

Zambia

A: Identification

Title of the CPI: National Consumer Price Index

Organisation responsible: Central Statistical Office, Zambia

Periodicity: Monthly

Index reference period: 2009 = 100

Weights reference period: 2002/2003 Household Budget Survey price updated to 2009.

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, macroeconomic modelling and other analytic uses.

B: CPI Coverage

Geographical Coverage

Weights: Nation-wide

Price collection: Nation-wide

Population coverage: Resident households of nationals.

Population groups excluded: Institutional households

C: Concepts, definitions, classifications and weights

Definition of the CPI and its objectives: The Consumer Price Index measures changes in the average level of retail prices of goods and services purchased by typical households for the purpose of consumption.

Classification: COICOP (Classification of individual consumption by purpose)

Sources of weights: Household expenditure surveys.

Frequency of weight updates: Above 5 years

Price updating of weight reference period to the index reference period: The weights are adjusted from the weight reference period to the index period using the method of price updating.

D: Sample design

Sampling methods:

Outlets: Judgmental sampling

Products: Judgmental sampling

Frequency of sample updates:

Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples: Outlet selection: Purposive approach is used in selecting outlets e.g. outlets that are chosen are those most frequently visited by the households. Generally, available information and application of best judgement was used to ensure that representative samples are selected. When an outlet has closed permanently, it is usually replaced with a similar outlet not too far from the one which closed down.

E: Data Collection

Approximate number of localities, outlets and price observations: Outlets: 3,000, Price observations: 30,000

Frequency with which prices are collected: Prices are collected once per month.

Reference period for data collection: The price collection period is from 1st to 10th of every month.

Methods of Price Collection

- Personal data collection for most of the items.
- Central price collection for charges of public utilities or services provided by deregulated (or regulated) bodies or government (such as electricity tariffs, bus, train, fares, postal services, telephone services etc.) and taxes and license fees paid to government e.g. television license and vehicle license.

Treatment of:

Missing or faulty prices: When a product is temporary unavailable, the current price is estimated using the monthly price change in prices of the set of products in the same COICOP class (short run geometric mean imputation)

Disappearance of a given type or quality from the market: When, a product becomes permanently unavailable, a close substitute is selected. The use of a chained index makes the estimation of missing prices and introduction of replacement easier. A replacement is included in the index as soon as prices for two successive months are available.

Treatment of seasonal items and seasonality

Items that have a seasonal character and their treatment: The missing prices of 'strongly' seasonal items are estimated as in the case of temporary missing products.

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.

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

Treatment of housing

Types of dwellings covered by the rent data: A sample of housing units is surveyed every month to collect house rent data. A sample of 100 housing units is covered from each province except for Lusaka and the Copper belt with samples of 300 housing units each. The housing units have been stratified into low, medium and high cost units.

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: Laspeyres type arithmetic mean formula for higher level aggregation is used, in a chained form.

Formula of aggregating regional/population group indices into national index: The national index is calculated in two steps.

a) Class/Group/Division/All items indices at province level are calculated as weighted averages of the indices for elementary aggregates according to the following formula:

$$I_{t/0} = \sum_{i=1}^n w_{0,i} * \left(\frac{p_{t,i}}{p_{0,i}} \right)$$

where

$I_{t/0}$ is an index for all products showing the average change between period 0 and t

$p_{t,i}$ is the price of product i in a month t .

$p_{0,i}$ is the base period price of product i in a month 0.

$w_{0,i}$ is the provincial weight of product i .

(b) These provincial indices (at the Class/Group/Division/All items level) are then further combined to estimated indices at the national level. The national indices are calculated as a weighted average of provincial indices by using regional weights. The formula is as follows:

$$I_{t/0}^N = \frac{\sum_{P=1}^9 g_0^P * I_{t/0}^P}{\sum_{P=1}^9 g_0^P}$$

where

$I_{t/0}^P$ is a provincial index for class/group/division/all items showing the average change between period 0 and t .

g_0^P is the regional weight.

$I_{t/0}^N$ is a National index for class/group/division/all items showing the average change between period 0 and t .

Software used for calculating the CPI: The software for data entry, processing and reporting is the Microsoft Access with Visual Basic for Applications (Windows based)

G: Editing and validation procedures

Control procedures used to ensure the quality of data collected: Manual editing of the data is done both in the field and in the office before data is submitted to the headquarters for entry and processing. Computer editing is done when prices are entered into the system on client PCS. The system compares quoted price against the previous month's prices to ensure that the new price is within the acceptable range.

Control procedures used to ensure the quality of data processed: For problems identified during processing, a reference may be made to the physical price quotation (questionnaire), or where the officer performing the editing may use empirical knowledge of the product. In all cases, the price can be amended to reflect the value deemed to be correct.

H: Documentation and dissemination

Timeliness of dissemination of the CPI data: The CPI statistical bulletin is released the last Thursday of the reference month.

Level of detailed CPI published

Paper publication: All items CPI, Division-level (12 Divisions)

Online: All items CPI, Division-level (12 Divisions)

Documentation

Publications and websites where indices can be found: "Press release" in English, "Consumer Price Index bulletin" published in English, "Selected Socio Economic Indicators" published in English; Internet website: www.zamstats.gov.zm

Publications and websites where methodological information can be found:

Methodological information can be found at

http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.22/2012/Zambia_REVISION_CONSUMER_PRICE_INDEX.pdf

I: Other Information

Completed by ILO in 2013.