

Index of export prices



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Abstract

1 General information on the statistics

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- *Name of the statistics*: index of export prices
- *Survey date*: monthly average
- *Periodicity and period for which a time series is available without any break*: monthly from January 2005
- *Survey population and principle of allocating the survey units*: representative survey among enterprises exporting goods
- *Legal bases*: Price Statistics Law, EU regulation concerning short-term statistics

2 Purpose and goals of the statistics

page 3

- *Survey content*: export prices excl. taxes, customs duties, etc., price-determining variables
- *Purpose of the statistics*: calculation of indices of export prices for short-term economic monitoring, deflation, terms of trade
- *Major users of the statistics*: European Commission, European Central Bank, federal ministries, business associations, enterprises, statistics (national accounts)

3 Survey methodology

page 4

- *Type of data collection*: written or online enquiry with obligation to provide information
- *Sampling procedure*: multi-stage purposive sampling of 5000 price representatives among approx. 3000 enterprises
- *Seasonal adjustment procedure*: no seasonal adjustment of original series, simultaneous publication of a seasonally adjusted overall index
- *Data collection tools and reporting channel*: by post, using a questionnaire (annexed to this document), or through a web-based questionnaire via secure internet connection between enterprise and Federal Statistical Office

4 Accuracy

page 5

- *Overall qualitative assessment of accuracy*: index value with one decimal place, results are valid when published for the first time
- *Sampling errors*: no random sample, hence no quantification possible
- *Non-sampling errors*: Incorrect or inexact data are checked for plausibility and are edited. Extrapolations are made for non-response, using suitable indicators.

5 Timeliness and punctuality

page 6

- *Timeliness of preliminary results*: no calculation of preliminary results
- *Timeliness of final results*: The results refer to the average of the reference month. They are published around the 26th day of the subsequent month.
- *Punctuality*: All release dates are met.

6 Comparability over time and space

page 6

- *Qualitative assessment of comparability*: is guaranteed within the same base period (5 years as a rule), but is limited over several base periods. Spatial comparability is guaranteed starting in 1991 with results for Germany as a whole, before 1991 exclusively for the former territory of the Federal Republic.
- *Changes affecting comparability over time*: changeover to new weighting patterns

7 Connection with other surveys

page 6

- *Input for other statistics*: deflation of other aggregates of economic statistics, especially in national accounts
- *Unterschiede zu vergleichbaren Statistiken oder Ergebnissen*: component of the German system of price statistics; the source statistics is foreign trade statistics.

8 Other information sources

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- *Publication channels, order address*:
www.destatis.de › Publikationen › Thematische Veröffentlichungen › Preise
www.destatis.de › Zahlen & Fakten › Datenbanken › Genesis-Online
- *Contact information*: www.destatis.de/contact

1 General information on the statistics

1.1 Name of the statistics (according to EVAS)

Index of export prices, EVAS No. 61421

1.2 Reference period

The reference period is the reference month.

1.3 Reference date

Average of the reference month.

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

Monthly from January 2005.

1.5 Regional coverage

Territory of the Federal Republic of Germany.

1.6 Survey population, principle of allocating the survey units

The statistics of export prices is based on a representative survey. The survey population includes all enterprises whose seat is in Germany and which export goods or electricity (Divisions 01 to 38 of the Product Classification for Production Statistics, 2009 edition) to other countries.

1.7 Survey units

The survey unit is the legally independent enterprise.

1.8 Legal bases

1.8.1 EU law

Council Regulation (EC) no. 1165/98 of 19 May 1998 concerning short-term statistics (OJ 1998 No L 162, p. 1), last amended by Regulation (EC) No. 1158/2005 of the European Parliament and of the Council of 6 July 2005 (Official Journal 2005 No L 191, p. 1).

1.8.2 Federal law

Law on Price Statistics as published in the adjusted version in Federal Law Gazette part III, number 720-9, last amended by section 20 of the act of 7 September 2007 (Federal Law Gazette I p. 2246), Ordinance on Implementing the Law on Price Statistics of 29 May 1959 (Federal Bulletin No. 104 p. 1), last amended by section 5 of the ordinance of 20 November 1996 (Federal Law Gazette I p. 1804), in connection with the Federal Statistics Law of 22 January 1987 (Federal Law Gazette I p. 462, 565), last amended by section 3 of the act of 7 September 2007 (Federal Law Gazette I p. 2246).

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 individual data collected are generally kept secret according to section 16 of the Federal Statistics Law. Only in a small number of exceptional cases explicitly regulated by law may individual data be passed on. The names and addresses of the respondents are never passed on to third parties. Pursuant to section 16 subsection 6 of the Federal Statistics Law, individual data may be passed on to institutions of higher education or other institutions entrusted with independent scientific research for the purpose of carrying out scientific projects, if such data have been anonymised in a way that identifying the relevant respondents or parties concerned is possible only with unreasonable efforts in terms of time, cost and manpower. Persons receiving individual data are also obliged to adhere to the principle of confidentiality.

2 Purpose and goals of the statistics

2.1 Survey content

What is collected is selling prices (preferably in euros), which should refer to the terms of trade “free on board” (fob), where possible. The prices do not include any public charges or subsidies (customs duties, monetary compensatory amounts, turnover tax, excise duties and export assistance). The price data should refer to representative contracts concluded in the reference month. If no contracts are concluded, the prices should be reported which – according to good knowledge of the market – could have been achieved in the reference period. The survey programme also includes the detailed product description and other variables influencing the price (e.g. type of forwarding, delivery terms, terms of payment, discounts/surcharges, type of packaging, quantitative unit, amount purchased/delivered, country of

destination). In addition, the currency of the reported price is collected. If the price was reported in a foreign currency, it is converted into euros for index calculation, using the exchange rate determined by the European Central Bank for the average of the reference month.

2.2 Purpose of the statistics

The collected export prices are used to calculate export price indices which show the development of selling prices for the flows of goods leaving the German economy. Subindices of export prices are not only used for general (short-term) economic analysis but also serve as an orientation for many market participants when monitoring markets or shaping their pricing policy. Also, export price indices are needed to deflate other aggregates of economic statistics, especially in national accounts.

Ratios of export price indices and relevant import price indices (terms of trade) are used to analyse the real terms of trade of the German economy with foreign countries. They show the extent to which, as a result of the development of export and import prices, the proceeds from delivering goods to other countries allowed purchasing goods from other countries to a higher or lower value than in the base period.

2.3 Major users of the statistics

Major users of export price statistics at the international level are the European Commission and the European Central Bank and, at the national level, various federal ministries, in particular the Federal Ministries of Economics and of Finance, and the German Bundesbank. Other users of export price statistics are specialised associations and interest groups of various economic branches. Results of export price statistics are sometimes used for stable-value clauses and are applied by the relevant contracting parties. Also, export price indices are used for calculations performed in national accounts of the Federation and the Länder.

2.4 User involvement

Major users are involved especially when the export price statistics is rebased to a new base year (generally every 5 years). In this context, they participate in updating the major bases of calculation. This includes in particular the basket of goods (selection of goods for which prices are to be collected regularly). Also, selected users are involved in designing the publication programme. In the context of monthly index calculations, there are manifold contacts with users, especially as regards analysing the causes of current price trends.

3 Survey methodology

3.1 Type of data collection

The data are collected in a written manner. The survey involves the obligation to provide information. Respondents are the proprietors or directors of the enterprises. For selected items, secondary sources (stock market listings, market reports, etc.) are evaluated.

3.2 Sampling procedure

Purposive sampling.

3.2.1 Sampling design

The population of export price statistics theoretically consists of all cases of goods (as defined by the 2009 edition of the national Product Classification for Production Statistics, Divisions 05 to 35 and 38 as well as agricultural products) sold by domestic enterprises in foreign countries. The sample is drawn in a multi-stage procedure using the purposive sampling method applied in all price statistics. In the first stage, representative export products are grouped by exports into euro countries and non-euro countries to form a basket of goods on the basis of evaluations of foreign trade statistics at the most detailed level of breakdown (national Commodity Classification for Foreign Trade Statistics, 8-digit items, converted to the Product Classification for Production Statistics). In the second stage, enterprises are selected that are to report prices on a monthly basis. The selection criterion is the level of the export value for the relevant basket item. In the third stage, the selected enterprises use given criteria to define representative cases of sale for the relevant basket items, for which prices are reported.

3.2.2 Sampling size, sampling fraction and sampling unit

The basket of goods of export price statistics currently comprises 1,140 items for exports to euro countries and 1,161 items for exports to non-euro countries, for which prices of a total of some 5,000 representatively selected cases of sale (price representatives) are collected every month from about 3,000 enterprises.

3.2.3 Sample stratification

With the above-described method of purposive sampling (cf. 3.2), the basic material is not explicitly stratified. Only for the selection of enterprises, elements of stratification by the export value for the individual basket items are included in the examination.

3.2.4 Expansion

No expansion is performed. The result is a weighted average of the price developments observed for the types of goods covered.

3.3 Seasonal adjustment method

The original series of the index of export prices are not seasonally adjusted. However, the overall index is also published in a seasonally adjusted form. The Federal Statistical Office applies the Berlin Method “BV4.1”.

3.4 Data collection tools and reporting channel

Data collection is done centrally by the Federal Statistical Office, either in writing by means of “shuttle” lists or through the internet (IDEV procedure).

3.5 Burden on the respondents

The composition of the sample of reporting units is reviewed at regular intervals.

3.6 Documentation of the questionnaire

The questionnaire used to compile statistics of export prices is available on request (only in German).

4 Accuracy

4.1 Overall qualitative assessment accuracy

Export price indices are calculated as index numbers with one decimal place. The data are final for the reference months. Rebasings to a more recent base year leads to revision-related differences because new calculation bases (basket of goods, weighting pattern, sample of reporting units) are used.

4.2 Sampling errors

Sampling errors cannot be quantified because the sample is not based on random sampling. However, the method of purposive sampling used in drawing the sample allows to achieve a high degree of representativity. In any case it is ensured that the leading companies in any market segment are included in the sample.

4.2.1 Standard error

None

4.2.2 Biases due to the data expansion procedure

None, because an expansion procedure is not applied.

4.3 Non-sampling errors

4.3.1 Errors due to coverage

None.

4.3.2 Unit non-response

In case of non-response (e.g. because of shut-down or restructuring of the enterprise, changes in the range of goods, etc.), the prices are extrapolated with suitable updating indicators (e.g. average price trend of the relevant item or of a higher aggregate). At the same time, it is attempted to rapidly obtain other reporting units for replacement.

4.3.3 Item non-response

In export price statistics, this group of errors includes especially incorrect or inaccurate data of the responding enterprises and non-response. Incorrect or inaccurate data are generally corrected through data editing and direct queries with the enterprises during the reference month. The plausibility checks are mainly aimed at checking the relevant price development rather than the price level.

4.3.4 Imputation methods

The prices of goods which are temporarily not sold are carried forward using suitable methods.

4.3.5 More detailed analyses of the systematic error

More detailed analyses of the systematic error are not made.

4.4 Continuous revisions

Index revisions are carried out at five-year-intervals.

4.4.1 Extent of revision

In the context of changing over to a new base year, the weighting pattern is revised, which entails revisions of earlier results.

4.4.2 Reasons for revision

Adjustment to changing market structures. Stipulations in EU regulations.

4.5 Extraordinary sources of error

Extraordinary sources of error include unexpected circumstances which affect considerably 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 (natural) phenomena which lead 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 calculation or publication of preliminary results.

5.2 Timeliness of final results

Where possible, the collected prices refer to sales performed in the middle of the month. Where this is not possible, the comparable sale performed most closely to that date is applied. If several contracts of the same type were concluded within a month, the prices refer to the average of the reference month. Federal results are published around the 26th day of the subsequent month.

5.3 Punctuality

All publication deadlines are met.

6 Comparability over time and space

6.1 Qualitative assessment of comparability

The Laspeyres concept applied in export price statistics is based on the principle of all calculation bases being constant (basket of goods, sample of reporting units, sample of price representatives, weighting pattern), which in theory ensures the comparability over time of the calculated indices within a base period. In practice, however, that principle cannot entirely be implemented. Especially for the composition of the sample of reporting units, changes are required because of permanent non-responses, which impairs comparability in the narrow sense. Adjustments in the description of price representatives that become necessary over time are assessed by means of suitable quality adjustment methods. This means that price changes resulting from quality changes are eliminated from the price development. Quality adjustment methods frequently applied are the matched-model approach, price comparison between the old and new quality in the overlap period, direct chain-linking, and assessment of quality changes by experts. For EDP goods, mathematical-statistical methods (regression analysis) are applied, too.

The calculation bases mentioned are kept constant over a base period, which is generally 5 years. Price indices for base periods of different lengths are often chain-linked to form long-term index series, although – strictly speaking – they are not comparable. The price trend shown in this way includes “non-genuine price changes”, i.e. price changes resulting e.g. from different weighting structures in the base periods. A particular problem regarding comparability between different base periods is changes in the underlying classifications.

Regional comparability of the export price indices calculated for Germany as a whole is ensured for data from 1991. For earlier periods, results are available only for the former territory of the Federal Republic of Germany.

However, for the main goals of export price statistics, that is measuring short-term to medium-term inflationary trends, the above-described comparability problems are irrelevant.

6.2 Changes affecting comparability over time

Introduction of new weighting patterns.

7 Connection with other surveys

7.1 Input for other statistics

Export price indices are needed to deflate other aggregates of economic statistics, especially in national accounts.

7.2 Differences regarding other comparable statistics or results

Export price statistics is part of the system of German price statistics, which shows the price development at all major stages in the economic process. At the production stage, producer price indices of agricultural, forestry and industrial products as well as construction price indices are calculated. Producer price indices for services are being set up. Indices of purchase prices of farm supplies are also part of the system. At the distribution stage, the system of price statistics contains indices of wholesale prices and of retail prices. The stage of the final consumption of households is covered by consumer price indices. The price development of imported goods is represented by import price indices. In export price statistics, other statistical surveys are used as data sources for setting up the major bases of calculation. Those statistics include in particular the annual processing of foreign trade statistics.

8 Other information sources

8.1 Publication channels, order address

The results of export price statistics are offered in an electronic form only.

At www.destatis.de › Publikationen › Thematische Veröffentlichungen › Preise the following publications can be obtained free of charge either in an Excel or a PDF file:

Fachserie 17, Reihe 8.2: The publication contains price indices for a total of 41 items of the product classification of the food industry and of trade and industry, 886 selected items of the Product Classification for Production Statistics (GP) and 74 items of the Standard International Trade Classification (SITC) (current month, previous month, same month of the previous year and annual average of the previous year) as well as rates of change on the previous year and on the same month of the previous year in percent. Weighting factors and linking factors are also shown. In addition, long time series are contained for selected indices.

Long time series: Export price indices for 824 selected items of the GP can be obtained free of charge as long time series, (from January 2005, where possible also from January 1995, possibly only from January 2000). In addition, summary tables of the indices of import and export prices are offered as long time series.

Data on the energy price development: The cross-section publication includes price indices for the various types of energy in the form of long time series. It shows not only export price indices but also import, producer and consumer price indices

Through the database system GENESIS-Online (www.destatis.de › Zahlen & Fakten › Datenbanken Genesis-Online › 61 › 614 › 61421 › Tabellen), detailed results of the export price statistics can directly be loaded in various file formats (.xls, .html and .csv).

8.2 Contact information

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8.3 Further publications

Papers on the export price statistics are contained in the cross-section publication *Wirtschaft und Statistik* (www.destatis.de › Publikationen › Wirtschaft und Statistik), e.g.:

Diplom-Volkswirt Peter, Florian: *Index der Außenhandelspreise auf Basis 2005, 07/2009*, pp. 711 ff.

Further information on the index of export price statistics can be found at www.destatis.de › Facts & Figures › Prices.