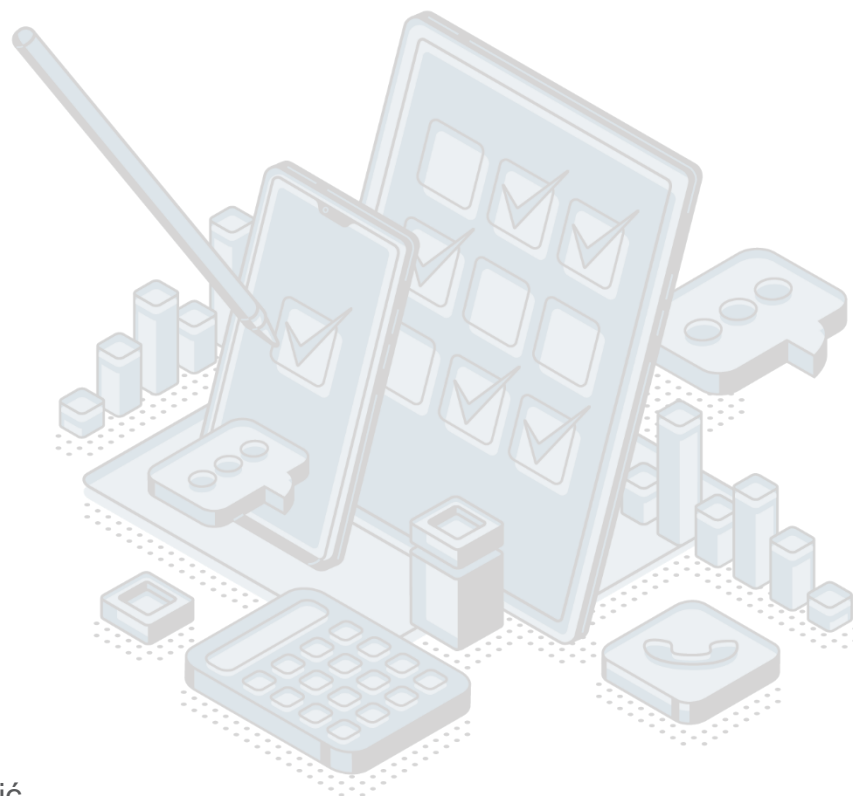QUALITY REPORT

Consumer Price Index

2022

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1. Introduction – Basic information about the survey

1.1 Purpose, goal and subject of the survey

Consumer Price Index (CPI) is defined as a measure of the average change of prices of a fixed basket of goods and services, which is purchased by households and which aims to satisfy the household's needs. CPI measures a change over time in price level, and it is calculated as a Laspeyres-type price index, based on the retail prices of goods and services available for purchase in the economic territory of Montenegro. The aim of the CPI survey is to calculate inflation as one of the most important macroeconomic indicators. Also, it can be used: for correction of salaries, pensions, social benefits, as well as deflator in national accounts.

1.2 Legal basis

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12 and 47/19) defines provisions for collection, processing, and dissemination of data. The Law provides to the Statistical Office clear and wide legal powers to collect and access the data necessary for the implementation of Programme and Annual Plan. The Law gives a priority to the use of administrative data and right of access to individual data that are a result of survey of other official statistical producers. As an annex to legal provisions, Statistical Office has signed several memoranda on cooperation with administrative data providers.

1.3 Statistical units

Each published index or rate of change refers to the final household monetary consumption within the economic territory of Montenegro. Reporting units covers all types of retail shops (stores of all types and sizes, green markets, craft workshops, public service companies, catering, sports and cultural-educational facilities and the like) which have the highest turnover. The observation units are retail prices of final consumption products and services, which have a significant share in the total consumption of the average consumer. These products and services make the "basket" of goods and services, which includes mainly products and services, whose share in total consumption of the population exceeds 0.1%.

1.4 Coverage and scope of survey

1.4.1 Sectors

CPI covers the whole household sector, more precisely the goods and services that are acquired by households (national concept).

1.4.2 Statistical population

Consumption of all private households permanently residing in Montenegro is covered. Neither consumption of the collective households, nor non-resident consumption is covered.

1.5 Referent geographical area

Territory of Montenegro.

1.6 Concepts and definitions

The Consumer Price Index (CPI) is an indicator of the average change in prices for all products and services used by households for consumption purposes. The Consumer Price Index serves as the official measure of inflation in Montenegro.

Elementary aggregates represent products at the lowest level of aggregation i.e. products in all sales facilities in one geographical location.

The monthly inflation rate (m/m-1) measures the change in the average prices of the current month compared to the average prices in the previous month.

The annual inflation rate (m/m-12) measures the change in the average prices of the current month compared to the average prices in the same month of the previous year.

The cumulative index (rate of change) measures the change in the average prices of the current month compared to the average prices in December of the previous year.

The base index (rate of change) measures the average price change in the current month compared to the average of the base year.

The average annual index (rate of change) measures changes in average prices from the beginning of the year to the current month compared to the same period of the previous year (e.g. Jan-May 19/Jan-May 18).

The weights used for calculation of the consumer price index represent a relative share of the selected goods and services in the total household's consumption, in domestic territory. More precisely, they represent the "importance" of a particular product group in total household's consumption in a specific reference period.

1.7 Classifications

For the calculation of consumer price indices, European Classification of Individual Consumption by Purpose (ECOICOP 5 digit) is used.

1.8 Frequency of data collection

For the purposes of calculation of the consumer price index, prices are collected once a month in the period from the 3rd to 25th of the month, except for the prices of fuel which are collected on a daily basis.

1.9 Frequency of data dissemination

Monthly.

1.10 Methodology

Methodology of statistical survey and instructions for price monitoring are available at the website of MONSTAT, using the following link: **CPI Methodology**

1.11 Base period

The index reference period is 2015=100.

1.12 Unit of measure

The following units are used:

- ➢ Index (actually unitless, i.e. it is the ratio of the price of the basket in a given year to the price in the base year multiplied by 100);
- ➢ Percentage change on the same period of the previous year (rates);
- ➢ Percentage change on the previous period (rates);
- ➢ Percentage share of the total (weights).

1.13 Data source

The selection of weights: Weights are structure of household consumption obtained on the basis of HBS data.

Selection of shops: Criteria for selection of number and type of shops in one town are:

- ➢ Type of product or service for which prices are collected;
- ➢ Number of populations;
- ➢ Turnover achieved;
- ➢ Price balance of the same product in different shops
- ➢ Continuous supply of goods in shop
- ➢ Consumer's habit
- ➢ Location

Number of population and product type are the main criteria for selection of number of shops by towns. Due to permanent presence in the field and facing real situation, price collectors, in cooperation with the Price Statistics Department, will take a final decision on selection of collecting places. Selection of shops for price collection is updated every year.

Selection of products: The list of products for which the prices are collected is uniform for entire Montenegro. A final list for price collection is defined by Statistical Office, i.e. Price Statistics Department, after the consultation with price collectors, up to the end of November at the latest. Price collector selects a product that match to the product description from the product list. If in a shop there are several different products that correspond to the appropriate description, it is selected one that is sold the most in longer time period. Due to this, it is very important that when selecting a product, a sale person is consulted. When a product is selected for which the price will be collected, it is unchanged during an entire year, except in exceptional cases when the product disappears from the market.

1.14 Method of data collection

Prices are collected on a monthly basis for selected goods and services in 5 municipalities: Podgorica, Nikšić, Bijelo Polje, Bar, Budva, which represent the biggest market centres. Price collectors, who are part-time employees, trained by MONSTAT, visit the shops every month according to a defined plan for price collecting and collect the prices referring to the representative list of goods and services. Depending on the type of goods or services, some prices are collected in a centralized manner by Price Department, by phone or via the Internet.

2. Relevance – Data users

2.1 User needs

International users:

- Eurostat;
- World Bank;
- UN organizations;
- International Monetary Fund.

National users:

- Ministries and other public administration bodies;
- Local government and other local government bodies;
- Central bank;
- Non-governmental organizations;
- Students;
- Researchers;

✦ Media.

2.2 User satisfaction

The Statistical Office has adopted the Quality Management Strategy, the Guidebook to the Implementation of the Quality Management Strategy, as well as the Plan for the Implementation of the Quality Policy. In order to measure the degree to which fulfils obligations towards users and within the new quality policy, the Statistical Office conducted User satisfaction survey.

The results of the survey are available on the Statistical Office website, at the following link:

User satisfaction report

3. Accuracy and reliability

3.1 Accuracy – Overall remark

The accuracy of CPI is generally considered to be high. The accuracy of source data is monitored by assessing the methodological soundness of price and weight sources and the adherence to the methodological recommendations.

There is a variety of data sources both for weights (National Account data, Household Budget Survey data, etc.) and prices (visits to local retailers and service providers and central collection via mail, telephone, e-mail and the internet are used). The type of survey and the price collection methods ensure sufficient coverage and timeliness. The outlets, from which prices are collected, are chosen to represent the existing trade and services network and they are based usually on three main criteria: turnover, representativeness and coverage of availability of goods and services included in CPI's basket. Prices are collected in outlets, craftsmen, supermarkets, markets, etc., in 5 municipalities in the country (the biggest market centres), some of them also via the internet and by phone. They reflect the price situation for the whole country. Weights are based on the data from HBS on the structure of household final consumption expenditure. Private households are included irrespective of their income. The national concept is in force.

3.2 Sampling error

The survey is not based on a random sample, so we cannot use the "classic" approaches to assess the sampling error.

The methodology for calculating the precision of consumer price indices is not yet completely developed because of the complexity of sample design. MONSTAT put efforts to reduce the sampling error by using the sample of consumer prices that is as large as possible, given resource constraints, models that optimize the allocation of resources by indicating the number of prices that should be observed in each municipality and each item category, in order to minimize the variance of the all items index.

Indicators of sampling error

Not available.

3.3 Non-sampling error

The sample defined for collecting consumer prices is not random, but chosen with the purpose of satisfying specific objectives. The basic principle of sample selection has been adopted with the aim of ensuring representativeness of consumer behaviour in terms of the coverage of the most frequently purchased products, the most frequently visited outlets and the best-selling products.

3.3.1 Coverage error

Considering that a purposive sample is in force, coverage errors are not possible.

Indicator of coverage error

Not relevant.

3.3.2 Measurement error

Measurement errors are only possible in the phases of collecting or entering data by price collectors or by persons who enter the data. Questionnaires and methodological instructions were provided to price collectors and with regular interactive communication with them we are trying to minimize the errors. Possible recording and entry errors are corrected before calculating the average prices and consumer price indices, so subsequent revisions were not carried out.

3.3.3 Non-response error

Retail prices of selected representative products and services used to calculate the CPI and the HICP are monitored at selected outlets (e.g. shops, markets, craftsmen and other organizations). At the points of sale which were selected in the sample at the beginning of the year, prices should be obtained every month, because the number of sales locations during the year should not be changed. Therefore, each month we have 0% non-response of units.

Non-response rate

0%.

Non-response unit rate

In the case of item non-response similar methodological limitations are valid as in the case of unit non-response.

The number of prices which will be collected for the selected product at selected outlets is determined at the beginning of the year and generally does not change, except for retail prices of agricultural products and other products and services which are currently unavailable on the market (e.g. sold out products).

3.3.4 Processing error

The cases of major changes in prices, possible replacements of products, missing products, closure of an outlet and changes in the price structure (tariff prices) are handled separately. An attempt is made to detect and correct errors which may occur upon entry of data.

Imputation rate

Not available.

3.4 Seasonal adjustment

The CPI data are not seasonally adjusted.

3.5 Data revision

3.5.1 Data revision policy

Statistical Office has adopted the revision policy and it is available at the following link: Revision policy

3.5.2 Data revision practice

The published data are considered to be final, except in case of methodological changes and introduction of new classifications, due to which they are subject to revision.

3.5.3 Data revision - average size

There was no data revision in 2022.

4. Timeliness and punctuality

4.1 Timeliness

Data are published according to the Statistical Release Calendar in form of regular monthly release.

Time lag of the first results

Provisional data are final data, so the timeliness of final results is the same as the timeliness of the first results.

Time lag of the final results

15-20 days.

4.2 Punctuality

CPI data are published in accordance with the Statistical Release Calendar for 2022.

5. Availability and clarity

5.1 Statistical Release Calendar

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 018/12) stipulates that official statistical producers prepare, update, and publish Statistical Release Calendar. It is published on the website of Statistical Office not later than 20 December for the next year, for all official statistical producers that includes date of releasing statistical data. Any change in date of releasing in the Calendar is published in advance in accordance with the Procedure on Unplanned Revisions.

5.2 Access to data Release calendar

The calendar of publication of statistical data is available at the following link: Release calendar.

5.3 Releases

Data are available in form of monthly releases published at the official website: Releases.

5.4 Publications

Statistical Office publishes the following regular publications:

➢ Monthly Statistical Review;

➢ Statistical Yearbook;

➢ Montenegro in Numbers.

All publications published by Statistical Office are available at the following link: Publications.

5.5 Online database

Monthly releases of Consumer Price Index (with more detailed data) are available on MONSTAT website, within section Prices, from January 2009, when the cost of living index and the retail price index are replaced by the Consumer Price Index, which is the official measure of inflation in Montenegro. In the file named Data, in the form of excel tables (CPI, COLI, RPI), data are also available for the cost of living index and the retail price index, for the period 2001-2008.

Database

5.6 Access to micro data

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12 and 47/19) regulates rules under which external users can obtain an access to individual data for needs of research. Article 58 defines types of scientific and research organizations that can obtain such data. Providing individual data without identifier is possible only upon a written request of scientific and research institutions, with purpose of performing scientific and research activities as well as international statistical organizations and statistical producers from other countries. Research entity signs the agreement with Statistical Office, and it signs the statement on respecting the confidentiality principle. Official statistical producers keep a separate record on users and purpose of using the statistical data given to these users.

5.7 Metadata completeness rate

Not available.

6. Comparability

6.1 Comparability – geographical

Despite the differences between country methodologies, the CPI is also an internationally recognized inflation measure, but is largely used for national purposes. In the case of the Montenegrin CPI, the most important requirements of the European Commission regulations which are in force in the case of the HICP, have been largely implemented.

6.2 Comparability - over time

From 2001 to 2008 data for RPI (Retail Price Index) and COLI (Cost of Living Index) are available. These two indices (RPI, COLI) have been replaced by CPI from January 2009, which represent official measure of inflation in Montenegro. CPI data are comparable from 2009 onwards, while for the previous years CPI is comparable with RPI/COLI only on the total level. CPI data are available since 2009 on the MONSTAT's website, within section Data.

Time comparability indicator

Not available.