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**QUALITY REPORT 2016**  
**Harmonised Consumer Price Index**

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## **1. Introduction – Basic information about the survey**

### **1.1 Purpose, goal and subject of the survey**

Harmonised indices of consumer prices (HICPs) give comparable measures of inflation for the countries and country groups they are produced. They are economic indicators that measure the change over time of the prices of consumer goods and services acquired by households. In other words they are a set of consumer price indices (CPIs) calculated according to a harmonised approach and a single set of definitions. In particular, HICPs provide the official measure of consumer price inflation in the euro area for the purposes of monetary policy and the assessment of inflation convergence as required under the Maastricht criteria for accession to the euro.

### **1.2 Legal basics**

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No. 18/12) 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.

Regulation (EU) 2016/792 of the European Parliament and of the Council of 11 May 2016 on harmonized indices of consumer prices and the house price index, and repealing Council Regulation (EC) No 2494/95.

### **1.3 Statistical units**

Each published index or rate of change refers to the 'final monetary consumption expenditure' of the whole household sector of the corresponding geographical entity. 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**

HICPs cover the whole household sector, more precisely the goods and services that are acquired by households.

#### **1.4.2 Statistical population**

The target statistical universe is the 'household final monetary consumption expenditure' (HFMCE) within the economic territories of the countries compiling the HICP. The household sector to which the definition refers includes all individuals or groups of individuals irrespective of, in particular, the type of area in which they live, their position in the income distribution and their nationality or residence status. These definitions follow the national accounts concepts in the European System of Accounts (ESA 2010). HICPs comprise all purchases by households within the territory of a country; those by both resident and non-resident households (i.e. 'domestic concept'). HICPs cover the prices paid for goods and services in monetary transactions. The prices measured are those actually faced by consumers.

### **1.5 Referent geographical area**

The HICP refers to the whole territory of Montenegro. Currently, there are five municipalities included in the sample: Podgorica-capital city and Nikšić as representatives of central region, Bar and Budva as representatives of south region, Bijelo Polje-north region. In these geographical locations lives 59% of total population in Montenegro according last Census from 2011 (620 029 - total population in Montenegro).

## 1.6 Concepts and definitions

*The Harmonized Index of Consumer Prices (HICP)* measures changes in the level of retail prices of goods and services from the point of view of the expenditure structure, which consumers (domestic and foreign) intend for final consumption in the territory of Montenegro (domestic concept). The HICP is used for monitoring the movement of retail prices in EU Member States, comparing inflation rates between Member States and as the official rate of the European Central Bank (ECB) at ensuring price stability in the Economic and Monetary Union (EMU).

*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 of 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 16/Jan-May 15).

*The weights* used for calculation of the HICPs 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

The HICPs are classified according to the five-digit categories and sub-categories of the ECOICOP - European Classification of Individual Consumption by Purpose (since 2016; before COICOP/HICP - UN Classification of Individual Consumption by Purpose adapted to the needs of Harmonised Indices of Consumer Prices was used).

There are also a set of special aggregates, which combine indices in a different way than the standard COICOP.

## 1.8 Frequency of data collection

For the purposes of calculation of the HICP, prices are collected once a month in the period from the 3<sup>rd</sup> to 25<sup>th</sup> of the month, except for the prices of fuel which are collected on a daily basis.

## 1.9 Frequency of data dissemination

Harmonised indices of consumer prices are produced monthly.

## 1.10 Methodology

Compendium of HICP reference documents, 2013 edition, is available on Eurostat's website: [Compendium](#)

## 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 Source of data

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 centers. 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. Prices are collected for about 576 major goods and services, representing the main divisions of the COICOP classification. Approximately 48 040 price observations for 576 commodities are collected from approximately 400 retail outlets. The prices collected centrally account for 15.55% of the total weights. Sale of products with reduced prices (price tracker or sales) is considered if discounted prices are available to all consumers without conditions, and if, in the month in which prices are recorded, there are significant sales of products with reduced prices.

Criteria for selection the number and type of shops in one city are: type of product or service for which prices are collected; number of inhabitants; turnover; similarity of prices for the same product in different stores; continuous supply of goods within commodity; consumer habits; location.

The number of inhabitants and types of products are the basic criteria for selection the number of shops by cities. Due to the constant presence in the field and facing the real situation, price collectors are those who, in cooperation with the Department of Price Statistics, will make the final decision regarding the shop selection. The shops are updated every year.

Product selection: The list of products for which prices are collected is unique for the whole of Montenegro. The final list of products and services is determined by the Statistical Office or the Department of Price Statistics after consultation with the price collectors till the end of November at the latest. The price collector selects a product that fits the description of the product from the list of products. If there are several different products in the store that correspond to the description, the one that is most sold for a long period of time is chosen. Therefore, it is very important to consult the seller regarding product selection. Once the product is selected, it does not change throughout the year, except in exceptional cases when the product disappears from the market.

## 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,
- Nongovernmental organizations,
- Students,
- Researchers,
- Media.

## **2.2 User satisfaction**

With purpose of determining user satisfaction with quality data and defining their needs, Statistical Office for the first time carried out the User Satisfaction Survey in 2017. The survey was done from 1 September to 20 October. The survey link was sent to users that sent request to the official email address in period 2013-2017. Additionally, the questionnaire is put on the website of Statistical Office. The processing of data obtained by the mentioned survey is ongoing, while final result are ready until the end of year, both for total users satisfaction, and by domains.

## **3. Accuracy and reliability**

### **3.1 Accuracy – Overall remark**

The accuracy of HICP 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: popularity with consumers, significant turnover from consumer sales and availability of goods and services included in the HICP basket.

Weights are based on the data from NA on the structure of household final consumption expenditure. All private households in the economic territory of the country are covered, whether resident or not and irrespective of their income (domestic concept).

### **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 harmonized indices of consumer prices 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 (A1)*

Not available.

### **3.3 Non-sampling error**

The sample defined for collecting consumer prices is not random, but chosen with a purpose of satisfying specific objectives. The basic principle of sample selection has been adopted with the aim of ensuring representativeness of consumer behavior in terms of the coverage of the most frequently purchased products, the most frequently visited outlets and the best-selling products. For the HICPs non-sampling errors are not quantified. MONSTAT puts efforts to reduce non-sampling errors through continuous methodological improvements and survey process improvements such as computer assisted price collection, which can help avoiding coding and typing errors.

#### **3.3.1 Coverage error**

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

*Indicators of coverage error (A2)*

Not relevant.

#### **3.3.2 Error of measurement**

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**

*Unit non-response rate (A4)*

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.

### **3.4 Seasonal adjustment**

The HICP 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 data are published as final and are not subjected to any revision (unless an error or mistake is found), a fact which is noted in the publications. Major changes in the methodology (classification changes, index reference period, etc.) are announced in the frame of monthly release "Harmonised Index of Consumer Prices" at the time the change is introduced.

#### **3.5.3 Data revision - average size (A6)**

Data for 2016 were revised due to the recalculation of data series from 2010 to the new index reference period (2015 = 100) and harmonization with the European Classification of Individual Consumption by Purpose (ECOICOP). Revision did not affect already published data at total level, while at the lower levels of aggregation, few significant differences were recorded in certain groups of products.

## **4. Timeliness and punctuality**

### **4.1 Timeliness**

Data are published according to the Statistical Release Calendar (three weeks after the end of the reference month, exception for January).

#### *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*

17-24 days.

### **4.2 Punctuality**

HICP data are published in accordance with the Statistical Release Calendar for 2016, except in the case of the January release, which was published on March 2, 2016 (announced on February 26, 2016). The reason for delay was introduction of the new ECOICOP classification and change of the new common index reference period (2015 = 100).

## **5. Availability and clarity**

### **5.1 Release**

HICP data are published monthly according the Statistical Release Calendar and are available at the following link:

[Releases](#)

### **5.2 Publication**

All publications published by Statistical Office are available at the following link: [Publications](#)

### **5.3 Availability of microdata**

The Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12) 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 keeps a separate records on users and purpose of using the statistical data given to these users.

## **6. Comparability**

### **6.1 Comparability - geographical**

HICP is produced based on HICP minimum standards. Requirements of EU regulations harmonizing HICP definitions and classifications have been implemented into Montenegrin HICP. There is some difficult areas which can be improved (particularly quality adjustment) in order to further improve the comparability. Definitions and classifications have been harmonised in a series of legal acts that have resolved conceptual disparities. HICPs are produced based on minimum standards, which may be applied with some flexibility as long as the effect on the value of the indicator remains below 0.1%.

### **6.2 Comparability - over time**

HICP data are considered to be comparable over time. MONSTAT has been produced HICP data from January 2011 and are available on website, within section [Data](#).