



Quality Report for the Monthly report on industry, 2021



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1 INTRODUCTION TO THE STATISTICAL PROCESS AND PRODUCT

1.1 Purpose of the survey

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.

1.2 Legal basis and responsibility of statistical institutions

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).

1.3 Relevant classifications

Through the Monthly Industry Report, statistical data on industrial production are monitored, processed and reported according to the valid Monthly Nomenclature of Industrial Products of BiH 2018 and the Classification of Activities of BiH 2010 (KD BiH 2010), which corresponds in content and structure to the EU classification NACE Rev.2.

1.4 Reporting unit

Reporting units for collecting data on production, employees and turnover in industry are industrial enterprises and industrial units of non-industrial enterprises that carry out production in Republika Srpska and which, according to the valid Classification of Activities, are classified into the following sections: Mining and quarrying (B), Manufacturing (C) and Electricity, gas, steam and air-conditioning supply (D), except group 35.3.

1.5 Statistical observation unit

Units of observation are industrial enterprises and industrial units of non-industrial enterprises selected in the sample, that carry out production in Republika Srpska and which, according to the Classification of Activities of BiH 2010 (KD BiH 2010) which corresponds in content and structure to the EU classification NACE Rev.2, are classified into the following sections: Mining and quarrying (B), Manufacturing (C) and Electricity, gas, steam and air-conditioning supply (D), except group 35.3.

1.6 Scope and coverage

The coverage refer to 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 ≥ 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.

1.7 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.

2 RELEVANCE, ASSESSMENT OF USERS' NEEDS AND PERCEPTIONS

2.1 Users of statistical survey data

2.1.1 Key users of statistical survey data

Micro data for business entities from Republika Srpska are submitted to the Agency for Statistics of Bosnia and Herzegovina, which is responsible for compiling data at the BiH level and reporting to the Statistical Office of the European Union, Eurostat.

The key users of the indices of industrial production, employees and turnover are the IMF, Ministry of Energy and Mining of Republika of Srpska, the Ministry of Finance of Republika Srpska, the Ministry of Economy and Entrepreneurship, the Ministry of Agriculture, Forestry and Water Management of Republika Srpska, local self-government bodies, the Central Bank of BiH, the Chamber of Commerce of Republika Srpska, the Economic Institute, educational and research institutions, students and other natural persons, the media and the internal users (National Accounts Division, Labour Statistics Division).

2.1.2 Assessment of users' needs

The survey of industrial statistical activity provides monthly data on the index of industrial production, the index of employees in industry and the index of turnover in industry. The published data, to the greatest extent, satisfy the needs of the users.

2.1.3 Measuring users' perceptions and user satisfaction

In 2020, RSIS conducted a User Satisfaction Survey and the results are available on the [RSIS official website](#). There is no special survey on user satisfaction with industry statistics.

2.2 Data completeness

2.2.1 Quality and performance indicator – Data completeness - rate (R1)

The rate of available statistics is the ratio between the available statistics and the statistics required (prescribed) by decrees and regulations (this refers primarily to the decrees and regulations of the European Commission and other relevant international organisations).

The methodology used to calculate the index of industrial production is based on EU recommendations related to short-term statistics (Council Regulation (EC) No. 1165/98), on definitions of variables, list of variables and frequency of data collection (Commission Regulation (EC) No. 1503 /2006) and definitions of Main Industrial Groups (MIGs) (Commission Regulation (EC) number 656/2007).

The EU regulation relating to short-term statistics (Council Regulation (EC) number 1165/98) defines variables 110 - production, 120 - total turnover, 121 - total domestic turnover and 122 - total foreign turnover and the obligation to present them in the form of an index number and in monthly dynamics, which is fully applied in Industry Statistics, so the rate of available statistics is 100%.

3 ACCURACY AND RELIABILITY

3.1 Sampling error

3.1.1 Quality and performance indicator – Sampling error (A1)

The sample determined for the collection of data on industrial production is not random, but was chosen with the purpose of meeting specific goals, ie. it is a targeted sample. Included are industrial enterprises and industrial units of non-industrial enterprises that cover at least 90% of added value at the level of each class of industrial activity, as required by the regulation on short-term statistics (Council Regulation (EC) number 1165/98).

3.1.2 Activities to reduce sampling errors

Given that the scope for collecting annual data on industrial production was obtained using the cut-off method, i.e. it is targeted coverage, the calculation of sampling errors according to the sampling error calculation methodology is not applicable

3.2 Non-sampling errors

3.2.1 Non-sampling errors – Coverage errors

The monthly industry report is conducted by collecting data obtained from selected observation units in the sample. The sample was created using data from the Statistical Business Register (SBR) and the Annual Industry Report (IND-21) for 2020. Out of a total of 1,915 active industrial enterprises from the SBR, the sample includes 590 industrial enterprises, as well as 75 industrial units in the composition of non-industrial enterprises, which makes a total of 665 observation units.

3.2.1.1 Quality and performance indicator – Over-coverage rate (A2)

Table 1. Over-coverage rate in 2021

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual average
Number of units in the address list	665	665	665	665	665	665	665	665	665	665	665	665	665
Number of irrelevant units in the address list	1	1	1	1	1	1	1	1	1	1	1	1	1
Over-coverage rate (%)	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%

3.2.1.2 Quality and performance indicator – Common units - proportion (A3)

Units from multiple sources are not used in the survey on industrial production. The units of observation are business entities and their units that are selected in the monthly coverage and from which the reports are collected directly.

3.2.1.3 Undercoverage error

Undercoverage errors imply differences between the target population and the sampled population.

3.2.1.4 Measures to reduce coverage errors

The sample is updated every year to ensure coverage of 90% of the gross added value for each class of KD 2010 (newly established enterprises are added, those that have stopped working are eliminated and value added coverage is checked, activity codes are updated based on contact with reporting units).

3.2.2 Non-sampling errors – Measurement errors

3.2.2.1 Reasons behind measurement errors

The most common reasons for measurement errors are:

- misunderstanding of the methodology by the reporting units;
- reporting units may knowingly or unknowingly provide erroneous data in the questionnaire;
- lack of interest of the reporting unit;
- the questionnaire is not always completed by the same person.

3.2.2.2 *Measurements to reduce the number of measurement errors*

The first level of data validation is carried out by regional departments of the RSIS. A comparison is made with the data for the previous month and compliance with the Monthly NIP BiH 2018. Any large deviation, as well as the occurrence of missing data, is controlled and verified by telephone contact with the reporting unit.

Data entry is done in the central office of RSIS, that is, in the Production Statistics Division. Measurement errors are detected and prevented by calculation and logic controls built into the application. Built-in controls also enable automatic identification of a new product, that is, a product without weights and/or without the participation of the branch of activity to which that product belongs in the GVA of the overall industry.

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

3.2.3 *Non-sampling errors – Non-response errors*

3.2.3.1 *Quality and performance indicator – Unit non-response rate (A4)*

Reports that are not submitted by reporting units or are submitted with inadequate answers are treated as non-response.

In the monthly statistics of the industry, the number of cases of non-response is negligible and mostly concerns enterprises with less influence in the relevant division.

Table 2: *Non-response rate in 2021*

Months	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual average
Number of observation units	665	665	665	665	665	665	665	665	665	665	665	665	665
Number of non-response cases	4	0	7	0	5	0	0	0	1	1	0	1	1.6
Non-response rates (%)	0.6%	0.0%	1.05%	0.0%	0.75%	0.0%	0.0%	0.0%	0.15%	0.15%	0.0%	0.15%	0.24%

3.2.3.2 *Quality and performance indicator – Item non-response rate (A5)*

Item non-response occurs very rarely and often is not possible to be detected. Mostly, these are cases when the reporting unit does not fill in the report all the products produced by the observation unit.

Currently, there is no precise record of the number of non-responses for individual variables.

3.2.3.3 *Procedures in the event of non-response*

In case the complete report or only some data is missing, contact is established with the reporting unit with the aim of completing the report in the manner required by the methodology.

Exceptionally, in case of non-response of the reporting unit for the complete report or only certain data, as well as in the case of deviations, inconsistencies and errors that cannot be corrected through repeated contact with the reporting unit, an assessment is made on the basis of data for the last few months, or on the basis of production trends in the last year (if it is seasonal production).

3.2.3.4 Procedures to reduce non-response rates

In order to reduce the non-response rate, taking into account the capabilities of the reporting units, the following procedures are used:

- multiple contacting of the reporting unit;
- flexibility of deadlines for report submission (possibility of postponing data submission deadlines);
- combining several different methods of data collection (telephone, e-mail, fax);
- revision of the questionnaire and instructions in order to simplify and facilitate filling out the questionnaire.

3.2.4 Revision

3.2.4.1 Quality and performance indicator – Data revision – average size (A6)

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 2022, larger deviations were noted in the published final data by month in 2021. For this reason, the revised data were published in the form of an [annual release of monthly series](#).

3.2.5 Imputation

3.2.5.1 Quality and performance indicator – Imputation - rate (A7)

In order to solve the problems related to missing, unacceptable or inconsistent answers, a segment of imputed data should be introduced into the processing of data collected from all enterprises and their parts. Currently, there is no accurate record of the number of imputed data.

4 TIMELINESS AND PUNCTUALITY

4.1 Timeliness of publication

The timeliness of data publication is the interval between the observed period to which the data refer and the publication date.

4.1.1 Quality and performance indicator – Time lag – first results (TP1)

Preliminary data for industrial production indices were published on average 23.8 days (Table 3), and for industrial turnover indices on average 31.8 days (Table 4) after the end of the observed period.

Table 3 Timeliness of publication of preliminary results for the industrial production index in 2021 - monthly figures and annual average

Month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual average
Date of publication of preliminary results	09.03. 2021.	23.03. 2021.	23.04. 2021.	24.05. 2021.	22.06. 2021.	22.07. 2021.	23.08. 2021.	22.09. 2021.	22.10. 2021.	22.11. 2021.	22.12. 2021.	24.01. 2022.	/
Time lag (in days)	T+37	T+23	T+23	T+24	T+22	T+22	T+23	T+22	T+22	T+22	T+22	T+24	T + 23.8

Table 4 Timeliness of publication of preliminary results for the industrial turnover index in 2021 - monthly figures and annual average

Month	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual average
Date of publication of preliminary results	16.03. 2021.	30.03. 2021.	04.05. 2021.	31.05. 2021.	30.06. 2021.	30.07. 2021.	30.08. 2021.	30.09. 2021.	01.11. 2021.	30.11. 2021.	30.12. 2021.	31.01. 2022.	/
Time lag (in days)	T+44	T+30	T+34	T+31	T+30	T+30	T+30	T+30	T+32	T+30	T+30	T+31	T + 31.8

Table 9 Punctuality of publishing the index of employees in industry in 2021

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual average
Announced date of publishing (according to the Release calendar)	08.03.	22.03.	22.04.	24.05.	22.06.	22.07.	23.08.	22.09.	22.10.	22.11.	22.12.	24.01.2022.	/
Actual date of publishing	09.03.	22.03.	22.04.	24.05.	22.06.	22.07.	23.08.	22.09.	22.10.	22.11.	22.12.	24.01.2022.	/
Time lag (in days)	T+1	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0.1

Table 10 Punctuality of publishing the industrial turnover index in 2021

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Annual average
Announced date of publishing (according to the Release calendar)	10.03.	30.03.	04.05.	31.05.	30.06.	30.07.	30.08.	30.09.	01.11.	30.11.	30.12.	31.01.2022.	/
Actual date of publishing	16.03.	30.03.	04.05.	31.05.	30.06.	30.07.	30.08.	30.09.	01.11.	30.11.	30.12.	31.01.2022.	/
Time lag (in days)	T+6	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0	T+0.5

Indicator for users of statistics

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.

4.3 Reasons for major delays and measures to improve timeliness and punctuality

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

5 COHERENCE AND COMPARABILITY

5.1 Coherence

5.1.1 Quality and performance indicator – Coherence between different data sources (CH1)

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. There is no reference survey to compare data with.

5.1.2 Reasons for major discrepancies

See under 5.1.1.

5.2 Comparability

5.2.1 Quality and performance indicator – Asymmetry for mirror flows statistics (CC1)

Not applicable.

5.2.2 Quality and performance indicator – Length of comparable time series (CC2)

Industrial production indices in Republika Srpska have been published since 1996, and a comparable series of industrial production indices exists since 2005.

CC2₁ = December 2004 – January 1996 = 108 months

CC2₂ = December 2021 – January 2005 = 204 months

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.

CC2₁ = December 2021 – January 2007 = 180 months

CC2₂ = December 2021 - January 2013 = 108 months

Industry turnover indices have been published since 2017, and there is a comparable series of data since 2006.

CC2₁ = December 2021 – January 2017 = 60 months

CC2₂ = December 2021 – January 2006 = 192 months

5.2.3 Breaks in time series

Indices for the period from 1996 to 2000 were presented according to the Unique Classification of Activities. From 2001 to 2004, the indexes were presented according to the Classification of Activities of Republika Srpska, which for the first time was harmonised with the original EU statistical classification of activities NACE Rev.1.

Indices from 2013 to 2021 were calculated according to KD BiH 2010, which was harmonised with NACE Rev.2. Indices for the period from 2005 to 2012 were also recalculated according to KD BiH 2010.

Indices of employees in industry have been published since 2007. The data from 2013 to 2021 are presented according to KD BiH 2010, to which the data for the industry as a whole and the sections for the period from 2007 to 2012 were recalculated.

Industry turnover indices have been published since 2017. Data from 2017 to 2021 were calculated according to KD BiH 2010, which is harmonised with NACE Rev.2.

5.3 Geographical comparability

5.3.1 Comparability with the European Statistical System members

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).

6 ACCESSIBILITY AND CLARITY, DISSEMINATION FORMATS

6.1 Releases in which data are published

Users of statistical data can easily and simply access the data, as they are published on the RSIS website www.rzs.rs.ba and in printed publications. Data are also presented at the press conference.

6.2 Publications in which data are published

Indices of industrial production, employees in industry and industrial turnover are published in the following publications:

- [Monthly release „Industrial production index“](#);
- [Monthly release „Index of employees in industry“](#);
- [Monthly release „Industrial turnover index“](#);
- ["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).

6.3 Online database

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

6.4 Access to microdata

Microdata are not available.

6.5 Accessibility of methodological documents

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.

6.6 Measures to improve clarity of disseminated results

Statistical data on industry are clearly presented.

6.7 Quality and performance indicator – Data tables - consultations (AC1)

The software for tracking the number of data accesses and downloads is not available.

6.8 Quality and performance indicator – Metadata - consultations (AC2)

The software for tracking the number of data accesses and downloads is not available.

6.9 Quality and performance indicator – Metadata completeness - rate (AC3)

Metadata completeness rate for industry statistics is 100%.

7 SURVEY COSTS AND BURDEN ON RESPONDENTS

7.1 Costs of survey implementation

Data on RSIS costs for the realisation of the statistical activity related to industry statistics are not available.

7.2 Burden on respondents

Table 11 Annual reporting burden for the Monthly report of industry in 2021 (in hours)

Number of data providers that filled in the questionnaire	600
Time required to fill in one questionnaire, average (hours)	0.8
Total time spent (hours)	3,819

7.3 Measures to reduce costs and burden

The introduction of an electronic form through which companies would directly enter their data would be the most significant measure to reduce costs and burden on reporting units.

8 CONFIDENTIALITY

8.1 Confidentiality - policy

Data related to individual observation units are used exclusively for statistical purposes.

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).

8.2 Confidentiality – data handling

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.

9 STATISTICAL PROCESSING

9.1 Source of 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 ≥ 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.

9.2 Frequency of data collection

Data on industrial production are collected and published in a monthly periodicity.

9.3 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.

9.4 Data validation

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

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.

9.5 Data compilation

The collected data are checked and corrected in the regional departments and in the Production Statistics Division of RSIS before being entered. If necessary, subsequent contact with the reporting unit provides additional data on the basis of which corrections are made.

Data entry is done in the Production Statistics Division of RSIS. In the application for entering and processing data, mainly "hard" controls are built in, which make it impossible to enter computationally and logically incorrect data.

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.

9.6 Adjustments

9.6.1 Seasonal adjustment

Industrial production indices are indices of finished industrial products defined by the current Nomenclature of Industrial Products, which is harmonised with the EU PRODCOM list.

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

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 adjusted and working-day adjusted indices.

The presentation and interpretation of the industrial turnover index is aligned with EU regulations on short-term statistics and recommendations on the publication of the industrial turnover index. Accordingly, industrial turnover is interpreted by the monthly rate of change calculated from seasonally adjusted indices and the annual rate of change calculated from working-day adjusted indices. This made it possible to compare the data for Republika Srpska with the data published by EUROSTAT.

In accordance with EUROSTAT's recommendations for presenting short-term indicators, data that are compared with data from the previous month (so-called monthly comparison) are presented in the seasonally adjusted form of the industrial production index or the rates of change calculated from them. Data that are compared with data from the same month of the previous year (the so-called annual comparison) are presented in the working-day adjusted form of the industrial production index or the rates of change calculated from them.