

Nigeria

A: Identification

Title of the CPI: Country Composite Index

Organisation responsible: National Bureau of Statistics

Periodicity: Monthly

Index reference period: November 2009 = 100

Weights reference period: 2003/2004 Nigeria Living Standard Survey (NLSS)

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, 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.

Consumption expenditure includes:

- Foods produced for own final consumption;
- Other goods produced for own final consumption;
- Services produced for own final consumption

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 paid by consumers, through time.

Classification: COICOP (Classification of individual consumption by purpose)

Weights include value of consumption from own production: Yes

Sources of weights: Household expenditure surveys.

Frequency of weight updates: Every 3-5 years

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

Weights for different population groups or regions: Weights for the urban and rural areas are computed.

D: Sample design

Sampling methods:

Outlets: Sampling with probability proportional to size (PPS)

Products: Judgmental sampling

Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples: Locality and outlet selection (Urban areas): A locality is urban if it has an estimated population of not less than 20,000 persons. The selection of price collection towns is done by the state. In each state, a state capital is chosen with certainty at most two other centres from the remaining other towns. In each selected urban town, open markets are chosen and the number ranges from 2 - 6. The markets within the towns are selected so that the large, medium and small ones all have chances of representation. For the supermarkets and other outlets, a listing is carried out. The compiled frame is stratified using employment size.

Locality and outlet selection (rural areas): The selection ensures adequate geographic coverage of the state and there is a fixed number of enumeration areas chosen. Most purchases are made in open markets; consequently the open market in the selected enumeration area becomes the pricing outlet. Where there is no market, the nearest one to the enumeration area becomes the pricing outlet.

E: Data Collection

Frequency with which prices are collected: The frequency of price collection is determined by the degree of fluctuations in the prices of the items as below; major food items (market inquiry) - once/week, major food items (physical purchase) - fortnightly, processed foods - once/week for state capitals, once /monthly for other centres, drinks and tobacco - once/ week for state capital, once/monthly for other centres, other goods and services - Monthly.

Methods of Price Collection

- Personal data collection
- Official tariffs

Treatment of:

Missing or faulty prices: When a product is temporarily unavailable, the current price is estimated by utilizing the price change of other varieties of the item having prices in both current and previous periods to update the price of the missing variety.

Disappearance of a given type or quality from the market: When a product becomes permanently unavailable, a close substitute is priced at the same period as the disappearing product. The substitute is introduced in the CPI by estimating a base period priced for the substitute. The assumption is that the old and the substitute varieties of the item experience the same price change between the base and the current period.

Treatment of seasonal items and seasonality

Items that have a seasonal character and their treatment: When a product disappears due to seasonality, the price is estimated as indicated for temporary products. However, the last price is held constant if a similar variety does not exist.

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: 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: Rents are imputed for owner occupier dwellings during the National Consumer Survey. Rents of similar dwellings and in the same locality are employed for the imputation.

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: The standard Laspeyre's index number formula is used in the calculation of the index number. The mathematical representation of the formula is given by:

$$I = \frac{\sum P_n q_0}{\sum P_0 q_0}$$

where P_n, P_0 are prices at period n and 0 respectively, and q_0 is the quantity at time 0 the base period. The quantity q is difficult to obtain in practice but the value of the expenditure on a commodity $P_0 q_0$ is relatively easier to obtain. Thus the above formula is expressed as:

$$I = \sum \left(\frac{P_0 q_0}{\sum P_0 q_0} \right) \frac{P_n}{P_0} = \sum W_0 r_n$$

where $r_n = \frac{P_n}{P_0}$ is the price relative for time n and $W_0 = \frac{P_0 q_0}{\sum P_0 q_0}$ are the expenditure weights.

G: Editing and validation procedures

Control procedures used to ensure the quality of data collected: The field enumerators are trained and retrained so as to know how to read scales and adhere to established procedures in order to minimize sampling and procedural errors. The scrutiny staff are also trained to recognize the recording errors. In addition NBS has various levels of field checks and controls which include: i) the zonal offices who coordinate field operations including spot checks and monitoring of the states within zones; ii) the state officers who are responsible for all the the field work in their states; and iii) the price supervisors who monitor the activities of the price enumerators.

Control procedures used to ensure the quality of data processed: During processing two methods are employed to ensure quality data: i) manual editing which is done to eliminate problems of the priced data from the field. Each price form is well scrutinized by experienced staff; ii) Computer editing: a) Valid codes - The item codes, centre codes and enumeration areas' codes are important variables that are checked to ensure data consistency. A combination of database special editing facilities and programs are established to ensure that only valid codes are acceptable; b) Exclusion of unrealistic prices. Dynamic price ranges are specified for each item and prices outside the specified range are excluded. The process is automated but the ranges are to be determined.

H: Documentation and dissemination

Timeliness of dissemination of the CPI data: The CPI in form of statistical news is released about 1 month after the month of prices survey.

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: “Statistical News: Consumer Price Index” in English, NBS, “Quarterly Economic Report”, Central Bank of Nigeria, “Quarterly Economic Report”, Federal Ministry of Finance, “Consumer Price Indices” (Annual); NBS website: <http://nigerianstat.gov.ng>

Publications and websites where methodological information can be found: The major methodological document covering the consumer price index is “Consumer Price Index, Development of Methodology in Nigeria” published by the Federal Office of Statistics and available from the information office in Lagos, Price 50 Naira. Also a brief CPI methodological document is available at www.unece.org/stats/documents/ece/ces/ge.22/2006/mtg2/sp.5.e.pdf

I: Other Information

Completed by ILO in 2013.