

# Annual estimation of labour costs



Periodicity: annual  
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# Abstract

## 1 General information on the statistics

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- *Name of the statistics*: annual estimation of labour costs • *Reference period*: years since 1996
- *Periodicity*: annually
- *Survey population*: economic units in industry and the service sector
- *Survey units*: enterprises
- *Legal basis*: no legal basis because this is a calculation system which does not require any separate survey.

## 2 Purpose and goals of the statistics

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- *Survey content*: determining the level and development of labour costs per hour worked and their main components of gross wages and salaries as well as non-wage costs.
- *Purpose of the statistics*: instrument to assess the competitiveness of Germany as a production location
- *Major users of the statistics*: several federal ministries, trade unions, enterprises and their interest groups

## 3 Survey methodology

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- *Type of data collection*: calculation system; updating of the four-yearly labour cost survey using the growth rates of the labour cost index

## 4 Accuracy

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- *Sampling and non-sampling errors*: errors of basic statistics may be contained in the annual estimation of labour costs; possible biases caused by estimation methods and updating of time series.
- *Revisions*: Four-yearly revision when current results of the labour cost surveys are available; annual revisions and multi-annual large-scale revisions.

## 5 Timeliness and punctuality

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- *Timeliness*: publication in May of the year following the reference year at the latest

## 6 Comparability over time and space

page 6

- *Qualitative assessment of comparability*: Time series that are comparable over time and space are available from reference year 1996.

## 7 Connection with other surveys

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- *Differences regarding other comparable statistics*: When calculating the national estimate of labour costs, apprentices are included for labour costs, but not for hours worked. The Europe-wide labour cost ranking of Destatis is based on those definitions of the labour cost level of all member states. In a European comparison of labour cost levels provided by Eurostat on the basis of the labour cost survey, apprentices are not included either for labour costs or for hours worked.

## 8 Other information sources

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- *Publication channel, order address*: The time series of the annual estimation of labour costs are available free of charge in the database Genesis-Online at <http://www.destatis.de>, (code: 62431). At <http://www.destatis.de>, path: Earnings and labour costs, press releases (link on top right), the press releases on the annual estimation of labour costs may be viewed.
- *Contact information*: Federal Statistical Office, Division V D – Earnings and labour costs, tel: +49(0)611/75-3541, <http://www.destatis.de/Contact>

## 1 General information on the statistics

### 1.1 Name of the statistics (according to EVAS)

Annual estimation of labour costs, EVAS No: 62431

### 1.2 Reference period

Reference year

### 1.3 Survey date

The annual estimation of labour costs is done after the results of the labour cost index for the 4th quarter of the latest reference year have been published. Generally the results of the previous year are published in May at the latest.

### 1.4 Periodicity and period for which a time series is available without break

Comparable annual time series are available from 1996.

### 1.5 Regional coverage

Territory of the Federal Republic of Germany

### 1.6 Survey population, principle of allocating the survey units

What is shown is labour costs, gross wages and salaries and non-wage costs per hour worked of all economic units in industry and in the service sector whose seat is located in Germany.

### 1.7 Survey units

The basis of the annual estimation of labour costs is the data provided by enterprises.

### 1.8 Legal bases

#### 1.8.1 EU law

No EU law as a legal basis.

#### 1.8.2 Federal law

No federal law as a legal basis. The annual estimation of labour costs uses results of the labour cost survey and the labour cost index which have already been published and compiles them to produce a new statistics. Therefore no separate legal basis is required.

#### 1.8.3 Land law

No Land law as a legal basis.

#### 1.8.4 Other bases

No other legal basis.

### 1.9 Confidentiality and data protection

The annual estimation of labour costs is based on results of the labour cost survey and the labour cost index which have already been published and which have already taken account of the provisions regarding confidentiality and data protection. Individual data are not used.

## 2 Purpose and goals of the statistics

### 2.1 Survey content

The annual estimation of labour costs provides results for labour costs, gross wages and salaries and non-wage costs, always per hour worked. Using the growth rates of the labour cost index and the levels of those three aggregates from the four-yearly labour cost survey, new annual levels of labour costs and their two main components are calculated. Those results are broken down by all sections of economic activity of industry and the service sector.

Labour costs consist of two large components, that is gross wages and salaries and non-wage costs.

Gross wages and salaries comprise the remuneration for hours worked, extra payments, payments to employees saving schemes, payments for days not worked and wages and salaries in kind. Not included are gross wages and salaries of apprentices and continued pay in case of sickness.

Non-wage costs comprise the employers' social contributions (including continued pay in case of sickness), vocational education and training costs (including gross wages and salaries of apprentices), employers' other expenditures and taxes to be paid by employers.

The term "hours worked" comprises only the hours actually worked, which means that, for example, days of sickness, public holidays and vacation days are not included, whereas overtime hours worked are included.

## 2.2 Purpose of the statistics

The annual estimation of labour costs provides annual information on the level and trend of labour costs in Germany. Hence that statistics, together with the labour cost index and the labour cost survey, is another tool to assess the competitiveness of Germany as a production location.

## 2.3 Major users of the statistics

Several federal ministries, trade unions, enterprises and their interest groups.

## 2.4 User involvement

Specialist committee on "Prices and Earnings". Apart from the institutionalised bodies, permanent dialogue is held with associations, companies, universities and institutes, whose wishes - emerging from practical work - are also included in the further development of the statistics.

# 3 Survey methodology

## 3.1 Type of data collection

The basis of data calculation is the labour cost survey conducted every four years. In the inter-survey years, the levels of labour costs per hour worked, of gross wages and salaries per hour worked and of non-wage costs per hour worked are updated using the annual rate of change of the labour cost index. The basis for the estimation of the years from 1996 to the latest labour cost survey, currently for 2004, is the unadjusted value of the labour cost index. From the first year after the latest labour cost survey, the estimation is continued up to the recent end of the series, using the calendar-adjusted growth rate of the labour cost index. Revisions of the labour cost index may change the results of the annual estimation of labour costs from the recent end of the series back to the year following the reference year of the latest labour cost survey.

## 3.2 Sampling procedure

The annual estimation of labour costs links up existing statistics. No separate survey or sampling is performed.

### 3.2.1 Sampling design

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### 3.2.2 Sample size, sampling fraction and sampling unit

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### 3.2.3 Sample stratification

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### 3.2.4 Expansion

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## 3.3 Seasonal adjustment method

The reference period is the relevant calendar year. Consequently, seasonal effects are not to be expected and do not require adjustment. Calendar effects occur and depend on when non-working legal holidays fall. This criterion influences the level of hours worked. For reference years from 2005, the calendar of 2004, which is the reference year of the latest labour cost survey, is kept constant by using the calendar-adjusted growth rates of the labour cost index.

## 3.4 Data collection tools and reporting channel

The annual estimation of labour costs links up existing statistics. No separate survey or sampling is performed for the annual estimation of labour costs.

## 3.5 Burden on the respondents

As the annual estimation of labour costs is a calculation system in which existing results of primary and secondary statistics are processed, no additional burden is placed on respondents.

## 3.6 Documentation of the questionnaire

As the annual estimation of labour costs is a calculation system rather than a primary survey, there is no questionnaire for that statistics.

# 4 Accuracy

## 4.1 Overall qualitative assessment of accuracy

For the calculation of the annual estimation of labour costs, results of the labour cost survey and of the labour cost index are used. As not all data required for the labour cost index are available yet when the calculations are performed and some data are therefore successively included in the calculations, estimates are included in the labour cost index and, consequently, in the annual estimation of labour costs.

## 4.2 Sampling errors

Generally, the sampling errors of the basic statistics which are included in the annual estimation of labour costs can also be contained in the results of the annual estimation of labour costs.

### 4.2.1 Standard error

Exactly quantifying the standard error is not possible.

### 4.2.2 Biases due to the data expansion procedure

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## 4.3 Non-sampling errors

### 4.3.1 Errors due to coverage

Generally, the non-sampling errors of the basic statistics which are included in the calculation of the annual estimation of labour costs can also be contained in the results of the annual estimation of labour costs. In addition, biases may occur which are caused by estimated additions and deductions, other estimation methods and updating of time series. Due to that situation, exact quantification is not possible.

### 4.3.2 Unit-Non-Response

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### 4.3.3 Item-Non-Response

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### 4.3.4 Imputation methods

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### 4.3.5 More detailed analyses of the systematic error

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## 4.4 Continuous revisions

A revision is the reworking and updating of results, e.g. by including new data, statistics and/or methods into the calculation system. A distinction is made between continuous revisions referring to minor corrections for individual quarters or years and comprehensive or benchmark revisions. The latter refer to the fundamental reworking of the entire time series.

Updating the labour cost level is done by means of the annual growth rate of the labour cost index. Revisions of the labour cost index may change the results of the annual estimation of labour costs from the recent end back to the year following the latest reference year of the labour cost survey.

When new results of the four-yearly labour cost survey are available, the time series of the annual estimation of labour costs between the latest two labour cost surveys available are adjusted, so that the labour cost survey and the annual estimation of labour costs are always identical for the labour cost survey years.

### 4.4.1 Extent of revision

The annual estimation of labour costs is always revised to the same extent as the labour cost index. The quality report on the labour cost index contains detailed information on the extent of its revisions.

### 4.4.2 Reasons for revision

What is used for calculating the annual estimation of labour costs is, among other things, the time series of the labour cost index. Data input for the calculation of the labour cost index are results of national accounts on the compensation of employees per hour worked. In national accounts, continuous revisions may be performed for any publication date. Generally, for every quarterly date the quarters of the current year are checked and once a year (in August) the last four years and the relevant quarters are revised. Those revisions are reflected by the results of the labour cost index.

## 4.5 Extraordinary sources of error

Extraordinary sources of error are unexpected circumstances which considerably affect the use of preliminary or final results and therefore have to be pointed out in a special form. Such phenomena comprise, for instance, particularly important reports which are inaccurate or delayed and phenomena which led to a strong modification of the survey object directly after the survey so that the informative value of the statistics is deteriorated. Such circumstances were not observed in this case.

## 5 Timeliness and punctuality

### 5.1 Timeliness of preliminary results

No preliminary results are calculated.

### 5.2 Timeliness of final results

The annual estimation of labour costs is done after the results of the labour cost index for the 4<sup>th</sup> quarter of the latest reference year have been published. Generally the results are published by May of the following year at the latest.

### 5.3 Punctuality

The annual estimation of labour costs is done after the results of the labour cost index for the 4<sup>th</sup> quarter of the latest reference year have been published. The criterion of "punctuality" cannot really be assessed because there is no fixed release date for the annual estimation of labour costs.

## 6 Comparability over time and space

### 6.1 Qualitative assessment of comparability

The definitions of the cost components underlying the annual estimation are the same as those of the labour cost survey and the labour cost index. In terms of definitions, the cost components of the labour cost survey have been co-ordinated with those of the European System of Accounts (ESA), so that consistency between national accounts, the labour cost index and the annual estimation of labour costs is achieved. Comparability over time is ensured back to reference year 1996, which is the starting point of the time series of the annual estimation of labour costs.

### 6.2 Changes affecting comparability over time

Comparability over time is ensured within the entire time series of the annual estimation of labour costs.

## 7 Connection with other surveys

### 7.1 Input for other statistics

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### 7.2 Differences regarding other comparable statistics or results

When calculating the national estimate of labour costs, apprentices are included for labour costs but not for hours worked. The Europe-wide labour cost rankings compiled by Destatis are based on those definitions of the labour cost level of all member states. In the Europe-wide comparison of labour cost levels compiled by Eurostat on the basis of the labour cost survey, apprentices are included neither for labour costs nor for hours worked.

## 8 Other information sources

### 8.1 Publication channels, order address

Results of the annual estimation of labour costs are available free of charge from the database Genesis-Online (<http://www.destatis.de>, code: 62431).

### 8.2 Contact information

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### 8.3 Further publications

At <http://www.destatis.de>, path: Earnings and labour costs, press releases (link on top right), the press releases on the annual estimation of labour costs may be viewed.