

# **STATISTICS** ATP-employment statistics

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<b>0.4 Purpose and History</b> The purpose the statistics is to give a quick indicator concerning employment trends analysed by industry and sector.	Sidsel Vive Jensen (+45 39 17 34 07 syi@dst.dk Shortcut to this page www.dst.dk/declarations/845

The ATP scheme (Labour Market

Supplementary Pension Scheme) came into force on 1 April 1964. The purpose of the scheme is to pay out supplementary pension to retired employees, among others. Since then the scheme has been subjected to a number of changes, such as an extension of membership, changes in payments and in the administration.

Apart from minor changes, the statistics have been compiled in their present form since 1978. During this period the ATP scheme was changed several times, and it was necessary to correct the employment figures to enable data comparability with earlier periods.

When the employment statistics were published on the basis of the ATP statistics for the 2nd quarter 2002 (preliminary figures), a revised and improved edition of the statistics was presented. In addition to some minor adjustments made to the calculation method, the most important change is that it is now possible to distribute the statistics by industry as well as sector. Thus, the revised employment statistics provide greater cohesion with other statistics based on data extracted from the Central Business Register operated by Statistics Denmark. Starting with the 3rd quarter 1998 the revised employment statistics, including the new distribution by sector, were presented for the first time on 12 September 2002. Due to the introduction of a D contribution and 180.000 ATP-members changing contribution by January 1st 2006 it has since 2006 not been possible to publish detailed industrial groupings below the 9-standard group of public and personal services (respectively the industries public administration, education, human health services, social institutions etc. and associations, culture and refuse disposal).

## 0.5 Users and Application

Users: Ministries, organisations, international organisations, banks and private enterprises.

Data from the ATP statistics are also included as input in connection with compiling other statistics by Statistics Denmark.

Fields of application: Public and private surveillance of short-term trends.

#### 0.6 Sources

The ATP fund submits data material to Statistics Denmark twice every quarter, a preliminary as well as a final data material, which contains information on the

employers' quarterly payments of contributions to the ATP scheme. Statistics Denmark receives the preliminary data material 4 to 5 weeks after the end of the quarter and is used for compiling preliminary employment statistics. At this moment, about 6-8 pct. of the employers, covering about 1-3 pct. of total employment, have not yet paid up the ATP contributions. Consequently, approximately 15 weeks after the end of the quarter, a new data extract for the same quarter is submitted. This data material is used in compiling the final statistics, as the ATP contributions have at this time been paid by a great majority of the employers.

Employment is divided along, among others, industry and sector groups. Information on industry and sector is obtained by means of the SE number from the Central Business Register, which contains a number of unit types (e.g. SE) and information on the relationships between these units. For each unit there is information relating to various variables. Industry and code of functions are the primary variables that are obtained for compiling the employment statistics.

#### 0.7 Legal Authority to Collect Data

The Act on Statistics Denmark, section 6, as amended (by Act no 15 of January, 12, 1972, by Act no 386 of June, 13, 1990 and by Act no 1025 of December, 19, 1992).

#### 0.8 Response burden

There is no response burden, as all data are collected via administrative and statistical registers (see item 0.6).

#### 0.9 EU Regulation

No EU Regulation.

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#### 1 Contents

## 1.1 Description of Contents

The statistics show the quarterly changes in the number of full-time employees analysed by industry as well as sector.

The calculation of employment is undertaken by using two types of contributions, a quarterly contribution and three annual contributions. The annual contributions relate to the total contributions made by the employer for the year prior to the quarter under survey in the statistics. These annual contributions are analysed by, respectively A, B and C contributions, as the distribution of the paid-up contributions analysed by A, B and C contributions for the previous year is know when the statistical data for the quarter under survey are to be compiled. By January 1st 2006 the D contribution was introduced, this has necessitated changes in the method of calculating the employment, since the annual contributions divided into A- B- C- and now D contribution is not yet known.

For each employer (SE number) the quarterly contribution plus three annual contributions, respectively A, B and C contributions, are thus known. It is primarily in the public sector that the ATP contributions vary between, respectively A, B, C and D contributions. The reason for this is that the ATP contributions are differentiated in accordance with the collective wage agreement for some employees in the public sector full contributions (A) are paid, while for other employees B, C or D contributions are paid. These rates of contribution make up, respectively about 40 pct., about 60 pct. and about 48 pct. of the ordinary contribution.

The quarterly contribution and the three annual contributions form the basis for calculating employment, as the annual contributions are used as distribution key for the quarterly contribution. When recalculating the quarterly contributions into employment, the starting point is the distribution of the total annual contribution for the most recently known year analysed by, respectively A, B and C contributions for the SE number in question. Subsequently, the quarterly contribution is divided

by the ATP contribution for a person employed full-time. With the introduction of the D contribution the method of calculating the employment has been adjusted, by estimating the annual distribution of the D contribution based on information from the ATP fund on the number of public sector employees changing contribution. According to the ATP fund about 180.000 public employees have changed contribution from B- to D rate on January 1st 2006, at the same time about 45.000 public employees changed contribution from B- to C rate. Furthermore, 120.000 public employees have by April 1st 2006 changed from D-to C-rate contributions.

The employment figures are calculated by dividing the total amount of ATP payments with the ATP contribution made by each employer for a person employed full-time. This measurement can thus be said to reflect the number of full-time employees, who are able to carry out the same amount of work, which is actually carried out in all full, commenced, and completed jobs for full-time as well as part-time employees in the quarter under survey. Consequently, the number of full-time employees is not similar to the number of persons in employment.

When the calculation has been undertaken, information on industry and sector is extracted from the Central Business Register by means of the SE number.

In order to show the quarterly changes in the employment the statistics is seasonally adjusted, using the X-12 ARIMA model.

#### 1.2 Statistical Concepts

#### Population:

The ATP payments made by the employers form the basis for the employment statistics. The ATP payments concern all employees aged 16-66 years. The ATP payments must be made by an employer in order to be included in the employment statistics, or in other words, the payments must relate to employment.

The following groups of persons are included in the employment statistics (as of 1 January 2002):

Employees aged 16-66 years, including employees on leave with pay Employees receiving sickness benefits, while absent due to sickness, during the first 2 weeks of sickness

Foreign employees working in Denmark and Danish employees working abroad

## Casual workers

Persons who are comprised by the different labour- market policy measures are included to the extent to which the rules for ATP payments are subjected, i.e. employment as employee, e.g. persons receiving ordinary job training, flex-jobs or sheltered jobs

Employment in Greenland and the Faeroe Islands

For information on employed persons who are not included in the ATP statistics, e.g. self-employed and assisting spouses, reference is made to the workforce survey and the register-based labour force statistics.

## Variables:

Every three months the employers pay a single amount for all wage earners employed in the business enterprise to the ATP scheme, but data on the composition of full-time and part-time employees, sex, age and geographic location of branches, etc. are not reported. Consequently, it is not possible to distribute employment according to the above criteria.

## Statistical measurements:

The estimated number of full-time employed, total ATP payments plus the number of employers (SE numbers).

## Groupings:

Industries in accordance with the Danish Industrial Classification of All Economic

Activities, DB93, from 2003 in accordance with the Danish Industrial Classification of All Economic Activities, DB03, and distribution by sector conducted on the basis of the code of function, and groupings by size.

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#### 2 Time

#### 2.1 Reference Period

The statistics are compiled quarterly, and full-time employment is calculated from the total ATP payments in the reference period. The data relating to industry and sector, which are collected from the Central Business Register, concerns the reference period.

## 2.2 Date of Publication

The statistics are published quarterly. The quarterly statistics are published both in a preliminary and in a revised version. The preliminary quarterly statistics are published approximately 50 days after the end of the quarter, while the revised quarterly statistics are published approximately 140 days after the end of the quarter. The dates of publication are fixed in accordance with the dates of receipt of the ATP data material from the ATP fund.

#### 2.3 Punctuality

Scheduled publication times are generally observed very precisely.

#### 2.4 Frequency

The statistics are published quarterly. The quarterly statistics are published both in a preliminary and in a revised version.

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#### 3 Accuracy

#### 3.1 Overall accuracy

Due to the fact that the statistics are based on calculated figures, it is difficult to indicate the statistical errors exactly. However, it must be firmly established that attention should not be focused on the level, but on the changes in full-time employment.

## 3.2 Sources of inaccuracy

- 1) The ATP payments made by the employers form the basis for the employment statistics. The general rule applied as to whether ATP payments are to be included in the employment statistics is that the ATP payments are made by an employer, or in other words, the payments must relate to employment.
- 2) The distribution of ATP payments by four rates of contribution is only compiled annually. If there are changes in the number of employees paying A, B, C and D contributions compared to the distribution of the previous year, these changes will be reflected in the contributions, and thus in the full-time employment, whereas they will not be reflected in the total employment. For example, if a business enterprise is only paying contributions relating to the A rate in the annual contributions of the previous year, but there are actually some employees at the enterprise who paid the B rate in the quarter under survey; this will imply that the employment figures are understated. There has been a change in the number of employees paying B rate to respectively D- and C rate with the introduction of the D contribution, this change has been estimated in order to prevent the employment figures from being overstated. As a consequence of this estimation it is not possible to publish detailed industrial groupings below the 9-standard group of public and personal services (respectively the industries public administration, education, human health services, social institutions etc. and associations, culture and refuse disposal) as these groupings are not accurate.
- 3) Due to an administrative reorganisation of the public sector caused by the municipal reform in 2007 it has not since been possible to divide general government into state, counties, municipalities, and social security funds.

- 4) As the payment of ATP is made via the enterprise's SE number, the grouping by industry of full-time employment is not as precise as that of other labour market statistics. This is due to the circumstance that a SE number may be the main number for several workplaces (kind of economic activity) engaged in different activities. The enterprise is then grouped by industry according to the main activity of the SE number in question.
- 5) As already described, employees receiving sickness benefits have been subjected to the ATP scheme since 1 October 1993. Employers, who do not pay out wages and salaries during sickness, must pay out unemployment benefits during the two first weeks of absence in accordance with the Danish act on sickness benefits. In order to compensate recipients of sickness benefits for the lack of labour market pension contributions during sickness, twice the ordinary contribution (however, only 1½ contribution in 1997) must be paid according to rules laid down in 1997. This double contribution comprises the ordinary ATP contribution plus a supplementary contribution for each hour sickness benefits is claimed. The employers pay in accordance with the general terms 2/3 of the contribution, while the employees pay 1/3 of the contribution.

Furthermore, the introduction in 1999 of the special pension scheme savings (SP) has had an impact on the employment statistics in connection with the employers' payments of sickness benefits during the 14-day period, as a 1% SP contribution of the sickness benefits has to be paid. Private employers pay a double rate of contribution plus the SP contribution of the sickness benefits during the 14-day period, together with the ATP contribution of wages and salaries for the entire business enterprise. Public employers pay a double rate of contribution of the sickness benefits during the 14-day period, together with the ATP contribution of wages and salaries for the entire business enterprise. Unlike the private employers, the public employers pay the SP contribution of the sickness benefits during the 14-day period separately.

The additional payments imply that the total payments and thereby the estimated employment figures increase irrespectively of the amount of employment. The available sources, including the Confederation of Danish Employers and the ATP fund estimate the additional payments to reach about 10,000 full-time persons for the year 2000.

On 1 July 2002 a new Act concerning payment of ATP contributions by employers during the 14-day period (employer's period) came into force. The enactment of this Act entailed that the payment of the double rate of contribution during the 14-day period was abolished with effect from the contributions paid during the 3rd quarter 2002. The draft legislation also entailed that both public and private employees was to pay the SP contribution of the sickness benefits during the 14-day period, together with the ATP contribution of wages and salaries for the entire business enterprise. Consequently, a continued additional payment still applied. Distinguishing this payment from the other ATP payments was not possible.

The SP contribution for the period of 2004 and 2005 was suspended by the Government, and will furthermore be suspended it in 2006 and 2007 according to the 2006 budget.

By late October 2005 it has been possible to calculate the consequence of the suspension of the SP contribution. The calculation, which is based on data from income statistics, shows a decline in employment of 2500 full-time employees on a yearly basis from 3rd quarter 2002 to 2nd quarter 2004.

5) The biggest element of uncertainty in the ATP statistics is when changes are made in the ATP scheme. To the widest possible extent, attempts are made to eliminate the statistical effects caused by the changes.

#### 3.3 Measures on accuracy

Reliable figures on statistical errors are not available.

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#### 4 Comparability

#### 4.1 Comparability over Time

When the employment statistics were published on the basis of the ATP statistics for the 2nd quarter 2002 (preliminary figures), a revised and improved edition of the statistics was presented. In addition to some minor adjustments made to the calculation method, the most important change is that it is now possible to distribute the statistics by industry as well as sector. Thus, the revised employment statistics provide greater cohesion with other statistics based on data extracted from the Central Business Register operated by Statistics Denmark.

However, in connection with the process of revising the statistics, changes in the statistical data relating to the level of employment cannot be avoided in certain areas. These changes are particularly accounted for by a clearer distribution by sector of the former group "other services". In the former series, the groups "other services", general government, county and municipality and public and personal services were created by using industry and type of ownership. In the new series, employment within general government, county and municipality is exclusively classified by using the code of function. Similarly, public and private employment is also classified on the basis of the code of function.

Finally, a new seasonal-adjustment model in connection with undertaking revisions is now being used. In this context, the revised ATP-based employment statistics have been compiled as from the 3rd quarter 1998. The previous ATP time-series are not strictly comparable with the new series. The new time-series will be available at the so called 9-grouping, 27-grouping and are classified by sector. Consequently, the level of detail at which the statistics are published is higher in the new time-series.

#### 4.2 Comparability with other Statistics

Strictly comparable statistics are not available, but in the other employment statistics, such as the register-based labour force statistics (RAS), the Annual and Quarterly Working Time Account (WTA) and the Labour Force Survey (AKU), it should be possible to retrieve the upward or downward changes in employment numbers.

Below is an outline of the differences between the ATP-based employment statistics and the RAS statistics, the ATR statistics and the AKU survey, respectively.

The differences between the RAS statistics and the ATP-based employment statistics:

The register-based labour force statistics (RAS) are annual status observations of the population's attachment to the labour market on the last working day in November. In the RAS statistics the population is divided into 3 main groups: persons in employment, unemployed and persons outside the labour force. Employed persons are either employees, self-employed or assisting spouses.

The employment figures in the RAS statistics differ from the ATP-based employment statistics due to:

The ATP employment figures are recalculated into full-time persons. The ATP statistics comprise persons aged 16-66 only

Self-employed persons and assisting spouses (who receive transfer incomes)

Persons who are employed less than 9 hours per week are not included in the ATP-based statistics.

For further information, please see the Declaration of Contents for the Register-

based Labour Force Statistics.

Differences between the WTA and the ATP-based employment statistics: The purpose of the Working Time Account (WTA) is to compile time series on hours worked estimated partly as hours and partly as full-time equivalents. Furthermore, it is also intended to compile data on earnings and employment for the national accounts statistics, adopting the definitions of work, earnings and employment as applied in the national accounts.

As a source on employment the RAS is applied for compiling the WTA. The total number of persons employed at end-November is used as the employment for the fourth quarter in the quarterly WTA, while Monthly data reports of A-income (MIA) is applied for describing the development in employment during the year. MIA is a gross compilation of employees containing information on all employees who have had paid employment. The ATP-based employment statistics is applied in extrapolating MIA backwards in time, for the period before MIA became a full-scale survey.

The employment figures in the WTA differ from the ATP-based employment statistics due to:

The same reasons as the RAS and the ATP differs from each other.

MIA does not distinct between full-time and part-time employment. Differences can be due to different developments in employees and in jobs, for example when the amount of part-time jobs rise it has a larger effect on MIA than the ATP-based employment statistics.

Differences in the payment pattern in MIA and in the ATP-based employment statistics can also account for differences in the development of employment.

For further information, please see the Declaration of Contents for the Quarterly and Annual Working Time Account.

Differences between the AKU survey and the ATP-based employment statistics: The purpose of the AKU survey is to collect information on the population's attachment to the labour market with respect to working conditions, working hours, etc. AKU is a survey-based labour market statistics. The level of employment in the labour market survey is different from that of the ATP-based employment statistics. The reason for this is that the labour force survey, unlike the ATP-based employment statistics, includes the following items:

Self-employed persons and assisting spouses Employment of less than 9 hours per week Persons aged 15 years.

Another difference is that the ATP-based employment statistics are compiled on the basis of full-time employed persons, implying that the survey-unit varies between the two statistics.

For further information, please see the Declaration of Contents for the Labour Force Survey.

## 4.3 Coherence between provisional and final statistics

The total corrections from the provisional figures to the revised figures are usually less than 5,000 full-time employees or under 0.2 pct.

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5 Accessibility

# 5.1 Forms of dissemination

The statistics are published in Nyt fra Danmarks Statistik (News from Statistics Denmark), in Statbank Denmark, in Arbejdsmarked (Labour market) appearing in

the series Statistiske Efterretninger (Statistical News) and in Konjunkturstatistik (Main Indicators).

## 5.2 Basic material: Storage and usability

For each SE number the primary data provides information on the ATP payments for the quarter of reference and the distribution of last year's total payments distributed according to the different rates of contribution. Each SE number is assigned with information about industry and ownership, which is obtained from Statistics Denmark's Central Business Register.

#### 5.3 Documentation

Further documentation is available in TIMES 2000. For information about the ATP scheme, reference is made to the ATP fund, phone + 45 48 20 48 20, e-mail: atp@atp.dk, www.atp.dk.

Full documentation of the new ATP time-series from the 3rd quarter 1998 is not available in TIMES4.

#### 5.4 Other Information

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An in-depth description of the methodology and definitions in the employment statistics based on ATP payments is given in *Arbejdsmarked* (Labour Market) appearing in the series *Statistiske Efterretninger* (Statistical News) 2002:40, 12 September 2002.