

Monetengro

A: Identification

Title of the CPI: Consumer Price Index

Organisation responsible: Statistical Office of Montenegro - MONSTAT

Periodicity: Monthly

Price reference period: Year t-1 = 100

Index reference period: Year t-1 = 100

Weights reference period: 2010

Main uses of CPI: Indexation of wages, pensions and/or social security payment, indexation of rents, contracts and/or other payments, main inflation indicator used for monetary policy, deflate household expenditures in national accounts, computation of purchasing power of households, macroeconomic modelling and other analytic uses.

B: CPI Coverage

Geographical Coverage

Weights: Nation-wide

Price collection: Nation-wide

Population coverage: Resident households of nationals.

Consumption expenditure includes:

- Food consumed away from home;
- Housing maintenance, minor repairs;
- Financial services (including fees for financial advice, brokerage fees);
- Non-life insurance premiums (e.g. vehicle, housing, other property, medical), gross of claims;
- Licences and fees (e.g. driver's licence, hunting licence, vehicle registration)

Consumption expenditure excludes:

- Foods produced for own final consumption;
- Other goods produced for own final consumption;
- Services produced for own final consumption;
- Income in-kind receipts of goods;
- Income in-kind receipts of services;
- In-kind goods received as gifts;

- In-kind services received as gifts;
- Purchase of owner-occupied housing;
- Mortgage repayments;
- Mortgage interest;
- Major repairs, conversions and extensions to owner occupied housing;
- Purchase of gifts of goods and services given to others outside the household;
- Second hand goods purchased;
- Luxury goods;
- Interest payments (excluding mortgage interest payments);
- Life insurance premiums;
- Gambling expenditure, gross of winnings;
- Investment-related expenditures (e.g. purchase of shares/stocks);
- Occupational expenditures;
- Other business-related expenditures;
- Social transfers in-kind of goods and services from government and No-profit institutions serving households;
- Expenditures abroad

C: Concepts, definitions, classifications and weights

Definition of the CPI and its objectives: Consumer Price Index is an indicator of average price changes of all products and services used by households for consumption. Its purpose is to calculate inflation as the main macroeconomic indicator. In addition to calculating inflation, it can be used for: harmonising prices of work in private contracts; harmonisation of earnings, pensions, social benefits, etc.; and as a deflator in the national accounts.

Classification: COICOP (Classification of individual consumption by purpose)

Weights include value of consumption from own production: No

Sources of weights: Household expenditure surveys.

Frequency of weight updates: Every 3-5 years

Weights for different population groups or regions: No

D: Sample design

Sampling methods:

Localities: Judgmental sampling

Outlets: Judgmental sampling

Products: Quota sampling (a priori fixing of the number of elements)

Frequency of sample updates:

Localities: Depends of market's situation.

Outlets: Annual

Products: Annual

If sample updates are irregular indicate when last updates were introduced: 2012 (sample of localities expanded from 4 to 5 municipalities).

Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples: Localities are chosen based on their significance in the country, which is determined by the number of inhabitants and their role in the geographic area (e.g. the capital region or county, or a major center).

Concerning the selection of outlets in selected localities, outlets with the highest turnover of products and services are selected. Outlet selection is purposive.

In the selected outlets, products that fit the descriptions in the product's list and with high volume of sales are chosen.

E: Data Collection

Approximate number of localities, outlets and price observations: Localities: 5, Outlets: 455, Price observations: 4,610

Frequency with which prices are collected: Prices for all goods and services are collected monthly.

Reference period for data collection: Food, non-alcoholic beverages, alcoholic beverages, tobacco and education, from 3rd - 9th of the month; Clothing, footwear, health and communications, from 10th to 13th of the month; Housing, water, electricity, gas and other fuels, furnishings, household equipment and routine maintenance of the house, miscellaneous goods and services, from 14th to 19th of the month; Transport, recreation and culture, from 20th to 23rd of the month; Restaurants and hotels, from 24th to 25th of the month; and central price collection on the 15th of the month.

Methods of Price Collection

- Personal data collection for all items.
- Telephone interviews for services.
- Internet for services.
- Official tariffs for electricity, fuels, tobacco, etc.

Treatment of:

Discounts and sales prices: Discounts are used in the calculation of the index.

Black market prices: Not collected.

Second hand purchases: Not included.

Missing or faulty prices: Previous observed prices are carried forward in case of missing or faulty prices.

Period for allowing imputed missing prices: 2 months after which the product should be replaced.

Disappearance of a given type or quality from the market: Once a product becomes permanently unavailable, it is replaced.

Quality differences: Quality adjustment methods used are i) Small changes in the product (packaging design) - any changes in price are calculated as a "pure" price changes. In this case the price of a new quality is directly compared with the price of the old quality, price changes are reflected in the index; ii) If the new product is significantly different from the old product - the whole change in prices is attributed to change in quality. It is assumed that the dynamics of prices of both products is the same and for that, overlapping method is used. In this case there's no change in the index at the time of substitution; iii) When it is evident that the change in price is in line with the changing quality – in purpose of showing real price increase it is necessary to estimate the actual price changes. Additional data are collected and used to evaluate these changes. This estimation varies from case to case, there is no prescribed procedure, and the way of assessment method depends of the available data.

Appearance of new items: When a new product gains a significant market share, its prices are collected for one year, and included in the basket the following year.

Treatment of seasonal items and seasonality

Items that have a seasonal character and their treatment: Fresh fruits, vegetables, and clothing are treated as seasonal items.

Seasonal food items: Seasonal food items are included in the CPI using fixed weights approach: the weights are kept constant over the year, while prices of out-of season products are estimated or imputed.

Seasonal Clothing: Seasonal clothing items are included in the CPI using fixed weights approach: the weights are kept constant over the year, while prices of out-of season products are estimated or imputed.

Method to impute the price of seasonal items: Prices are imputed by using price development of in-season products.

Treatment of housing

Types of dwellings covered by the rent data: Types of dwellings covered by the rent data are: i) One bedroom flat, unfurnished, suburb; ii) One bedroom flat, furnished, centre; iii) Two bedroom flat, unfurnished, suburb; and iv) Two bedroom flat, furnished, centre. Rent quotes are collected monthly from selected real estate agencies.

F: Computation

Formula used for calculation of elementary indices: The ratio of geometric mean prices (Jevons index) (Chained form)

Formula to aggregate elementary indices to higher level indices: Laspeyre's formula is used to calculate monthly indices at higher levels of aggregation. The formula is given by:

$$I_m = \frac{\sum_k w_k i_{k,m}^m}{\sum_k w_k}$$

where w_k is weight, $i_{k,m}^m$ individual monthly index of product k .

Monthly and annual average prices: Monthly average price for Montenegro is calculated as a weighted geometric means of monthly average prices of cities, using following formula:

$$P_{ik}^m = \left(\prod_g^s P_{gk}^{m w_g} \right)^{1/\sum w_g}$$

Where P_{gk}^m is average monthly price for city g , for product k , P_i^m - monthly price for product in store i , n - number of collected prices in city, w_g - weight of city, s - number of cities where the prices are collected. Average annual prices are calculated as a simple arithmetic means of average monthly prices.

Seasonally adjusted indices: No seasonal adjustment.

Software used for calculating the CPI: Self developed software (we are in process of creating new program for calculation of CPI by our IT sector)

G: Editing and validation procedures

Control procedures used to ensure the quality of data collected: Price controls are made by price collectors in the field, comparing the prices recorded in the current and the previous month. Data recorded on prices and explanations of price changes are submitted to the price unit in the capital city. After receiving the data, validation of data is performed for all recorded prices. If there is a need statisticians in price department contact price collectors, who then check "suspicious" prices by revisiting the field. In the case of products change, where necessary, adjustment of price changes is made by changes in quality.

H: Documentation and dissemination

Timeliness of dissemination of the CPI data: The CPI is published on the 15th day after the end of the reference month via website www.monstat.org (The lapsed time between the end of the field operation and the first publication of the index is approximately 10 days).

Level of detailed CPI published

Paper publication: All items CPI, Division-level (12 Divisions), Group-level app. 40 groups

Online: All items CPI, Division-level (12 Divisions), Group-level app. 40 groups

Restricted Access: Class-level (100 classes), Basic items, Average prices

Separate indices published for specific population groups: No

Type of products for which average prices are calculated and disseminated: Annual average prices of some food products are published in the publication "Montenegro in figures".

Documentation

Publications and websites where indices can be found:

Monthly releases: <http://monstat.org/eng/page.php?id=409&pageid=26>.

Monthly bulletin: <http://monstat.org/eng/page.php?id=102&pageid=102>.

Statistical yearbook: <http://monstat.org/eng/page.php?id=101&pageid=101>.

Montenegro in figures: <http://monstat.org/eng/page.php?id=103&pageid=103>

Publications and websites where methodological information can be found:

<http://monstat.org/cg/page.php?id=261&pageid=26> (English version is not available on our website)

I: Other Information

Reported by the country in 2012.