

Republic of Macedonia

A: Identification

Title of the CPI: Consumer Price Index

Organisation responsible: State Statistical Office of the Republic of Macedonia (SSOM)

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, main inflation indicator used for monetary policy and deflate household expenditures in national accounts.

B: CPI Coverage

Geographical Coverage

Weights: Nation-wide

Price collection: Main cities/metropolitan areas/regions

Population coverage: Resident households of nationals.

Population groups excluded: Institutional households.

Consumption expenditure includes:

- Food consumed away from home;
- Housing maintenance, minor repairs;
- Major repairs, conversions and extensions to owner occupied housing;
- Purchase of gifts of goods and services given to others outside the household;
- 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;
- 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: The CPI is defined as an indicator of movements of the products' prices aimed for personal consumption. The Consumer Price Index is a central indicator that is used to determine price stability in the country.

Definition of consumption expenditures: Consumption expenditures used for derivation of the weights are received from Household Budget Survey and they are defined as paid expenditures for personal consumption.

Classification: COICOP (Classification of individual consumption by purpose) at 5-digit level

Weights include value of consumption from own production: No

Sources of weights: Household expenditure surveys, administrative or statistical sources such as census, social statistics, national accounts, transport statistics, catering services etc.

Frequency of weight updates: Every 3-5 years

Price updating of weight reference period to the index reference period: The weights in CPI 2012 are based on HBS carried out in 2010 and every year the weights are price updated.

Weights for different population groups or regions: No.

D: Sample design

Sampling methods:

Localities: Judgmental sampling

Outlets: Cut-off sampling (the elements with the highest sales or value of other auxiliary variable are included into the sample)

Products: Judgmental sampling

Frequency of sample updates:

Localities: Annual

Outlets: Annual

Products: Annual

Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples: Largest urban centers within each statistical region are selected as localities. The outlets are selected with purposive sampling. The outlets are selected according to their turnover, number of customers, specialization, etc. Outlets are selected on regional level, so general guidelines are given to local staff from Regional Statistical Offices, responsible for price collection in order to adjust the structure of the outlets to the evolution of retail trade structure (e.g. increasing ratio of supermarket).

The representative items to be priced are selected judgmentally at the end of every year by SSOM price statistics staff, which also determines their specification. The product list is updated at the end of each year. At that time it is possible to include newly significant goods and services in the index computation.

Criteria used for selecting an item variety in the outlet in case of loose specifications provided by the central office: Price collectors from Regional Offices monitoring the market, giving to us (SSOM price statistics staff), useful information about the item varieties with the highest turnover. Using this information, SSOM price staff makes definitive decision.

E: Data Collection

Approximate number of localities, outlets and price observations: Localities: 8, Outlets: 1,500, Price observations: 15,000

Frequency with which prices are collected: All prices are collected once per month, except agriculture products, which are collected twice per month, in the first and third week.

Reference period for data collection: The reference period for data collection is as follows: Agriculture products first time (from 1st to 7th) and second time (from 16th to 21st day of the month); Non-food products from 1st to 25th day of the month, Food products from 11th to 17th day of the month; Services from 14th to 22nd day of the month

Methods of Price Collection

- Personal data collection for most of the items.

- Internet for communication, IT equipments, etc.
- Official tariffs for electricity, central heating, oil derivatives, administrative services, etc.

Treatment of:

Discounts and sales prices: Seasonal sales, other sales prices and reduced prices (e.g. special offers, discounts, etc.) are included in the index when they are available to all potential consumers with no special conditions attached.

Black market prices: Not collected.

Second hand purchases: Not included.

Missing or faulty prices: Missing prices of goods and services (excluding seasonal items like fruits, vegetables), are treated by carrying forward the previous observed price.

Period for allowing imputed missing prices: Prices are carried forward for a maximum of 2 months, then replacement with some new items, of similar specifications like the “old” ones is done.

Disappearance of a given type or quality from the market: In case an item disappears from the market, item replacement is done by the price collector. New similar products replace the old ones and the price difference between the two products counts as price change in the calculation of the index. In the case of “new” items, with slight different specifications than the old one, i.e. introduction of products with new specification follows the annual revision.

Quality differences: For new cars, washing machines and electric drills, the 50% option pricing method has been implemented whereas for other durables like TV sets, cameras, air-conditioners and PCs direct comparison is still the preferred method for quality adjustment. Mobile phones: only classical types/models with pre-paid system are included in the basket, every 3 months new models are implemented which is done by direct comparison.

Appearance of new items: Entirely new items could be included only at the beginning of the year.

Treatment of seasonal items and seasonality

Items that have a seasonal character and their treatment: For fruits and vegetables the weighting is with fixed weights all the year out. In the first out-of-season month the price of the last seasonal month is taken. In the second out-of-season month this price is then adjusted by the change in observed prices on average over all available products in the same COICOP subdivision (all-seasonal estimation). Same method is applied for seasonal adjustment of clothing and footwear items and package holidays, which also show a clear seasonal pattern.

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.

Treatment of housing

Treatment of owner-occupied housing: Imputed rents for owner occupied housing are not included in the CPI.

Types of dwellings covered by the rent data: There are two kinds of rents: state ownership dwellings and owner-occupied dwellings. The state rents are administrative prices by square meter of empty dwelling. The owner-occupied dwellings rents are collected each month, and they are with specific characteristics (50-55 m², empty dwellings), located in different city zones.

F: Computation

Formula used for calculation of elementary indices: The ratio of arithmetic mean prices (Dutot index) (Direct form)

Formula to aggregate elementary indices to higher level indices: For computation at higher level indices, weighted arithmetical mean by the appropriate share of total inhabitants or share of turnover is used.

Monthly and annual average prices: Average monthly prices are obtained by applying a weighted arithmetical mean, where by average prices in particular cities are weighted with the sold quantity of particular goods in those cities. The average annual prices are obtained by applying an arithmetical average of the prices over a period of 12 months.

Seasonally adjusted indices: For seasonal adjustment, (Commission Regulation (EC) No 330/2009) is used.

Software used for calculating the CPI: Microsoft Access.

G: Editing and validation procedures

Control procedures used to ensure the quality of data collected: Data collection, first checking and data transmission to the SSOM is done at the regional level. The other responsibilities of regional staff are cooperation with sales managers of outlets, exploration of the reasons of the significant changes in prices, entry of the primary data in the Excel sheet and first verification of prices. The price collectors work under supervision of CPI central staff in SSOM. Data collectors in regional offices record the prices in paper form questionnaire in each month. Then in the regional offices, data for current prices are entered in common special Excel files prepared by SSOM, and at the same time they put code letter for each price having view on the price from previous month. These files are transmitted from regional offices to SSOM by e-mail. The control procedure continues in SSOM. Once again all prices are checked, and then central recorded prices (electricity, oil derivatives, cigarettes, railway transport ...etc.) are added. Then in cooperation with the price collectors in regional offices, few "problematic" prices are checked again to be sure that collected prices are

correct. After that all changed prices compared to previous month are entered in SSOM in special application in Access.

Control procedures used to ensure the quality of data processed: Data is checked to verify whether changes are entered correctly. The SSOM staff systematically and visually identifies any figures of unusual price movements. After all these checking procedures, SSOM proceeds with CPI calculations.

H: Documentation and dissemination

Level of detailed CPI published

Paper publication: All items CPI, Division-level (12 Divisions), Group-level app. 40 groups, Class-level (100 classes)

Online: All items CPI, Division-level (12 Divisions), Group-level app. 40 groups, Class-level (100 classes)

Documentation

Publications and websites where indices can be found: New Releases:

http://www.stat.gov.mk/OblastOpsto_en.a.spx?id=15, Retail Price and Consumer Price Index, Consumer Price Index by COICOP; Other publications:

http://www.stat.gov.mk/PublikaciiPoOblasti_en.a.spx , Statistical Yearbook, Monthly Statistical Bulletin Short-term Statistical Data for Economic Movements in the Republic of Macedonia

Publications and websites where methodological information can be found: Statistical Yearbook, http://www.stat.gov.mk/PrikaziPublikacija_1_en.a.spx?rbr=246

I: Other Information

Reported by the country in 2012.