

## **METHODOLOGY IN REBASING THE CONSUMER PRICE INDEX (CPI) FOR THE BOTTOM 30% INCOME HOUSEHOLDS FROM BASE YEAR 2012 TO BASE YEAR 2018**

### **1. Identification of the Base Year**

The base period is the year at which the index number is set to 100. It is the reference point of the index number series. The CPI for the Bottom 30% Income Households is rebased to 2018 base year from the current 2012 base year.

The year 2018 was chosen as the next base year to be consistent with the current base year of the CPI for All Income Households. The CPI for All Income Households was rebased from 2012 to 2018 in accordance with the Philippine Statistics Authority (PSA) Board Resolution No. 1, Series of 2017-146, which approved the synchronized rebasing of price indices to base year 2006 and every six (6) years thereafter.

### **2. Determination of the Market Basket**

Market basket is a term used to refer to a sample of goods and services commonly purchased and bought by Filipino households.

To determine the commodities that will form the market basket for the 2018-based CPI for the Bottom 30% Income Households, the 2022 Commodity and Outlet Survey (COS) was conducted in April 2022. The survey was conducted nationwide to the successfully interviewed sample households of the 2018 Family Income and Expenditure Survey (FIES).

The commodities included in the 2018-based market basket are the modal goods and services that appeared to be the most commonly purchased/availed of by the households.

The commodities are grouped/classified according to the 2020 Philippine Classification of Individual Consumption According to Purpose (PCOICOP) which is based on the United Nations COICOP.

### **3. Determination of Weights**

The weights represent the importance of the commodity or group of commodities relative to other commodities or group of commodities in the market basket.

The weights for the 2018-based CPI for the Bottom 30% Income Households are derived from the expenditure data of the 2012 FIES. The weight for each group of commodities is the proportion of the expenditure of the particular group of commodities to the total national expenditure. The total (all items) national expenditure weights is equal to 100.



#### 4. Monitoring of Prices of Items in the Market Basket

This involves establishing baseline information for prices of the items in the base year and monitoring the prices of the items on a regular basis. Collection of data for the CPI for the Bottom 30% Income Households is done by the provincial staff of the PSA. Except for food, beverage, and tobacco items, which is monitored on a weekly basis in NCR, price collection is done twice a month. First collection phase is done during the first five days of the month while the second phase is on the 15<sup>th</sup> to 17<sup>th</sup> day of the month. Data are collected from the sample outlets (stores or establishments where prices of commodities/services are collected or quoted) which were chosen using the following criteria:

- a. Popularity of an establishment along the line of goods to be priced - the sample outlet is publicly known in the locality for selling goods that are included in the CPI market basket and the outlet is patronized by a large segment of the population.

- b. Consistency and completeness of stock

*Consistency of stock* - the outlet has a constant, steady or regular stock of commodities listed in the CPI market basket.

*Completeness of stock*- the sample outlet has the highest number, if not all, of commodities that are included in the CPI market basket relative to the other outlets in the area.

- c. Permanency of outlet - the outlet is an established store or stall in the market area. It should not be an ambulant or transient vendor so as collection of prices in the same outlet in the succeeding survey rounds is possible.
- d. Geographical location- the outlet is accessible to the majority of consumers in the area.

#### 5. Computation of the CPI

Below are the steps in the computation of CPI using 2018 as the base year:

##### **Step 1: Compute the monthly average price for each commodity**

$$\text{Monthly Average Price of Commodity} = \frac{\text{Price for Outlet 1} + \text{Price for Outlet 2} + \dots + \text{Price for Outlet k}}{k}$$

where: k = number of outlets for each commodity

**Step 2: Compute the price relative (PR) for each commodity**

- At the Base Year

$$PR = \frac{\text{Current Month's Average Price}}{\text{Annual Average Price in 2018}}$$

- After the Base Year

$$PR = \frac{\text{Current Month's Average Price}}{\text{Previous Month's Average Price}}$$

**Step 3: Compute the index for 6-digit or Item Index ( $I_{i(6)t}$ )**

- At the Base Year

$$I_{i(6),t} = \text{Geometric Mean}(PR_i) * 100$$

- After the Base Year

$$I_{i(6),t} = \text{Geometric Mean}(PR_i) \times I_{i(6),t-1}$$

where:  $I_{i(6),t-1}$  is the Item Index at time t-1

**Step 4: Compute the index for 5-digit or Sub-class Index ( $I_{j(5),t}$ )**

Weighted Arithmetic Mean

$$I_{j(5),t} = \frac{\sum_{i=1}^n w_{i(6)} I_{i(6),t}}{\sum_{i=1}^n w_{i(6)}}$$

where: n is the number of items under Sub-class j  
 $w_{i(6)}$  refers to the weight of Item i

**Step 5: Compute the higher-level indices (Lower digit disaggregation)**

Same formula as the sub-class level index computation, except that the commodity level refers to the higher commodity levels.