Statistics of employees subject to social insurance contributions

- quarterly statistics of employees

Periodicity: irregular
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For subject-related information on this publication please contact the Federal Statistical Office:
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Abstract

1 General information on the statistics

• **Name of the statistics**: statistics of employees subject to social insurance contributions based on the Common procedure for reporting data for statutory health, long-term care, pension and unemployment insurance purposes
• **Reference period**: in this case reference date: last day of a quarter
• **Survey date**: processing after a procedural period of six months
• **Periodicity and period for which a time series is available without any break**: quarterly, since 1992
• **Regional coverage**: municipality level for places of work and of residence
• **Survey population and principle of allocating the survey units**: employees subject to social insurance contributions, reports by employers on all employees subject to social insurance contributions in the context of the Social insurance reporting procedure

2 Purpose and goals of the statistics

• **Survey content**: employees subject to social insurance contributions by their main activity, in a breakdown by both employment and structural demographic variables and in an economic breakdown
• **Purpose of the statistics**: The results are used for continuous labour market and short-term economic monitoring and for structural surveys.
• **Major users of statistics**: political community, administrative authorities, research institutes; national accounts, and statistical calculations regarding the overall employment situation

3 Survey methodology

• **Type of data collection**: Data are collected by means of reports to be submitted by employers on all employees subject to social insurance contributions in the context of the Social insurance reporting procedure.
• **Data collection tools and reporting channel**: Using an automated reporting procedure, employers transmit data to health insurance providers, pension insurance bodies, the German Federal Employment Agency. The data are stored centrally in individual insurance records. The latter are evaluated for the purposes of compiling statistics of employees subject to social insurance contributions.
• **Dissemination**: by the Federal Employment Agency and by the statistical offices of the Federation and the Länder which have access to a database of the aforementioned Agency

4 Accuracy

• **Overall qualitative assessment of accuracy**: The quality of the secondary data used for statistical purposes is regarded as very good.
• **Non-sampling errors**: To a great extent, data correctness and completeness are ensured by the application of data checking and correcting methods. However, there are individual insurance records which are incomplete because of a lack of or incorrect data in the reports of employers.
• **Continuous revisions**: Initial data can be revised, if necessary. However, this has not been the case since 2001.

5 Timeliness and punctuality
• **Timeliness:** Due to the reporting procedure, the quarterly data become available six months after the reference day. The data can be accessed about three to four weeks after the completion of the data checking and processing procedures at the Federal Employment Agency.

• **Punctuality:** The data are always published on the indicated date.

### 6 Comparability over time and space

- **Qualitative assessment of comparability:** Key data for the Federation are largely comparable without any difficulty while detailed results can be compared to a limited extent only. Deviations/breaks in time series are explained, back-calculations are not made. At the international level, the data are comparable with those of other countries, in particular the EU Member States.

- **Changes affecting comparability over time:** Comparability is limited due to new legal provisions which became effective on 1 January 1999, the introduction of a new IT procedure on 30 June 1999, the implementation of updated classifications of economic activities and territorial reforms in some of the Länder.

### 7 Connection with other surveys

- **Input for other statistics:** employment accounts of the Federation and the Länder

- **Differences regarding other comparable statistics or results:** Discrepancies with the results of other statistics collecting data on the labour force (e.g. microcensus) are attributable to methodological and conceptual differences.

### 8 Other information sources

- **Publication channels, order address:**
  
  Publication of the Federal Employment Agency
  

- **Contact information:** Federal Statistical Office, Division III D, tel: +49(0)611/75-4868, e-mail: arbeitsmarkt@destatis.de
1 General information on the statistics

1.1 Name of the statistics (according to EVAS)
Statistics of employees subject to social insurance contributions, EVAS No: 13111

1.2 Reference period
The total of employees subject to social insurance contributions is recorded at quarterly intervals, the reference date being the last day of each quarter, that is 31 March, 30 June, 30 September and 31 December.

1.3 Survey date
In accordance with the process applied, the administrative data of the Social insurance reporting procedure are evaluated by the Federal Employment Agency six months after the reference date in order to determine the total of employees subject to social insurance contributions.

1.4 Periodicity and period for which a time series is available without any break
Generally, the statistics of employees subject to social insurance contributions are compiled at quarterly intervals. Data on employees subject to social insurance contributions by sex are available for the former territory of the Federal Republic of Germany for the period 1974 to 2004 (reference date: 30 June). Regarding Germany as a whole (incl. the new Länder), data on employees subject to social insurance contributions by sex are available for the period 1992 until now (reference date: 30 June; currently 30 June 2007).

1.5 Regional coverage
The data on employees subject to social insurance contributions include information on both the domestic place of employment and the place of residence (domestic/foreign territory). The domestic place of employment is the municipality where the local unit is situated in which a given employee works who is subject to social insurance contributions. The place of residence is the registered place indicated to the employer. Domestic places of employment/residence are recorded in accordance with the current Official Municipality Code. If the place of residence is abroad, the country concerned is recorded. The Federal Statistical Office publishes results of the statistics of employees subject to social insurance contributions mainly at the federal and the Länder level.

1.6 Survey population, principle of allocating the survey units
The concept of employees subject to social insurance contributions covers all employees incl. those undergoing vocational training who are subject to health, pension and long-term care insurance and/or to contributions pursuant to employment promotion law or for whom employers pay shares of contribution pursuant to employment promotion law. Conscripts performing compulsory military or community service are regarded as employees subject to social insurance contributions provided they were employed at the time they began their service, the employment relationship continues and they do not receive remuneration payments purely for the reason of performing that service. Public officials, self-employed persons and family workers are however not covered by the concept of employees subject to social insurance contributions. In accordance with a legal amendment which became effective on 1 April 1999, employers have been required to pay lump-sum contributions to health and pension insurance funds also for persons who perform exclusively activities for which they receive what is called minor payment. So far data on persons in minor employment and employment processes (as indicated in the annual data, including information on annual gross wages up to the upper contribution threshold) have neither been included nor published in the quarterly statistics of employees subject to social insurance contributions.
of the Federal Statistical Office. These data are part of separate statistics of the Federal Employment Agency. To meet the demand for more timely data, the Federal Employment Agency determines the total of employees subject to social insurance contributions after a procedural period of two or three months and extrapolates the data to obtain “six-month values”. In regional terms, the extrapolated results are only broken down to the Land level and, in economic terms, to the level of sections.

1.7 Survey units
Survey units are employees subject to social insurance contributions.

1.8 Legal bases

1.8.1 EU law
No EU law as a legal basis for the statistics of employees subject to social insurance contributions

1.8.2 Federal law

1.8.3 Land law
No Land law as a legal basis for the statistics on employees subject to social insurance contributions

1.8.4 Other bases
Contract concluded between the Federal Employment Agency and the Federal Statistical Office in March 2007 regarding the transmission of data by the Federal Employment Agency pursuant to Article 282a, Para. 2 of SGB III. A similar contract was signed between the statistical offices of the Länder and the Federal Employment Agency, too.

1.9 Confidentiality and data protection
Confidentiality provisions are laid down in Article 16 of the Federal Statistics Law of 22 January 1987 (Federal Law Gazette I pp. 462, 565) and in Section 6 of the contract concluded between the Federal Employment Agency and the Federal Statistical Office in March 2007 regarding the transmission of data by the Federal Employment Agency pursuant to Article 282a, Para. 2 of SGB III. As the statistics on employees subject to social insurance contributions are exclusively based on social data, the data protection provisions of Article 35 of SGB I and Articles 67ff. of SGB X (both on social data) apply accordingly.

2 Purpose and goals of the statistics
2.1 Survey content

Data are collected on employees who are subject to social insurance contributions. The following statistical variables are available for purposes of analysis: age, sex, citizenship, completed level of general education and vocational training, current job (occupation), apprenticeship, status in the local unit as a skilled worker, master craftsman or foreman or other full-time employee, full-time/part-time work, economic activity of the local unit, pension insurance fund incl. a breakdown by wage earners and salaried employees until 31 December 2004 (as a result of reforming the organisation of the statutory pension insurance system, this variable has no longer been included since 1 January 2005), and also place of employment and place of residence which form the basis for determining, at the regional level, the number of non-residents working in the country and of residents working abroad.

2.2 Purpose of the statistics

The statistics of employees subject to social insurance contributions provide information on employees in an economic, professional and regional breakdown. The social variables covered include, for instance, age, sex and citizenship. The results are used for both labour market and short-term economic monitoring, for structural analyses and comparisons, and for planning and decision making purposes.

In accordance with the results of the representative statistics on the population and the labour market (microcensus), employees subject to social insurance contributions account for more than 75% of all persons in employment. Hence the results of the statistics of employees subject to social insurance contributions are an essential component in presenting an overall picture of the country’s labour force.

2.3 Major users of the statistics

At the national level, the major users of the statistics of employees subject to social insurance contributions are the policy community (in particular the Federal Ministry of Labour and Social Affairs and the German Bundestag), administrative agencies (e.g. the German Association of Cities and Towns), the scientific community, professional and economic associations, the public at large and the media. Besides, the results are used in the context of national accounting and for internal computations to provide an overall picture of the country’s labour force.

2.4 User involvement

At various meetings (e.g. of the labour market specialist committee) the users of the statistics of employees subject to social insurance contributions are provided with information on the current trends in the statistics.

3 Survey methodology

3.1 Type of data collection

The statistics of employees subject to social insurance contributions are secondary statistics. The statistics are based on a Common procedure for reporting data for statutory health, long-term care, pension and unemployment insurance purposes, which was introduced in the former territory of the Federal Republic of Germany on 1 January 1973 and in the new Länder and Berlin-East after German reunification. This procedure requires employers to report, in an electronic and harmonised form, data for all employees subject to social insurance contributions (complete enumeration) which are of relevance to insurance matters. The Federal Employment Agency stores the data in individual insurance records. These records form the basis for reference date-related evaluations for statistical purposes.
3.2 Sampling procedure
The statistics of employees subject to social insurance contributions are based on a complete enumeration. For this reason, sampling procedures are not required.

3.2.1 Sampling design
None

3.2.2 Sample size, sampling fraction and sampling unit
None

3.2.3 Sample stratification
None

3.2.4 Expansion
None

3.3 Seasonal adjustment method
Due to the quarterly provision of reference date-related data, the application of a seasonal adjustment procedure would not be appropriate.

3.4 Data collection tools and reporting channel
Data collection is based on a multi-stage administrative procedure. Typically, employers transmit the data collected in an electronic form to the competent health insurance institutions. These check the data reported for correctness and, if required, make corrections. The data checked by the health insurance institutions are then transmitted to the pension insurance data centres. After another checking procedure, the data that are of relevance to the labour administration are transmitted to the Federal Employment Agency. The latter maintains an individual insurance record for each person insured (who is identified by a social security number) where all data reported are stored in the order of the effective dates. The central authority of the Saarbrücken Regional Board assigning registration numbers to local units collects, checks and stores data on local units in a central business file. In compiling statistics of employees subject to social insurance contributions, data on persons and local units are combined. From reference date 30 June 1999, the Federal Employment Agency has stored and administered the relevant stock of data centrally in a data warehouse. The statistical offices of the Federation and the Länder are given online access to the results of the statistics of employees subject to social insurance contributions stored in a database of the data warehouse of the Federal Employment Agency. The statistical offices use these data for their own analyses.

3.5 Burden on the respondents
Interviews are not required to compile the statistics of employees subject to social insurance contributions. As the data needed for the statistics are obtained in the context of the Social insurance reporting procedure, the compilation of the statistics does not pose an additional burden on citizens.

3.6 Documentation of the questionnaire
The information required for the statistics of employees subject to social insurance contributions is based on selected
data of both the individual insurance records and the register of local units of the Federal Employment Agency. There are no questionnaires which should otherwise be documented in this chapter.

4 Accuracy

4.1 Overall qualitative assessment of accuracy

The quality of the secondary data used for statistical purposes is regarded as very good. This is due to the fact that the statistics of employees subject to social insurance contributions are designed as a complete enumeration, which allows a detailed breakdown of variable combinations, in particular by region and the main economic activity of local units. Rather complete and informative data are ensured by the following: Employers are obliged to provide information; the institutions involved are linked by the reporting procedure; employees have the opportunity to check the data stored on them by receiving an annual record and, finally, comprehensive data checking and correction algorithms are applied. However, the quality requirements differ for the variables that are part of the reporting procedure. Some few variables which are classified as “facultative variables” are not covered completely. Furthermore, the statistics of employees subject to social insurance contributions reflect the situation only at a given instant in time as the employee-related data are derived from the individual insurance records for a certain reference date. Aggregated statistical results can generally be accessed free of charge on the websites of the Federal Employment Agency and the statistical offices.

4.2 Sampling errors

The statistics of employees subject to social insurance contributions are based on a complete enumeration. For this reason, sampling procedures are not required. Consequently, sampling errors do not occur.

4.2.1 Standard error

None

4.2.2 Biases due to the data expansion procedure

None

4.3 Non-sampling errors

4.3.1 Errors due to coverage

Correctness and completeness of the data are largely ensured by data checking and correction procedures. However, there are individual insurance records which are incomplete because the data submitted by employers are either incomplete or wrong. The occupational title of an employee should for instance be based on his/her current job rather than the occupation in which he/she was trained or which he/she held previously. The revised 1988 version of the Classification of occupations by occupational sectors, occupational groups and unit groups of the Federal Employment Agency serves as a basis for coding the relevant occupations. Also, the actual job as a purely statistical variable is a less reliable variable in the context of the Social insurance reporting procedure. This is so because, on the one hand, employers partly do not keep the relevant data up-to-date and, on the other, the Classification of occupations has not been updated recently. Nonetheless, the actual job provides important structural information on employment.

4.3.2 Unit non-response
The total of employees subject to social insurance contributions is determined by applying an information retrieval routine to find out whether the persons covered by the individual records were employed on a given reference day. If, however, the employment data recorded are rather old so that the employment relationship can be assumed to have ceased in the meantime, the associated ‘case’ is not considered in the statistics of employees subject to social insurance contributions (cut-off method with random-based time-warping). This is necessary because (to a small extent) the information is incomplete which is stored in the individual records in the context of the reporting procedure.

4.3.3 Item non-response
Due to missing or incorrect data in the individual insurance records, it may happen that data are either not available for some of the variables or the data available cannot be adequately allocated. As a result, the sum of “full-time employees” and “part-time employees” does for instance not always equal the total of employees. Actually, the extent to which data cannot be assigned adequately is so small that it does not affect the overall result. However, cases of “Educational attainment unknown, no data available” have a negative impact on the level of the variable “Education and training” (highest completed level of education). Currently, concrete data on educational attainment are not reported for more than 15% of the employees subject to social insurance contributions.

4.3.4 Imputation methods
Imputation methods are not applied as there are no cases of item non-response.

4.3.5 More detailed analyses of the systematic error
The systematic error is not analysed in relation to the data published of the statistics of employees subject to social insurance contributions.

4.4 Continuous revisions
The results of the statistics of employees subject to social insurance contributions are considered provisional for a period of three years (related to the date of evaluation). Within that period, the results may be subject to revisions by the Federal Employment Agency. That means, the data basis can be corrected by the Agency and the statistics be reprocessed if there is a substantial need for revision (more than 1% of the stock of data is incorrect) within that period. If a substantial need for revision does not arise, the data will automatically be assigned the status of final results.

4.4.1 Extent of revision
The degree of revision depends on both the type and extent of the errors which have occurred and the importance of the variables concerned. Since 2001, there has been no need for revision.

4.4.2 Reasons for revision
See 4.4.

4.5 Extraordinary sources of error
Generally, the criteria used to identify, for statistical purposes, the main economic activity of local units include above all value added, turnover and, if these two are not available, the number of persons employed as a makeshift alternative. Such an alternative is used for compiling statistics of employees subject to social insurance contributions, too. In the context of the statistics, a local unit is defined as the unit for which an employer has received a registration number for the purposes of the relevant reporting procedure. Typically, this is an economic establishment situated in a geographically identified place or, as defined in the Classification of Economic Activities, a local unit with employees who are subject to
social insurance contributions. However, a local unit can also comprise several branches of an enterprise which carry out the same main activity. To simplify the reporting procedure, these branches can be combined provided they are situated in the same municipality. For external analyses, the Federal Statistical Office and the statistical offices of the Länder have access to information on the economic activity down to the group level (three-digit codes).

Information on the number of establishments (local units) must only be used for the statistical offices’ internal purposes and to carry out the necessary confidentiality procedures.

Results relating to commuters are exclusively based on the data for the reference date of 30 June. There are some few inaccuracies as regards the information collected on the places of residence of employees. The reporting rules do not precisely define what place of residence (main place or secondary place of usual residence) should be reported by the employer. As a result, people may be recorded as long distance commuters (between the registered main place of residence and the place of work) in the statistics of employees subject to social insurance contributions although their place of work coincides with their secondary place of residence so that they do actually not commute.

5 Timeliness and punctuality

5.1 Timeliness of preliminary results
The quarterly evaluations regarding employees subject to social insurance contributions are carried out six months after the reference day. This delay of six months between the reference day and the time of evaluation is a compromise between achieving maximum timeliness and covering to the greatest possible extent the reports for the reference day. As experience has shown, about 95% of all data are reported to the Federal Employment Agency within that period of six months. The statistical offices are currently provided with the data material after another three to four weeks. That is the time the Federal Employment Agency requires for processing, checking and anonymising the data and for updating the online database. The Federal Statistical Office publishes its first data approximately two weeks after receipt of the data material, that is about 7.5 months after the reference day.

5.2 Timeliness of final results
As defined by the Federal Employment Agency, all data of the statistics of employees subject to social insurance contributions are provisional over a period of three years. Provided a substantial need for revision does not arise, the data will then be assigned the status of final results. Owing to the introduction of efficient IT procedures at the Federal Employment Agency, the continuous provision of results of the statistics of employees has gained in stability. Since 2001, changes have not been made to the provisional results so that the results released 7.5 months after the reference day could have been regarded as “final”.

5.3 Punctuality
First results of the statistics of employees subject to social insurance contributions are available about 7.5 months after the reference day, that is on the 17th working day of the quarter concerned.

6 Comparability over time and space

6.1 Qualitative assessment of comparability
Quarterly data are available for the former territory of the Federal Republic from reference day 30 June 1974 and for the new Länder and Berlin-East from 31 March 1992 (not considering certain limits of the variable breakdown). Comparability of the key data is ensured. Based on a legal amendment, the reporting procedure changed as from 1 January 1999. As a result of applying the new procedure, the recorded number of employees subject to social insurance contributions increased by about 1%. Direct comparisons with statistical results for reference days of previous periods are only possible to a limited extent. There are several reasons for the increase recorded in the figures based on the new procedure as compared to those based on the old approach (such as a harmonisation of reports, improvement of the respondents’ reporting behaviour, complete coverage of working students), which can however neither be quantified nor be substantiated in more detail.

6.2 Changes affecting comparability over time

As a matter of fact, the introduction of new classifications causes breaks in time series of results broken down by economic activities. Until reference day 31 December 1997, the relevant economic activities were coded based on the institutional focus principle in accordance with the Verzeichnis der Wirtschaftszweige für die Statistik der BA – Ausgabe 1973 (WS73) (List of economic activities for the statistics of the Federal Employment Agency – 1973 edition). From reference day 31 March 1998 until 31 March 2003, the Klassifikation der Wirtschaftszweige für die Statistik der BA – Ausgabe 1993 (WZ93) (Classification of economic activities for the statistics of the Federal Employment Agency – 1993 edition) was used. And from reference day 30 June 2003, the Klassifikation der Wirtschaftszweige – Ausgabe 2003 (WZ 2003) (German Classification of Economic Activities - 2003 edition) was implemented. In that context, the emphasis was on the functional focus principle. The latter classification was based on the Statistical Classification of Economic Activities in the European Community (NACE Rev. 1.1) of December 2001. And finally, the Klassifikation der Wirtschaftszweige – Ausgabe 2008 (WZ 2008) (German Classification of Economic Activities – 2008 edition) has been used from reference day 30 June 2008. The basis for this classification is the Statistical Classification of Economic Activities in the European Community (NACE Rev. 2) of 30 December 2006. Generally, the economic activity-related results of the statistics of employees subject to social insurance contributions can be compared with the results of other German and European economic statistics. At the same time, comparability of the results broken down by sections and divisions is ensured with respect to extra-European data sources, provided they are based on the UN International Standard Industrial Classification of All Economic Activities (ISIC Rev. 3.1).

The domestic places of employment and of residence are recorded in accordance with the Official Municipality Code which is in place on the reference day. Regarding some Länder, however, the time series’ comparability over space cannot be fully ensured at the district and municipality level due to several territorial reforms. Furthermore, in the context of a reform of the Berlin administrative districts, job centres were merged in Berlin-East and West in 2001. Since then, allocations to the western and eastern parts of Berlin have been of an approximate nature. For this reason, the Federal Statistical Office has changed the spatial delimitation of “former territory of the Federal Republic including Berlin-West” into “former territory of the Federal Republic excluding Berlin” and of “new Länder including Berlin-East” into “new Länder excluding Berlin” from reference day 31 March 2005. The results for Berlin have been recorded separately.
As a result of the organisational reform undertaken in the statutory pension insurance system, the data for wage earners and salaried employees have no longer been comparable over time since 1 January 2005 because the breakdown by these two types of employment relationships was abandoned then.

7 Connection with other surveys

7.1 Input for other statistics
Results of the statistics of employees subject to social insurance contributions are regularly used as an input for the employment accounts of the Federation and the Länder. In addition, data of these statistics are used in calculation systems relating to the earnings survey and to national accounts, and for the compilation of the labour cost index. And frequently, results of the statistics of employees subject to social insurance contributions are used for subject-related analyses regarding, for instance, the Mittelstand companies or commuter behaviour in Germany.

7.2 Differences regarding other comparable statistics or results
Discrepancies with the results of other sources of employment statistics (e.g. employment accounts and microcensus) are due to methodological and conceptual differences relating, for instance, to the reference period (reference date – period – reference week), the reporting channels (reports by local units – estimation procedure – household survey), the definition of the survey unit (local unit – enterprise) and the regional allocation (place of work and place of residence).

The share of employees subject to social insurance contributions in the total of persons in employment varies between the individual branches of economic activity depending on the employment structure of the branches. In manufacturing, the vast majority of persons in employment are subject to social insurance contributions. In other branches of economic activity where the proportions of self-employed persons, family workers, public officials or persons in minor employment are high, the statistics of employees subject to social insurance contributions covers far less people (e.g. agriculture and forestry, trade, public administration, defence, social insurance). Depending on the economic structure, coverage differs at the levels of regional breakdown, too.

8 Other information sources

8.1 Publication channels, order address
Comprehensive methodological explanations and results in greater subject-related and regional detail are provided in Fachserie 1, Reihe 4.2.1: Bevölkerung und Erwerbstätigkeit – Struktur der sozialversicherungspflichtig Beschäftigten. The publication is available for free download at: http://www.destatis.de/jetspeed/portal/cms/Sites/destatisInternet/DE/Navigation/Statistiken/Arbeitsmarkt/Sozialversicherungspflichtige/Sozialversicherungspflichtige.psml.

8.2 Contact information
Federal Statistical Office, Division III D
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8.3 Further publications

Internet website of the German Federal Employment Agency:
http://www.pub.arbeitsamt.de/hst/services/statistik/detail/a.html