

# Brazil

## A: Identification

**Title of the CPI:** Índice de Preços ao Consumidor Amplo (IPCA)

**Organisation responsible:** Instituto Brasileiro de Geografia e Estatística (IBGE)

**Periodicity:** Monthly

**Price reference period:** 2008/2009 = 100

**Index reference period:** 1993 = 100

**Weights reference period:** 2008 – 2009 “Pesquisa de Orçamentos Familiares POF” (Consumer Expenditure Survey).

**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 and deflate household expenditures in national accounts.

## B: CPI Coverage

### Geographical Coverage

*Weights:* Nation-wide

*Price collection:* Nation-wide

**Population coverage:** Resident households of nationals.

**Population groups excluded:** Institutional households, low income households, high income households and 1 to 40 national minimum wages (37.4% of urban areas).

### Consumption expenditure includes:

- Food consumed away from home;
- Housing maintenance, minor repairs;
- Second hand goods purchased (second hand motor cars only);
- Luxury goods;
- 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);
- Gambling expenditure, gross of winnings

### 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;
- Interest payments (excluding mortgage interest payments);
- Life insurance premiums;
- 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 purpose of consumer price indices is to provide a measure of change in prices of a fixed basket of products determined in the consumer expenditure survey.

**Definition of consumption expenditures:** The price collected is the price paid in cash, and refer only to the services and types of products described in the questionnaires, as well as those available at the point of purchase or in stock; services are those that can actually be rendered, and services and types of products generally available to the public. Prices include taxes.

**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

**Price updating of weight reference period to the index reference period:** The weights are obtained from the consumer expenditure survey (2008 – 2009) and are updated on the basis of price changes since the reference date of the household budget survey, up to the application of the weights in the calculation of the indices. A base month is defined and automatically linked to the series.

**Weights for different population groups or regions:** The IPCA weights represent households in urban areas. The weights are compiled separately for different populations groups (1 to 40 minimum wages) and regions (11 areas).

## **D: Sample design**

### **Sampling methods:**

*Outlets:* Judgmental sampling, Points of Purchase Survey (1987/1988)

*Products:* Judgmental sampling

### **Frequency of sample updates:**

*Outlets:* Continuous (on a rotating basis)

*Products:* Continuous (on a rotating basis)

**Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples:** The register of respondents was obtained through the 1987/1988 points of purchase survey (PPS) carried out in households. The selection variable used was the frequency of mention by households and the size of the sample was defined on the basis of price variability. The 2008/2009 consumer expenditure survey provided types of establishments chosen by households per item surveyed. These two procedures together, guide the on-going process of revising the register. The chosen outlets were defined on the basis of typical shopping pattern in the area for the types of priced products. Other respondents were defined from the sample of real estate agencies for the registers of rented housing. The registers of public utilities are obtained with government agencies. The businesses registers are obtained with associations of businesses or market place managers. The selection and the size of sample of products were selected to represent distinct categories of household spending from the consumer expenditure survey. The representative items must be well defined so that changes in the recorded prices from month to month reflect only the pure change in price. The size of the sample was defined on the basis of price variability.

**Criteria used for selecting an item variety in the outlet in case of loose specifications provided by the central office:** The price collectors are instructed to identify representative items only with specifications provided by the central office. Detailed descriptions for the collection of prices are provided for the most frequently sold types of each item. There are two types of product specification, one identifying a single price and the other for cases where more than one price is obtained for a given product per establishment, generating an average price for that product in the place of business.

## **E: Data Collection**

**Approximate number of localities, outlets and price observations:** Localities: 11 regions, Outlets: 30,854, Price observations: 438,706

**Frequency with which prices are collected:** Food and beverage - weekly; Clothing- weekly; Household goods – weekly; Housing – weekly, except rent of residences (bimonthly);

Transportation – weekly, except vehicle property tax (annually); Health and personal care – weekly; Personal expenses – weekly; Education – weekly, except schools, universities and technical courses (twice in the year); Communication – weekly.

**Reference period for data collection:** The reference period for data collection is weekly.

### **Methods of Price Collection**

- Personal data collection for most of the items.
- Scanner data for medicines.
- Internet for airfares.
- Official tariffs for public utilities.

### **Treatment of:**

**Discounts and sales prices:** They are taken if they apply to all consumers.

**Black market prices:** Not collected.

**Second hand purchases:** Included for second-hand motor cars only.

**Missing or faulty prices:** Missing prices are determined according to three criteria: i) imputation of the average price of the establishments that provided information for the month, when prices are similar among establishments; ii) imputation of the previous month's price when price levels among establishments vary significantly; and iii) imputation of the average change in prices of similar items or products in the case of seasonal or temporary lack of prices.

Period for allowing imputed missing prices: 2 months

**Disappearance of a given type or quality from the market:** Products that become unavailable are replaced within two months, and are replaced with the most widely sold similar products. These new products are included in the calculation of the second month. In the case of temporary seasonal lack of prices, the above mentioned third criterion for imputing prices is used.

**Quality differences:** There is not a specific kind of adjustments for quality changes.

**Appearance of new items:** New items are included at the time of updating the basket of goods and services, when new household budget survey is conducted.

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

**Items that have a seasonal character and their treatment:** Fresh fruits; vegetables and greens; cereals, pulse and oilseeds; and tubers, roots and vegetables.

### **Treatment of housing**

**Treatment of owner-occupied housing:** Owner occupied housing is not included in the CPI.

**Types of dwellings covered by the rent data:** The sample of dwellings is defined from the real estate agencies for all the types of dwellings. There are 34,000 respondents and approximately 3,000 rented residences included. Register of rented housing is obtained monthly.

## **F: Computation**

**Formula to aggregate elementary indices to higher level indices:** The aggregation of the basic levels to obtain indices for items, subgroups, groups and general index is Laspeyre's formula. The weight used is obtained from the consumer expenditure survey and are updated on the basis of price changes since the reference date of the survey, up to application of the weights in the calculation of the indices. A base month is defined and automatically linked to the series.

**Formula of aggregating regional/population group indices into national index:** The national index is obtained by adding the regional indices using a weighted arithmetic mean. The weighting variable is the urban income of each of the 11 regions.

**Seasonally adjusted indices:** The seasonally adjusted index for households with an income of 1 – 40 minimum wages is made available each month using the X12-Arima method, following the methodology published in the *Série de Relatórios Metodológicos*, vol 16, 1996, "Sistema Nacional de Índices de Preços ao Consumidor – Índice de Preços ao Consumidor Amplo – Ajustamento Sazonal" [National Consumer Price Indices System – Comprehensive Consumer Price Index – Seasonal Adjustment].

**Software used for calculating the CPI:** Self developed programme.

## **G: Editing and validation procedures**

**Control procedures used to ensure the quality of data collected:** Quality control of the data collection process is routine and consists of a visit to check from the team supervisor to an establishment where one of the field researchers has already collected price data.

**Control procedures used to ensure the quality of data processed:** Verification of the prices collected begins with a visual review of the questionnaires by field supervisors, which allows for immediate confirmation in the survey area. Next, the series of prices collected in the 11 areas is assessed by a centralized team at IBGE headquarters, made up of technical staff specialized by product group. The data validation is based on a computerized method of statistical price assessment data.

## **H: Documentation and dissemination**

**Timeliness of dissemination of the CPI data:** 6 days after the end of the reference month.

### **Level of detailed CPI published**

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

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

**Restricted Access:** Average prices

**Separate indices published for specific population groups:** No

## Documentation

**Publications and websites where indices can be found:** The indicators and the monthly report are made available at the internet website <http://www.ibge.gov.br/english/> .

**Publications and websites where methodological information can be found:** Information on methodology for the production of consumer price indices is published in the Série de Relatórios Metodológicos (methodological reports), volume 14, 2007, fifth edition, in the “Sistema Nacional de Índices de Preços ao Consumidor – Métodos de Cálculo”(National Consumer Price Indices System – Methods of Compilation). Methodological information on how seasonal food items are included in the CPI is published in the Série de Relatórios Metodológicos (methodological reports), volume 32, 2005, in the “Sistema Nacional de Índices de Preços ao Consumidor – Métodos de Cálculo dos Itens Sazonais Alimentícios”.

## I: Other Information

Reported by the country in 2012.