

# Slovak Republic

## A: Identification

**Title of the CPI:** Consumer Price Index

**Organisation responsible:** Statistical Office of the Slovak Republic (SO SR)

**Periodicity:** Monthly

**Price reference period:** December year  $t-1=100$

**Index reference period:** December year  $t-1=100$ , December 2000=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, resident households of foreigners in the country and temporary visitors.

### Consumption expenditure includes:

- Food consumed away from home;
- Housing maintenance, minor repairs;
- Purchase of gifts of goods and services given to others outside the household;
- Second hand goods purchased (Only second hand cars);
- Luxury goods;
- Financial services (including fees for financial advice, brokerage fees)

### 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;
- Interest payments (excluding mortgage interest payments);
- Non-life insurance premiums (e.g. vehicle, housing, other property, medical), gross of claims;
- 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 the average measure of change in prices of goods and services bought for the purpose of consumption by the vast majority of households in the Slovak Republic.

**Definition of consumption expenditures:** Consumption expenditures used for derivation of the weights are defined in terms of “payment” (concerning prices we followed Commission regulation (EC) No 2601/2000 of 17 November 2000 laying down detailed rules for the implementation of Council Regulation (EC) No 2494/95 as regards the timing of entering purchaser prices into the Harmonised Index of Consumer Prices).

**Classification:** COICOP (Classification of individual consumption by purpose) 12 divisions, 44 groups and 101 subgroups

**Weights include value of consumption from own production:** No

**Sources of weights:** Household expenditure surveys, national accounts, consumer surveys. The weights are also based on national accounts data (at the aggregated level) and household budget survey data (at the more detailed level). Supplementary information from suppliers is used to split the weights for electricity, fuels, gas, passenger transport by railway, passenger transport by road, some telecom services and cigarettes. In some cases also the special surveys are used to split the weights e.g. the survey in pharmacies is used to split the weights for pharmaceutical products purchased without doctor’s prescription.

**Frequency of weight updates:** Annual

**Price updating of weight reference period to the index reference period:** The weights are updated each year by taking into account the updated sources for the compilation of weights: national accounts (t-2), household budget survey (t-2), the information from suppliers and other sources that are yearly updated. The weights are price-updated to December 2011 at the

COICOP 4 digit category level; in some cases the estimations for volume updating and other adjustment are used.

**Weights for different population groups or regions:** Special weights for pensioners, low income households and employees. No regional weights for different regions.

## D: Sample design

### Sampling methods:

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

*Outlets:* Judgmental sampling, quota sampling (a priori fixing of the number of elements)

*Products:* Judgmental sampling, quota sampling (a priori fixing of the number of elements)

### Frequency of sample updates:

*Outlets:* The sample varies rarely only in cases when an outlet closes or when a new one enters the market.

*Products:* Annual

**Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples:** Localities: Population in the region is one of the criteria used to choose a locality. Price collection covers 38 regions within the whole Slovakia – within these regions price collection is done in about more than 130 big and/or small towns. A small share of prices is collected in rural areas.

Outlets within 38 price collection regions are selected by the price collectors, usually 3-5 for each EA (it depends on the size of a region), with a greater number in Bratislava and a smaller number for some EAs in smaller regions. The selection is based on the popularity of the outlet. The price collectors collect prices in the outlets where people usually do their shopping.

**Criteria used for selecting an item variety in the outlet in case of loose specifications provided by the central office:** In case of loose specifications the price collectors choose the products within the given item specification and within the given specification they choose the products that belong to the most sold products.

## E: Data Collection

**Approximate number of localities, outlets and price observations:** Localities of price collection are selected within 38 price collection regions; within these regions the price collection is done in about more than 130 big and/or small towns. The small share of prices is collected in rural areas. Not all items of consumer basket are collected in every locality, Outlets: 13,400, Price observations: 90,000

**Frequency with which prices are collected:** The prices of all consumer basket items are collected once per month (except of fuels, second hand cars and seasonal items). The prices of fuels are collected weekly. Statistical office of Slovak republic is provided with the prices of second hand cars once per two months. The collection of prices for seasonal prices depends on the season.

**Reference period for data collection:** The price collectors collect prices within the first 20 days of the calendar month. The special timetable for different regions is given for price collection of fruits and vegetables to cover prices in the first, second and third week of price collection period. The prices of fuels are not collected by the internal price collectors but SO SR is provided with these prices of fuels weekly from the external sources on the basis of contract.

### **Methods of Price Collection**

- Personal data collection for most of the items.
- Mailed questionnaires for the prices of water, heating energy, second hand cars, fuels, pharmaceutical products prescribed by the doctor.
- Telephone interviews used very rarely.
- Internet for the prices within internet outlets, the prices of communication services and of financial and insurance services
- Official tariffs for prices of electricity, gas, postal services and other administrative prices.

### **Treatment of:**

**Discounts and sales prices:** Discounts and sales in prices of individual goods and services are taken into account if such reductions: i) can be attributed to the purchase of an individual good or service; ii) are available to all potential consumers with no special conditions attached (non-discriminatory); iii) are known to the purchaser at the time when they enter into the agreement with the seller to purchase the product concerned; and iv) can be claimed at the time of purchase or within such a time period following the actual purchase that they might be expected to have a significant influence on the quantities purchasers are willing to purchase.

**Black market prices:** Not collected.

**Second hand purchases:** Included for second-hand motor cars only. SO SR is provided with the prices of second hand cars on the basis of contract in two month frequency.

**Missing or faulty prices:** If price collectors cannot collect price of the given product from objective reason (e.g. if outlet is closed for a short time); there are two possibilities for price collectors to estimate (impute) the missing price; (either by carrying forward of the previous observation or software also enables extrapolation of price by using the change of the other prices for the same item). The price collectors have to differentiate the estimated (imputed) prices from real collected prices by use of special codes in software. As regards faulty prices the treatment depends on the situation, if e.g. the decimal point is (by mistake in typing)

“shifted”, the correction is done. If the price is “faulty” from other reason (e.g. the replacement product does not comply with the characteristics given in the item description); this “faulty” price is not taken into account in the index compilation and every such situation is evaluated individually – one of the solution can be the using of carry-forwarded price from the last month instead of “faulty” prices.

Period for allowing imputed missing prices: The imputed prices are used for a maximum of 2 months. Starting with the 3rd month the price of a replacement product is used.

**Disappearance of a given type or quality from the market:** Once a product disappears permanently, the price of a replacement product is used; the price collector has to mark the use of every replacement product by the special code in the software. The price collector also describes the characteristics of a replacement product – it serves as a basis for evaluation of the possible quality change. In the cases that it is not possible to find a replacement within the given description, the description is changed at the central level and price collectors collect prices according to the new description.

**Quality differences:** The basis for process of Quality Adjustment (QA) are Eurostat recommendations (Commission regulation (EC) No 1334/2007 of 14 November 2007 amending Regulation (EC) No 1749/96 on initial implementing measures for Council Regulation (EC) No 2494/95 concerning harmonised indices of consumer prices – <http://epp.eurostat.ec.europa.eu/portal/page/portal/hicp/legislation> )

**Appearance of new items:** The proposals for introduction of new items into a consumer basket and/or proposals for the change of the given item descriptions are mainly based on the field information – the information from all price collectors are gathered together in the autumn of the current year, the proposals are then discussed at the common meeting and the prices of the proposed “new” items are collected in the so called extraordinary price collection (it lasts for about two or three months). After evaluation of these extraordinary price collections the description of “new” or “changed” items of consumer basket are finalized and included in the consumer basket starting with January of the new year (December of the previous year is price reference period for all (old and new items and/or for the old items with the new description).

## **Treatment of seasonal items and seasonality**

**Items that have a seasonal character and their treatment:** SO SR covers seasonal products in the categories of fruits and within clothing and footwear. For these seasonal products, the imputation of prices in out-of-season period is assured by the following way: The imputation of prices in the out-of-season period is derived from “all seasonal estimation” mentioned in Article 2 (Definitions) of CR (EC) No 330/2009. In compliance with regulation requirements: i) in the first month of the out-of-season period, the estimated price is equal to a typical price observed in the previous in-season period (in the 1st month price collectors have to type typical price of “their” seasonal product for the previous season); ii) from the second month out-of-season period, the estimated price is equal to the estimated price for the preceding month, adjusted by the change in observed prices on average over all available products in the same subdivision of COICOP classification (from the second month out-of-season period the imputation of estimated price is assured at the central level – software imputes prices on the basis of the estimated price for the preceding month adjusted according to the price development of other products covered by the given COICOP subclass). The

treatment of all seasonal products is described in details in “Methodological instructions for price collection, verifying and reporting of data on consumer prices” (Available only in Slovak language).

**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:** The method used to impute price development in out-of season periods is carrying forward the last observed price.

### Treatment of housing

**Treatment of owner-occupied housing:** The treatment of owner-occupied housing (OOH) is really important – the vast majority of households in Slovakia live in their own flats and/or houses. Major repairs and maintenance are partially covered in CPI. Owner occupied housing is covered by CPI.

**Types of dwellings covered by the rent data:** Rental flats represent the small share of all housing stock in Slovakia (it is estimated about 5 %). The owners of most of the newly built rental flats are municipalities and the rental in these flats are regulated. Most of the rental flats covered in the consumer basket refers to this regulated rental. SO SR collects prices for rental flats in breakdown by the number of rooms - 3 categories of rental flats - (1, 2 and 3 rooms). The rental is calculated per 1 m<sup>2</sup>.

### 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:** Laspeyre’s type formula

**Formula of aggregating regional/population group indices into national index:** SO SR does not aggregate regional/population group indices into national index. Index for Slovakia is compiled from the average prices compiled from the individual prices collected within 38 price collection regions of Slovakia.

**Monthly and annual average prices:** The national monthly average prices are compiled using the arithmetic mean of individual prices collected within 38 price collection regions of Slovakia. Annual average prices are compiled using the arithmetic mean of 12 average monthly prices.

**Seasonally adjusted indices:** Within consumer price indices the SO SR compiles seasonally adjusted price indices based on December 2000 for foodstuffs using TRAMO/SEATS.

## G: Editing and validation procedures

**Control procedures used to ensure the quality of data collected:** There are three control levels of collected price data (and of other related information to the collected prices. The first level of control of the prices is done by the price collectors themselves at the level of 38 price collection regions, the second level of control is done at the level of 8 official regions by 8 so-called “co-ordinators” or “price managers”(i.e. persons whose main task is to coordinate the work of price collectors. They themselves also do price collection and so they have practical experience with the work in field). They are persons, who are intermediaries between the level of central compilation of CPI and the level of individual price collectors. The third level of control of the collected data is done at the level of central compilation of CPI. Each level of control refers to various tasks and/or responsibilities.

**Control procedures used to ensure the quality of data processed:** The control of processed data is done at the level of central compilation of CPI. When data are centrally collected in Trencin, various reports are produced. First, a basic report on the month's prices: flagging those individual prices differing by more than 20% from the previous corresponding price; of those individual prices differing by more than 20% from the national average; of prices differing from the average by more than one standard error; minimum and maximum prices; and noting the number of months since a price last changed. This is accompanied by a report comprising all comments made by collectors in the month (it is important mainly in the assessment of replaced products – in case of a replacement price collectors are obliged to provide the description of characteristics of the replacement, but price collectors are obliged to write also other important information concerning observed prices – there are special codes for different types of information) and then there is a first calculation of the preliminary indices for EAs and for all COICOP subclasses, classes, groups and divisions. The compilation of indices for EAs and for all COICOP subclasses, classes, groups and divisions are repeated after the correction of “faulty” prices, then after quality adjustment and last after the imputation of seasonal products prices in out-of-season on the basis of the price development of all available items within the same COICOP subclass. The compilation of indices to the other basis (e.g. December 2000=100) follows only when the control (checking process) is finished.

## H: Documentation and dissemination

**Timeliness of dissemination of the CPI data:** The CPI is usually published about the 12th – 13th calendar date in the month following the month for which it is compiled. The lapsed time between the end of the field operation and the first publication of CPI is about 10 days.

### Level of detailed CPI published

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

**Restricted Access:** Basic items

**Separate indices published for specific population groups:** Special indices are compiled for employees, pensioners, and households with low money incomes.

**Type of products for which average prices are calculated and disseminated:** Average prices are calculated for all items of consumer basket. The average prices of selected items of consumer basket are disseminated in the database Slovstat of SO SR.

## Documentation

**Publications and websites where indices can be found:** Monthly publication Consumer price indices in Slovak republic – its electronic version is available at:  
<http://portal.statistics.sk/showdoc.do?docid=21220>, Statistical yearbook

One can have access to the published average prices at:  
<http://1miloas2.statistics.sk:7777/pls/elis/MetaInfo.explorer?cmd=go&s=1003&sso=3&so=16>

The average monthly prices of selected items of consumer basket are also included in the monthly publication Consumer price indices in Slovak republic – its electronic version is available at: <http://portal.statistics.sk/showdoc.do?docid=21220>

**Publications and websites where methodological information can be found:** Monthly publication Consumer price indices in Slovak republic – its electronic version is available at:  
<http://portal.statistics.sk/showdoc.do?docid=21220>, Statistical yearbook.

CPI methodological information can be found on the following link:  
<http://portal.statistics.sk/showdoc.do?docid=6066> .

"Methodological annotation - CPI" deals more with the information concerning the design of the CPI; it is available at: <http://portal.statistics.sk/showdoc.do?docid=33822>

## I: Other Information

Reported by the country in 2012.