

## METHODOLOGY IN REBASING THE CONSUMER PRICE INDEX TO 2006

### 1. Identification of the Base Year

The base period is the period, usually a year, at which the index number is set to 100. It is the reference point of the index number series. The CPI is now rebased to 2006 base year from the current 2000 base year.

The year 2006 was chosen as the next base year because it was the latest year when the Family Income and Expenditure Survey (FIES) results were made available. It is also in accordance with the National Statistical Coordination Board (NSCB) Resolution No. 2, Series of 2009, which approved the synchronized rebasing of the price indices to base year 2006.

### 2. Determination of the Market Basket

This activity is crucial because inadequate representation of the typical basket will give wrong signals as to the behavior of prices, a very important factor in economic planning.

Market basket refers to a sample of goods and services which is meant to represent the totality of all the goods and services purchased by households relative to a base year.

A separate market basket for the upper 70% and bottom 30% income households were constructed for each province and selected cities using the results of the 2007-2008 Commodity and Outlet Survey (COS). The 2007-2008 COS was conducted in June 2008 for 25,000 national sub-sample households also utilized in the 2006 FIES. The market baskets for the upper 70% and bottom 30% income households were merged to come up with the 2006 CPI market basket for all income households for all provinces and selected cities. The 2006 CPI series was also the first in the CPI series that used the United Nations Classification of Individual Consumption According to Purpose (COICOP) in determining the commodity groupings of the items and services included in the market basket.

### 3. Determination of the Household Consumption Patterns (Weights)

This activity involves assigning weights to the commodity groups/sub-groups. This reflects the consumption priorities of households and the way they allocate resources to meet their needs. Weight is a value attached to a commodity or group of commodities to indicate the relative importance of that commodity or group of commodities in the market basket.

The weights for the 2006-based CPI were derived from the expenditure data of the 2006 FIES, a survey that covered around 44,542 sample households nationwide. The weight for each item of expenditure is a proportion of that expenditure item to the total national expenditure. The total (all items) national expenditure weights is equal to 100.

The 2006 FIES expenditure data were used to directly estimate the 2006 CPI weights at the national and regional levels. However, the 2006 FIES estimates for the expenditure data at the provincial level were not directly utilized in estimating the CPI expenditure weights as the data at the provincial/city level may not be reliable with the use of the households' master sample (MS) that was used in selecting the 2006 FIES sample households. The MS was drawn using regions as domains in generating estimates in all the household surveys of the NSO starting July 2003.

The provincial/city expenditure data were derived using the model-based method in small area estimation procedures using the regional expenditure data as the control total for all the expenditure data within the specific region. Using these estimates, the weight for each item of expenditure is computed as a proportion of that item of expenditure to the total national expenditure. A raking procedure was done to adjust the weights of the provinces so that the provincial weights when added up will equal to the regional weights.

#### 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 is done through the collective effort of the Bureau of Agricultural Statistics (BAS) and the NSO. BAS collects price data for agricultural commodities in NCR and in provincial capitals where there are BAS offices, while NSO collects prices for all other commodities in all other areas.

Except for Food, Beverage, Tobacco (FBT) 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 (outlets 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 – this means the sample outlet is publicly noted in the locality for selling goods included in the CPI survey forms 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 survey forms as well as of those commodities of the same kind and belonging to the same commodity group.

*Completeness of stock*- the sample outlet carries in its stock many if not all of the items included in the CPI survey forms 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.
- d. Geographical location- the outlet is conveniently located and is accessible to the majority of consumers in the area.

#### 5. Computation of the CPI

The formula used in computing the CPI is the weighted arithmetic mean of price relatives, a variant of the Laspeyres formula with fixed base year period weights. In computing the CPI, the formula is

$$\text{CPI} = \frac{\text{sum} [(P_n/P_o)W]}{\text{sum}(W)} * 100$$

where:

$P_n$  = current price

$P_o$  = base period price

$W = P_oQ_o$  = weights