several hours off from work in the middle of the day to go home or out for lunch, but rather take a short break to have lunch at the establishment.²⁶ According to the ILO, hours worked must include breaks of

²² Some will claim that these hours are not *unpaid*, since the payment resides in the pay that you get for the relevant job, and if it is necessary to work more than 37 hours per week, the hourly pay is simply correspondingly lower. Some will also say that the last hours are *voluntary*, since you have chosen the job that you have (in the ordinary job market). Most people have no doubt, however, that if they do not work the (more or less explicitly communicated) expected hours, they will lose their job.

²³ This is particularly problematic in connection with comparisons with the LFS, since the situation here is the exact opposite cf. the above about persons working many/long hours.

²⁴ The bonus payment appears in the earnings statistics as part of the irregular payments, but is not registered in hours.

²⁵ Being available can cover many things, depending on the type of job you hold: It may be for external customers who need some kind of service, it may be that you have lunch while continuing your work, or it may be that you exchange work-related information with your colleagues while you are eating.

²⁶ Analyses based on the LFS have shown that the group which must pay for their own lunch typically spends less than half an hour per day on lunch. However, it is currently not possible to calculate exactly how much time is spent on lunch, since you must not specify hours spent on lunch for the LFS, but only specify whether the number of hours is inclusive of or exclusive of lunch. Consequently, the conclusions are made by

less than half an hour, whereas lunch breaks etc. of durations of more than half an hour must count as absence and accordingly not be included in the hours worked.

Another element of uncertainty in the recording of hours worked is that some of the hour statistics are determined by the collective agreements, in terms of how much *other standby time* (e.g. on-call duty) counts in the time sheet. It means that, in principle, different working time may be reported for persons employed under different agreements even though they are in fact working equally long hours.

For administrative purposes, enterprises rarely have an interest in recording exactly when an employment begins and when it ends (especially). The enterprises may have an interest in keeping the information in the payroll systems about persons who may potentially come back later.

The working time of temps, fixed-term employees (consultants, external examiners, board members etc.) and employees with irregular working hours will typically be relatively inadequately registered concerning periods in which they work more intensely than others and concerning the timing of their employment (the number of employments registered with commencement on 1 January and conclusion 31 December are overrepresented).

comparing the average number of hours for those stating hours inclusive of lunch, and number of hours for those stating hours exclusive of lunch.

List of references

EUROSTAT (2010): *Report from the Task Force on adapting the explanatory notes with respect to working time*. Working Group Labour Market Statistics. Document for item 8.3 of the agenda, 13-14 December 2010 Bech Building, Room Ampère, Luxembourg. Doc. Eurostat /F2 /EMPL/39/10 Annex.

EU (EUROSTAT, 2013): [European System of Accounts – ESA 2010](#). ISBN: 978-92-79-31242-7.

FN (UNSTAT, 2009): *System of National Accounts 2008 (SNA 2008)*. ISBN: 978-92-1-161522-7.

Hoffmann, Eivind and Adriana Mata (1998): *Measuring Working Time: An alternative approach to classifying time use*. Bulletin of Labour Statistics 1998-3.

Hoffmann, Eivind and Adriana Mata (2000): *Statistics on working time arrangements: An overview of issues and some experiences*. Invited paper for the ECE-EUROSTAT-ILO Seminar on Measurement of Quality of Employment, Geneva 3-5 May 2000.

ILO (2013): [Resolution concerning statistics of work, employment and labour underutilization](#). Adopted by the 19th International Conference of Labour Statisticians (October 2013).

ILO (1990): *Surveys on economically active population, employment, unemployment and underemployment: An ILO manual on concepts and methods*. Geneva, International Labour Office. ISBN 92-2-106516-2.

ILO (2009): *Report of the 18th International Conference of Labour Statisticians*, Geneva, 24 November – 5 December 2008. ISBN: 987-92-2-121730-5.

Mata Greenwood, Adriane (2001): *The hours that we work: the data we need, the data we get*. ILO Bulletin of labour Statistics, 2001-1.

OECD (1998): *Annual hours of work: Definitional and comparability issues*. Working Party on Employment and Unemployment Statistics. DEELSA/ELSA/WP7(98)2.

SCB (2012): *Actual Hours Worked in the Swedish LFS – Four articles*

Viby Mogensen, G., *Moral på skatteområdet. Danske erfaringer 1980-1997*, i S. Pedersen, *Skyggeøkonomien i Vesteuropa. Målinger og resultater for udvalgte lande*, København, 1998.