Consumer Price Index

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

Republika Srpska Institute of Statistics

1. Contact

1.1.	Contact organisation	REPUBLIKA SRPSKA INSTITUTE OF STATISTICS
1.2.	Contact organisation unit	Sector of statistics of Labour, Proces, Living Standard and Environment - Prices and Living Standard Statistics Division
1.3.	Contact name	Željka Drašković
1.4.	Contact person function	Head of the Prices and Living Standard Statistics Division
1.5.	Contact mail address	Veljka Mlađenovića 12d, 78000 Banja Luka, Republika Srpska, Bosnia and Herzegovina
1.6.	Contact email address	zeljka.draskovic@rzs.rs.ba
1.7.	Contact phone number	+387 51 332 716
1.8.	Contact fax number	+387 51 332 750

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3. Statistical presentation

3.1. Data description

Consumer price index (CPI) measures changes in the average level of prices of products and services of the final monetary household consumption on the territory of Republika Srpska. Its main purpose is to provide a measure of official inflation in Republika Srpska by monitoring the dynamics of changes in price levels.

CPI also serves to harmonise wages according to collective agreements, pensions and social benefits and to preserve values for contracts with an indexation clause. It also allows a comparison of inflation rates with other countries and a comparison of price trends between different regions within the country. In addition, CPI serves as a basis for deflating macroeconomic aggregates in national accounts statistics.

CPI is calculated in the regular monthly dynamics.

Key statistics:
- monthly index- change in prices in the current month in relation to previous month,
- chain index- change in prices in the current month in relation to December previous year,
- annual index- change in prices in the current month in relation to the same month previous year,
- average annual index - change in prices since the beginning of the year until the current month in relation to the same period previous year,
- base index - change in prices in the current month compared to the average of the base (reference) year (2010=100),
- average prices for the current month.

3.2. Classification system

The international Classification of Individual Consumption by Purpose-COICOP is used to calculate indices.

3.3. Sector coverage

The Consumer Price Index uses data from the final monetary consumption of households in the territory of Republika Srpska, on the basis of which a selection is made of the most representative groups of goods and services purchased by such households for their own (personal) consumption.

3.4. Statistical concepts and definitions

Aggregate indices: indices calculated as weighted average of elementary indices, which refer to hierarchical positions, starting from the level of products.

Aggregation (of indices): combination of linked categories, usually within a common group of the hierarchy, that provides information on a level broader than the one at which observations were made.

Base price: price in the base period (for CPI, December of the previous year).

Base indices: indices calculated on the basis of a pre-defined base period (for CPI, Ø2010=100).

Base period: data collected for this time period serve as the basis for the calculation of indices or other ratios (December of the previous year and Ø 2010=100).

Type: defines in detail the specificity of a selected product at the retail outlet, in accordance with the given description. (e.g., natural varieties for fresh fruit and vegetables, technical characteristics for household appliances.)

Elementary item: individual product identified by a price collector in terms of the specific type, brand, packaging and retail outlet. For each product, the corresponding quota-number of collected elementary prices.

Elementary index: index of the elementary item.

Unit of measure: the unit of measurement to which the values are attached and in which the collected quantity of an individual product is expressed.

Cards: questionnaires completed during fieldwork.

Basket of products: a list of selected products and services for which prices are collected. It is selected to represent the most common consumer behaviours in terms of their final consumption.

Chain index: indices linked by a pre-defined common reference period for the so-called calculation indices – December of the previous year.

Retail price: the price paid by households to purchase individual goods and services through cash transactions on the territory of Republika Srpska. Retail prices that are actually paid at the time of the purchase process are collected, including all taxes and excluding possible subsidies on products.

Brand: an indication serving to identify the manufacturer or the specific product sign/name.

Microdata: collected prices of elementary items, aggregated elementary indices

Weights: values expressing the importance (participation) of products in the basket, which are used to calculate aggregate indices as weighted averages, starting from elementary indices. They are based on data related to the final consumption of households or data on the estimated population according to the HBS results.

Collected amount: a specific sold amount of a product. It is expressed in various units of measure.

Retail outlet: stores, markets, and other trade shops where prices are collected.

Product: any product or service for personal consumption of households that can be purchased, joint name for products and services.

Average data: values calculated on the basis of collected elementary data (average prices or average indices referring to a specific product).

Reference base indices: indices calculated using the base year 2010 (reference base for indices)

Reference index period: period for which the index base is 100.

Reference period of prices: period for which the price was valued and based on which chain indices are calculated (for CPI, this period is December of the previous year).

Reference period of weights: period for which costs are calculated, to calculate weights.

Representative item: product at the lowest level of aggregation, that is, a product at the retail outlet at one geographical location, for which the weight can be estimated.

Series: a set of elementary prices determined by each product (individual price per individual item, of a specific brand, type and packaging, at a single retail outlet).

Change rate: price change in the current month in comparison with the price of the same item from the previous (pre-defined) period, expressed in percentages.

Frequency of collection: frequency of collection of elementary prices (for CPI, once and/or twice a month)

Price before replacement: the replacement product price from the previous month.

3.5. Statistical unit

Selected products and services (basket) which bear the main statistical characteristic – the price collected for the survey.

3.6. Statistical population

Categories of the final monetary consumption of households - consumer goods and services.

3.7. Reference area

Republika Srpska

3.8. Time coverage

2005–2016.

3.9. Base period

Ø2010=100

4. Unit of measure

Indices

5. Reference period

Month

6. Institutional mandate

6.1. Legal acts and other agreements

The statistical survey Consumer price index in Republika Srpska for 2016 is carried out based on the Statistical Programme of Republika Srpska for the period 2013-2017 (Decision of the National Assembly of Republika Srpska, No. 01-1901/12 on the adoption of the Statistical Programme, "Official Gazette of Republika Srpska", No. 120/12) and in accordance with the Law on Statistics of Republika Srpska ("Official Gazette of Republika Srpska", No. 85/03).

6.2. Data sharing

Production of CPI is not subjected to international agreements.

7. Confidentiality

7.1. Confidentiality - policy

The confidentiality of data and protection of personal data collected for the calculation of consumer price index are regulated by the Law on Statistics of Republika Srpska ("Official Gazette of Republika Srpska, No. 85/03), the Rulebook on protection of confidential data of the Republika Srpska Institute of Statistics and other current regulations referring to data protection and confidentiality, including the Law on protection of personal data ("Official Gazette of BiH", No. 49/06).

7.2 Confidentiality – data treatment

At all stages of the process of developing the Consumer price index, confidentiality and statistical protection of data are ensured. In this regard, statistical staff is obliged to act in accordance with the provisions of the Law on Statistics of Republika Srpska, "Official Gazette of Republika Srpska", No.85/03) on confidentiality and protection of data. One of the measures related to data confidentiality is also provided in written statements on the protection and confidentiality of statistical data, signed by all employees of the Institute. In addition, all written documents in which information is requested for statistical purposes specify the articles of legal provisions regulating this field. The protection of data is ensured through passwords required to access each personal computer in the Institute. Detailed measures of statistical data protection are described in the Rulebook on protection of confidential data of the Republika Srpska Institute of Statistics.

8. Release policy

8.1. Release calendar

IPC data are published in accordance with pre-determined deadlines, defined in the Release Calendar of the Institute, according to which the monthly press releases are published 22 days after the expiration of the month for the data from the previous month (these are also the final data). Deadlines for other types of publications in which consumer price indices are published are also planned in the Release Calendar.

8.2. Release calendar access

http://www.rzs.rs.ba/publications/?left_mi=15&add=15

8.3. User access

In the provisions of Article 17, paragraph 2 of the Law on Statistics of Republika Srpska ("Official Gazette of Republika Srpska", No. 85/03), it is determined that the statistics of Republika Srpska aim to present the real situation objectively, to distribute the data in a neutral and impartial manner, as well as that citizens' right to access public information is respected. All users have the right to access data and information at the same time and in the same way.

9. Frequency of dissemination

Monthly

10. Accessibility and clarity

10.1. Release

Consumer price indices are published in the monthly release providing the most important results in a summary review – a table of indices at the level of total indices, at the level of main divisions (12) and at the level of major groups of consumption (40), in accordance with the COICOP classification in relation to different time periods. Data provided in monthly statistical releases are available in pdf and xlsx format at the Institute's website, within the section: http://www.rzs.rs.ba/front/category/19/148/?&add=None

10.2. Publications

In addition to monthly releases, consumer price indices are also published in the following publications:
- Monthly Statistical Review, current indices in relation to different time periods, for the total index and for major categories of in accordance with the COICOP classification. The data are available at the Institute's website:
  http://www.rzs.rs.ba/front/article/2551/?left_mi=None&add=None

- Price Statistics Bulletin, which contains annual data, i.e. indices at a more detailed level (up to class level of the COICOP classification). The data are available at the Institute's website:
  http://www.rzs.rs.ba/front/category/149/

- Statistical Bulletin of Republika Srpska, which provides multi-annual data on consumer price indices, available at the Institute's website:
  http://www.rzs.rs.ba/front/category/8/?left_mi=287&add=287

- This is Republika Srpska, which provides basic data on inflation for the year for which the data are published, available at the Institute's website:
  http://www.rzs.rs.ba/front/category/308/?left_mi=288&add=288

10.3. Online database

Consumer price indices are also available in the online databases of the Institute, in the section Prices:
http://www3.rzs.rs.ba/rzs/faces/indicators.xhtml

10.4. Microdata access

Individual consumer price data are protected by general legal frameworks of confidentiality and are used for statistical purposes only (Law on Statistics of Republika Srpska, "Official Gazette of Republika Srpska", No.85/03). When it comes to microdata, the conditions under which certain users are allowed access to microdata and the methods of protection of confidential data (statistical protection of individual and aggregated data) are regulated in detail by the Rulebook on protection of confidential data of the Republika Srpska Institute of Statistics).

10.5. Other

Data are also disseminated through a media conference, a special press release and a response to the written requests of the users according to their specification.

10.6. Documentation on methodology

Methodological documents and the most important information related to the survey are available both in electronic form and in paper format, that is, as publications. Online methodology is available at the Institute's website:
http://www.rzs.rs.ba/front/category/19/147/?&add=None

10.7. Quality documentation

Quality report is available at the website of the Republika Srpska Institute of Statistics:
http://www.rzs.rs.ba/front/category/340/?left_mi=284&add=284

11. Quality management

11.1. Quality assurance

When it comes to quality assurance for statistical data and maintaining public confidence in the data, the Law on Statistics of Republika Srpska (Article 17, paragraph 1) prescribes the application of principles of impartiality,

reliability, transparency, timeliness, professional independence and statistical confidentiality in organisation and production of statistics in Republika Srpska. The Republika Srpska Institute of Statistics follows the recommendations on organisation and quality management defined by the European Statistics Code of Practice (CoP).

11.2. Quality assessment

Final phase of the statistical activity is an overall assessment using information from all processes, from the design of survey instruments and data collection, to data publication and feedback from users. This information is used to produce a quality report, which contains descriptions of all processes of the statistical activities and lists advantages and disadvantages related to quality, as well as quality indicators.

12. Relevance

12.1. User needs

In line with the main purpose of the Consumer price index, as a measure of official inflation in the country, users of data on consumer prices can be classified as external and internal users, that is, users outside the Institute and users in the Institute. External users include the Government of Republika Srpska and its ministries and other state administration bodies, chambers of commerce, business entities, economic institutes, banks, various associations, non-governmental organisations, academia, independent researchers, etc.
For internal purposes, consumer price data are mainly used to deflate national accounts.
The user needs for CPI data are recognizable through the record of received requests for data, as well as through the number of total visits to the Institute's website. In this regard, in 2016, 38 individual user requests for data related to consumer price indices were answered.

12.2. User satisfaction

User satisfaction for users of consumer price data is measured through the User Satisfaction Survey carried out by the Republika Srpska Institute of Statistics. The results of the most recent survey are available at the Institute's website, in the section Quality in Statistics: http://www.rzs.rs.ba/front/article/1374/?left_mi=306&add=306

12.3. Completeness

Although consumer price index statistics primarily serve the needs of national economies and is not used in the ESS such as the harmonised consumer price index, the rate of data completeness (R1) is 100%. Consumer prices indices are the only statistics within the survey.

13. Accuracy and reliability

13.1. Overall accuracy

The accuracy of the data is checked by assessing the reliability of the source data and applying the prescribed methodology, as well as by the control of measurement errors.

13.2. Sampling error

For consumer price statistics, the survey is based on a sample, thus, the entire population is not used. The sample is not random, but selected to meet specific targets. Minimum standards for the selection of a targeted sample for CPI imply that each category at the 4-digit level of the COICOP should contain sufficient elementary aggregates that can provide information about its changes in the population estimated as reliable and comparable. A basic principle of selection has been adopted, in order to ensure the representativeness of customers' habits in terms of coverage (most popular products in terms of purchase, most frequently visited retail outlets, top-selling services, etc.).

13.3. Non-sampling error

By constant improvement of methodological processes, efforts are being made to reduce non-sampling errors. The list of active sales outlets, the list of best-selling products and product brands is regularly updated to eliminate coverage errors.

Measurement errors are possible in the phases of data collection in the field and data entry. These can be made by price collectors or persons who enter the data. Questionnaires and all methodological instructions are sent to price collectors. Regular contacts with price collectors are maintained in order to minimize errors. Possible

recording and entry errors are corrected before calculating the index and average prices, in order to avoid the subsequent revision of the calculated indices.

14. Timeliness and punctuality

14.1. Timeliness

The data are published on the 22nd day after the end of the reference month. The timing of the first release of results, which is determined as the difference between the date of the first release and the end of the reference period, for 2016 is 22.3 average days from the end of the reference month. The first results are also the final data. Timeliness can be violated in cases where significant product list changes or weight updates are made (most often occurs with data for January), which was not the case in 2016.

14.2. Punctuality

Punctuality of publishing is 100%.

15. Coherence and comparability

15.1. Comparability - geographical

The consumer price index, as a relevant measure of inflation, is primarily used for national needs. CPI in Republika Srpska relies in part on international recommendations, but the Harmonized Index of Consumer Prices is still not being developed, which primarily serves to compare the inflation rates between EU Member States and to calculate the convergence measure in terms of price stability within the euro zone.

15.2. Comparability – over time

Data on changes of consumer prices in Republika Srpska have been collected since 2005, and the first results were published at the beginning of 2008, since then they are regularly published in the monthly dynamics.

15.3. Coherence – cross domain

There is no reference survey to use the results of other datasets / domains in order to get monthly prices.

15.4. Coherence - internal

Indices are completely coherent. Indices are the only statistics and, in that sense, they are internally coherent because aggregated indices (i.e. indices at higher levels of aggregation) are obtained from the elementary indices.

16. Cost and burden

Costs related to CPI survey as well as the burden of respondents are described in the Quality report for Consumer Price Index, 2015:

http://www2.rzs.rs.ba/static/uploads/izvjestaji_o_kvalitetu/Izvjestaj_o_kvalitetu_Indeks_potrosackih_cijena_2015.pdf

17. Data revision

17.1. Data revision – policy

There is no general data revision policy, except that users are informed about the conducted revisions of data in the form of short information, which are published in statistical releases and other publications.

17.2. Data revision - practice

Monthly consumer price indices were not subject to revisions.

18. Statistical processing

18.1. Source data

The data necessary for calculating the Consumer Price Index are collected on the basis of a targeted sample, which in 2016 consisted of 9,476 individual prices, in six cities of Republika Srpska. In addition, another required source of data for the compilation of indices is the Household Budget Survey (HBS), which provides the value and structure of average consumption.

18.2. Frequency of data collection

Prices of goods and services are recorded on a monthly basis, with the exception of the prices of food products from markets and gasoline prices, which are recorded twice a month, that is, in the first and third week of the month.

18.3. Data collection

Prices are collected at selected retail locations, such as: stores selling consumer goods – supermarkets, hypermarkets and similar, specialised stores, retail shops in shopping malls, markets (green markets), utility companies, telecommunication companies, and other enterprises providing services to households. Most prices are collected by direct collection in the field, while some of them are collected through the authorized service provider's website, through a single price list, etc. The Republika Srpska Institute of Statistics provides price collectors with specifications (so-called cards), which include the following major data: description of product/service, appropriate COICOP codes and required units of measure. Based on these data, price collectors independently choose a specific product for which they will collect prices and detailed descriptions, at a specific retail outlet. Selection of a specific product should comply with the most sold product criterion. Price collectors complete the questionnaire on all additional characteristics of products, as well as information on possible replacements of products/services, if there are any. This way of price collection, in which the same product is monitored as long as it is considered the best-selling product, enables tracking of price changes between two periods.
For the consumer price index purposes, price collection is conducted on the following days in a month:
- For agricultural products sold at markets, prices are collected twice a month, in the first and third weeks of the month,
- Prices of gasoline are also collected in the first and third weeks of the month, on the same day,
- For all other products, in accordance with the current European standards, prices are collected once a month (between the 1st and 21st of the month) and the interval between price collections must be the same.

18.4. Data validation

Data validation is performed during and after data entry, through logical controls that are pre-defined within the application itself. For example, for all prices with a deviation of +/-10% a note is required during data entry. After data entry, several individual parametres are checked, including:
- completeness of the entry of prices, that is, whether the price equals 0,
- checks of the change rates for each item, in comparison with the previous month,
- control of prices for which excessive changes were recorded in comparison with the previously collected prices,
- control of price reductions by more than 50%,
- for which product codes there was a change of brand, type, retail outlet or reference quantity, while the change was not recorded properly,
In all cases in which a price deviates significantly from the one previously collected, without reasonable explanation for such deviation, price collectors return to the field for subsequent verification. Also, when data processing is finalized, the output data (indices) are compared with the corresponding output data of the neighbouring countries.

18.5. Data compilation

For the consumer price index it is necessary to first calculate elementary indices and representative item indices on the level of cities. Here we use the geometric mean as the measure of average value. Aggregate indices are afterwards calculated using the Laspeyres's formula for weighted arithmetic mean, beginning with the lowest level of the representative item index to the level of the total index for Republika Srpska. The reference base for the calculation of a series of indices is 2010.
Weights used for calculating the consumer price index are based on the data on final monetary household consumption and they represent the values reflecting the relative share of products and services in the total household consumption. Main source of data for weights is the Household Budget Survey (HBS). Two types of weights are used for the calculation: population weights (so-called horizontal weights) for the calculation of average indices of each elementary item at the entity level, and weights of household consumption value in the territory of RS (so-called vertical weights) for the aggregation of total index, starting from the lowest level of elementary

indices. Weights based on the Household Budget Survey 2011 data are used for the calculation of consumer price indices in 2016. Weights are corrected each year with price changes in the previous year.

18.6. Adjustment

Given that the Consumer Price Index is a national indicator of inflation and is not a subject of the ESS, which harmonised indices are, there are no standard methods of adjustment, except in the event of extreme values (outliers) or replacements of products by the most similar ones in terms of characteristics in the description.

19. Comment	