



# Industrial production index, index of employees in industry and industrial turnover index

Reference metadata based on the Euro SDMX Metadata Structure (ESMS)

Republika Srpska Institute of Statistics

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## 1. Contact

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## 2. Metadata update

2.1.	Metadata last certified	25.11.2022.
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### 3. Statistical presentation

#### 3.1. Data description

The monthly survey of industry is primarily conducted with the aim of calculating the index of industrial production (IPI), which is one of the most important short-term indicators of economic activities in this domain. IPI, first of all, shows changes in the changes of industrial production, and it is also an indicator of changes in the gross value added for certain sections of activity. Thanks to the fast monthly availability of information for all levels of industrial activities, IPI is an extremely significant short-term indicator from the point of view of early detection of turning points in the behavior of the economic development trend.

As a result of this statistical activity, indices of employees and turnover in industry are also produced.

Indices of industrial production, indices of employees and indices of industrial turnover are calculated in regular monthly dynamics. The observation period is a month and coincides with the calendar month.

#### 3.2. Classification system

The Classification of Economic Activities of Bosnia and Herzegovina (KD BiH 2010), which in its content and structure fully complies with the EU Statistical Classification of Economic Activities NACE Rev. 2

Main industrial groups by economic purpose, i.e. by final consumption of products (MIGs)

Monthly Nomenclature of Industrial Products – Monthly NIP BiH 2018, which is harmonised with the EU PRODCOM list

#### 3.3. Sector coverage

Sections B, C and D (except 35.3) according to the KD BiH 2010

#### 3.4. Statistical concepts and definitions

*Indices of industrial production* are indices of finished industrial products, defined by the Monthly Nomenclature of Industrial Products – Monthly NIP BiH 2018, which is harmonised with the EU PRODCOM list.

*Original indices of industrial production* are indices which express actually realised finished production from which seasonal and working-day effects in the current month were not eliminated.

*Seasonally-adjusted indices* represent indices from which seasonal effects were eliminated, as well as the number of working days and holidays during the current month.

*Working-day adjusted indices* represent indices from which effects of the number of working days and holidays during the current month were eliminated.

*Industrial production* covers finished production in natural form, regardless whether the product is further manufactured in total or partially in the enterprise or it is provided as a commodity outside the enterprise. Unfinished production is not included in finished production until it reaches a certain phase in the production process. This phase is defined in the Monthly NIP as a specific product which has its given code and name.

*Employees in industrial activities* include employees in sections B, C and D (except 35.3), including workers in administration and in subsidiary workshops and other non-industrial activities providing services only for the business entity for which the report is submitted (for the observation unit).

*Employees in non-industrial activities* include workers employed in trade, agriculture, construction, transport and other non-industrial activities within an industrial enterprise, who perform services within and outside the observation unit.

*Industrial turnover indices* are chain indices calculated from the total value of turnover/invoiced industrial products and services at the observation unit level.

*Original industrial turnover indices* are indices which show monthly changes in turnover and in sales of industrial products and services of domestic producers, from which seasonal effects and effects of the number of working days and holidays in the observed month are not eliminated.

*Seasonally-adjusted indices of industrial turnover* represent indices from which seasonal effects were eliminated, as well as the number of working days and holidays during the current month.

*Working-day adjusted indices of industrial turnover* represent indices from which effects of the number of working days and holidays during the current month were eliminated.

*Total turnover value* coincides with the market value of sold industrial products and services supplied to third parties on the domestic and non-domestic market. The value includes all other costs (transport, packaging, etc.), and all taxes on invoiced goods and services, except value added tax (VAT). Excluded are the discounts and price cuts (excluding cash discounts), and the value of returned packed products.

*Revenues from sales on domestic market* are generated with sales of products and services in Bosnia and Herzegovina, while revenues from sales on non-domestic market refer to sales outside Bosnia and Herzegovina.

### 3.5. Statistical unit

The units of observation are selected enterprises and industrial units of non-industrial enterprises, which carry out production at the territory of Republika Srpska, and are classified according to the KD BiH 2010 (which in its content and structure fully complies with the EU Statistical Classification of Economic Activities NACE Rev. 2), into sections: B - Mining and quarrying; C - Manufacturing and D - Electricity, gas, steam and air-conditioning supply (except group 35.3).

### 3.6. Statistical population

Statistical population consists of business entities in sections B, C and D (except 35.3) according to the KD BiH 2010.

### 3.7. Reference area

Republika Srpska

### 3.8. Time coverage

Indices of industrial production in Republika Srpska have been published since 1996, indices of employees in industry since 2007, and the index of industrial turnover has been published since 2017.

### 3.9. Base period

2015

## 4. Unit of measure

indices, %

## 5. Reference period

Month

## 6. Institutional mandate

### 6.1. Legal acts and other agreements

The Law on Statistics of Republika Srpska ("Official Gazette of Republika Srpska", No. 85/03), the Statistical Programme of Republika Srpska for the period 2018-2021, the current annual Work Plan of the Republika Srpska Institute of Statistics (RSIS).

The calculation of the indices is also based on EU regulations (Council Regulation (EC) No. 1165/98, Commission Regulation (EC) No. 1503/2006 and Commission Regulation (EC) No. 656/2007).

### 6.2. Data sharing

Data are submitted to the Agency for Statistics of Bosnia and Herzegovina, which is responsible for aggregating data for the level of BiH and reporting to the Statistical Office of the European Union (Eurostat).

## 7. Confidentiality

### 7.1. Confidentiality - policy

The confidentiality of data and protection of personal data are regulated by the Law on Statistics of Republika Srpska ("Official Gazette of Republika Srpska", No. 85/03) and the "Rulebook on protection of confidential data" of the Republika Srpska Institute of Statistics. The confidentiality of statistical data is also ensured by the Law on protection of personal data ("Official Gazette of BiH", No. 49/06, 76/11 and 89/11).

## 7.2 Confidentiality – data treatment

All collected data are treated as confidential and used exclusively for statistical purposes. The RSIS "Rulebook on protection of confidential data" states the principles of treating confidential data, procedures for ensuring confidentiality during data collection, processing and dissemination, as well as procedures for accessing microdata.

## 8. Release policy

### 8.1. Release calendar

Data on indices of industrial production and indices of employees in industry are published in accordance with a predetermined release calendar, 22 days after the end of the reference month. Data on the industrial turnover index is published 30 days after the end of the reference month. The Release calendar is available to users on the RSIS website.

### 8.2. Release calendar access

[http://www.rzs.rs.ba/publications/?left\\_mi=15&add=15](http://www.rzs.rs.ba/publications/?left_mi=15&add=15)

### 8.3. User access

Access to data and information is allowed to all users at the same time and in the same way.

## 9. Frequency of dissemination

Monthly

## 10. Accessibility and clarity

### 10.1. Release

Monthly releases:

- "[Industrial production index](#)";
- "[Index of employees in industry](#)";
- "[Industrial turnover index](#)"

### 10.2. Publications

- "[Monthly statistical review](#)" – in the section related to industry;
- "[Thematic bulletin "Industry"](#)" – final results;
- "[Statistical yearbook of Republika Srpska](#)" – in the chapter related to industry (final results);
- "[This is Republika Srpska](#)" – in the chapter related to industry (final results)

### 10.3. Online database

Online database is available on the [RSIS website](#).

### 10.4. Microdata access

Microdata are not available.

### 10.5. Other

Data are also disseminated at press conferences, on the website, in a special press release, as well as through answers to users' written requests, according to their specification.

## 10.6. Documentation on methodology

On the official RSIS website, basic [concepts and definitions](#) related to this survey are available as well as [the methodology](#) in the section related to the industry statistics. In addition, in a shorter form, metadata are also disseminated in printed and electronic publications - Statistical yearbook, Monthly statistical review, releases on the industrial production, employees in industry and industrial turnover.

## 10.7. Quality documentation

Quality reports are available on the RSIS website:

[https://www.rzs.rs.ba/front/category/340/371/?left\\_mi=284&add=284](https://www.rzs.rs.ba/front/category/340/371/?left_mi=284&add=284)

Other RSIS quality documentation is available at:

[https://www.rzs.rs.ba/front/category/359/?left\\_mi=306&add=306](https://www.rzs.rs.ba/front/category/359/?left_mi=306&add=306)

## 11. Quality management

### 11.1. Quality assurance

In order to ensure the quality of statistical data and to preserve public confidence in the data, RSIS applies provisions of the Law on Statistics of Republika Srpska (Article 17, paragraph 1) which prescribes the application of the principles of impartiality, reliability, transparency, timeliness, professional independence and statistical confidentiality in the organisation and production of statistics in Republika Srpska. The Republika Srpska Institute of Statistics follows the recommendations for the organisation and quality management set out in the [European Statistics Code of Practice \(CoP\)](#), and the total quality management is based on the implementation of the Common Assessment Framework.

### 11.2. Quality assessment

The final phase of the statistical activity is the total evaluation, which uses information from all the processes, from the design of survey instruments and data collection to the publication of data and feedback from users. This information is used to produce a quality report which outlines all the processes within the statistical activity and lists the advantages and disadvantages related to quality, as well as quality indicators.

## 12. Relevance

### 12.1. User needs

Key users of data are:

- Republika Srpska Government – Ministry of Energy and Mining, Ministry of Finance, Ministry of Economy and Entrepreneurship, Ministry of Agriculture, Forestry and Water Management;
- local self-government administrations;
- Central Bank of BiH;
- business entities, Republika Srpska Chamber of Commerce;
- scientific, research and educational institutions, Economic Institute and other educational and research institutions, students;
- the media: broadcasters, news agencies;
- general public, natural persons;
- internal users: National accounts division, Labour statistics division;
- international users: IMF.

### 12.2. User satisfaction

The results of the most recent User Satisfaction Survey are available on the RSIS website, at [https://www.rzs.rs.ba/front/category/359/?left\\_mi=306&add=306](https://www.rzs.rs.ba/front/category/359/?left_mi=306&add=306)

### 12.3. Completeness

The methodology used to calculate the industrial production index is based on EU recommendations related to short-term statistics (Council Regulation (EC) No. 1165/98), to definitions of variables, list of variables and frequency of data collection (Commission Regulation (EC) No. 1503/2006) and definitions of MIGs (Commission Regulation (EC) number 656/2007). The EU regulation relating to short-term statistics (Council Regulation (EC) number 1165/98) defines the variables 110 – production, 120 – total turnover, 121 – total domestic turnover and 122 – total non-domestic turnover, and their presentation in the form of an index number and in monthly dynamics, which is fully applied in the industry statistics.

## 13. Accuracy and reliability

### 13.1. Overall accuracy

Data accuracy is verified by applying the prescribed methodology, checking measurement errors and comparing the data with the data from the previous period, as well as by means of additional analyses.

### 13.2. Sampling error

The sample selected for the collection of data on industrial production was chosen with the purpose of meeting specific objectives, ie. it is a targeted sample. Included are industrial enterprises and industrial units of non-industrial enterprises that cover at least 90% of value added at the level of each class of industrial activity as required by the EU regulation on short-term statistics (Council Regulation (EC) number 1165/98).

### 13.3. Non-sampling error

The most common non-sampling errors mainly relate to over-coverage, measurement errors and non-response.

The rate of over-coverage in 2021 was 0.15%.

Given that the survey is based on a targeted sample, the most common measurement errors occur during data collection. Reporting units may knowingly or unknowingly provide erroneous data.

Reports that are not submitted by reporting units or are submitted with inadequate answers are treated as non-response. The unit non-response rate was 0.24% in 2021. There is no information available to calculate the item non-response rate.

The data entry application has built-in logical and mathematical controls that prevent incorrect data entry.

## 14. Timeliness and punctuality

### 14.1. Timeliness

The timeliness of the publication of preliminary results of the industrial production index of is on average 23.8 days in 2021, and of the index of industrial turnover 31.8 days. Preliminary data are subject to change. The final data are available on the day of publishing the next month's release.

The final results for the industrial production index were published on average 54.2 days after the end of the reference period, for the index of employees in industry 23.7 days and the index of industrial turnover 61.8 days after the end of the reference period.

### 14.2. Punctuality

There were no major delays, almost all data was published according to the deadlines. The actual publication dates of the industrial production index, index of employees in industry and industrial turnover index deviated from the planned publication dates only in the first quarter of 2021.

The percentage of releases published according to the Release calendar was 75% for the the industrial production index, and 92% for the index of employees in industry and industrial turnover index.

## 15. Coherence and comparability

### 15.1. Comparability - geographical

The available data of industry statistics are fully comparable with the data of members of the European Statistical System because the statistical activities are carried out in accordance with the EU recommendations related to short-term statistics (Council Regulation (EC) No. 1165/98), to definitions of variables, list of variables and

frequency of data collection (Commission Regulation (EC) No. 1503/2006) and definitions of MIGs (Commission Regulation (EC) No. 656/2007).

#### 15.2. Comparability - over time

Industrial production indices in Republika Srpska have been published since 1996, and there is a comparable series of data since 2005. The indices of employees in industry have been published since 2007 and are comparable for the industry as a total and for the sections of activity, while at the level of a division data are comparable since 2013. Industry turnover indices have been published since 2017, and there is a comparable series of data since 2006.

#### 15.3. Coherence - cross domain

The Monthly report of industry - M KPS IND-1 is the only source of data for calculating the indices of industrial production, employees in industry and industrial turnover.

#### 15.4. Coherence - internal

Data are internally consistent.

### 16. Cost and burden

*Annual reporting burden for the monthly survey on industry in 2021 (in hours)*

Number of data providers that provided the answer in the questionnaire	600
Time required to fill in one questionnaire, average (hours)	0.53
Total time spent (hours)	3,819

Data on survey costs are not available.

### 17. Data revision

#### 17.1. Data revision - policy

There is no general data revision policy. Users are informed on performed data revisions in the form of brief information, published in statistical releases and other publications.

#### 17.2. Data revision - practice

Preliminary data are subject to change. Final data are available on the day of the publication of the release for the next month. During the preparation of the base for calculating the indices in the next year, the differences are analysed between the preliminary and final data.

### 18. Statistical processing

#### 18.1. Source data

The source of data for the Monthly report on Industry are industrial enterprises and industrial units of non-industrial enterprises that cover at least 90% of gross value added (GVA) at the level of each class of industrial activity. Using a cut-off sampling method, all enterprises with  $\geq 20$  employees or  $\geq 500,000$  KM in revenue were included. If necessary, enterprises with a smaller number of employees and lower revenue were included in the sample, all with the aim of satisfying the basic condition – coverage of 90% of the value added of the class.

#### 18.2. Frequency of data collection

Monthly

#### 18.3. Data collection

Data collection in this statistical activity is done in a traditional way (via questionnaires).

The questionnaire "[Monthly report on industry – M KPS IND-1](#)" is used. Reporting units submit completed questionnaires, in two copies, to regional units of RSIS by the 5th of the month for the previous month.

#### 18.4. Data validation

The collected data are checked and corrected in the regional units and in the Production Statistics Division before being entered. If necessary, by a subsequent contact with the reporting unit additional data are obtained which provides a basis for potential corrections.

Keeping a record of received reports, data checking, entry and processing of data on industrial production, number of employees and turnover in industry is carried out in the RSIS Production Statistics Division.

During data entry, special attention is given to the unit of measure, type of production, produced quantities, number of employees and the amount of revenue. These data are compared with the data for the previous month. Any unexpected deviation, as well as the cases of missing data, is checked and verified by a telephone contact with the reporting unit.

The data entry application has built-in controls that make it impossible to enter computationally and logically incorrect data into the database. Built-in controls also enable automatic identification of a new product, that is, a product without a weight and/or without the share of the activity group to which the product belongs in the gross value added of the total industry.

The second level of data validation is the verification of aggregated data (macrodata) at different levels, starting with data at the product level, followed by calculated indices at the level of group, division, section, and indices for MIGs and overall industry.

#### 18.5. Data compilation

**Industrial production indices** are calculated in two steps according to the Laspeyres formula. In the first step, as weighting coefficients for obtaining the index up to the group level, the average unit gross value added of products is used. Coefficients are calculated on the basis of the the Annual report on industry (IND-21 PRODCOM survey) and revised every five years.

In the second step, for the group and all higher levels, the weighting is done using the structure of the value added. The structure of value added is calculated on the basis of gross added value obtained from the data of the Annual report of structural business statistics (SBS). The structure is updated at the beginning of each year before the current year's index is calculated.

**Indices of employees in the industry** are obtained by aggregating the number of employed workers at the end of the month according to the personnel records of enterprises, including workers in administration as well as workers in subsidiary workshops that provide services only for their own enterprise. Data on the number of employees in non-industrial activities of enterprises that provide services within and outside the enterprise are not included. The data includes the number of employed workers in units engaged in industrial production, which are part of non-industrial enterprises.

**Industrial turnover indices** for the domestic and non-domestic markets for all levels are calculated by weighting with their participation in the value of sales of the domestic and non-domestic markets. The index of turnover for the total market is calculated by multiplying the indices of the domestic and non-domestic markets with their respective participation in the total value of turnover.

#### 18.6. Adjustment

Seasonal adjustment of the index was carried out using the TRAMO-SEATS method on the monthly index series, which starts with the index for January 2006, for the industry as a whole, sections, divisions and MIGs. Extending the index series by adding indices for each subsequent month, due to the characteristics of the applied seasonal adjustment method, may cause subsequent changes to already published seasonally and working-day adjusted indices.

The JDEMETRA+ software is used for seasonal adjustment of the industrial production index and the industrial turnover index.

### 19. Comment