# SPECIAL RELEASE

## Summary Inflation Report of the Consumer Price Index in Ilocos Region: October 2022 (2018=100)

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## Consumer Price Index

The Consumer Price Index (CPI) of the Ilocos Region in October 2022 was posted at 118.1. This means that one needs Php118.10 to purchase the same set of goods and services that were worth Php100.00 in 2018.

The region's CPI in October 2022 increased by 7.4 percent from 4.6 percent in October 2021. Meanwhile, it has increased by 0.9 percent from September 2022. (see Table 2)

**Figure 1. Consumer Price Index, Ilocos Region
October 2022, September 2022, and October 2021
(2018=100)**



| CPI | |
|---|---|
| Oct 2022 | 118.1 |
| Sept 2022 | 117.1 |
| Oct 2021 | 110.0 |
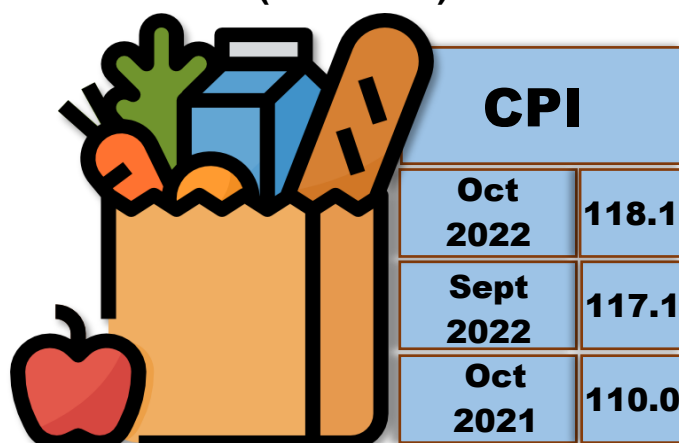
Data Source:
Retail Price Survey of Commodities for the Generation of Consumer Price Index, Philippine Statistics Authority
Image Source: freepik.com

## By Province

**Figure 2. Consumer Price Index by Province, Ilocos Region**
**October 2021 and October 2022**
**(2018=100)**
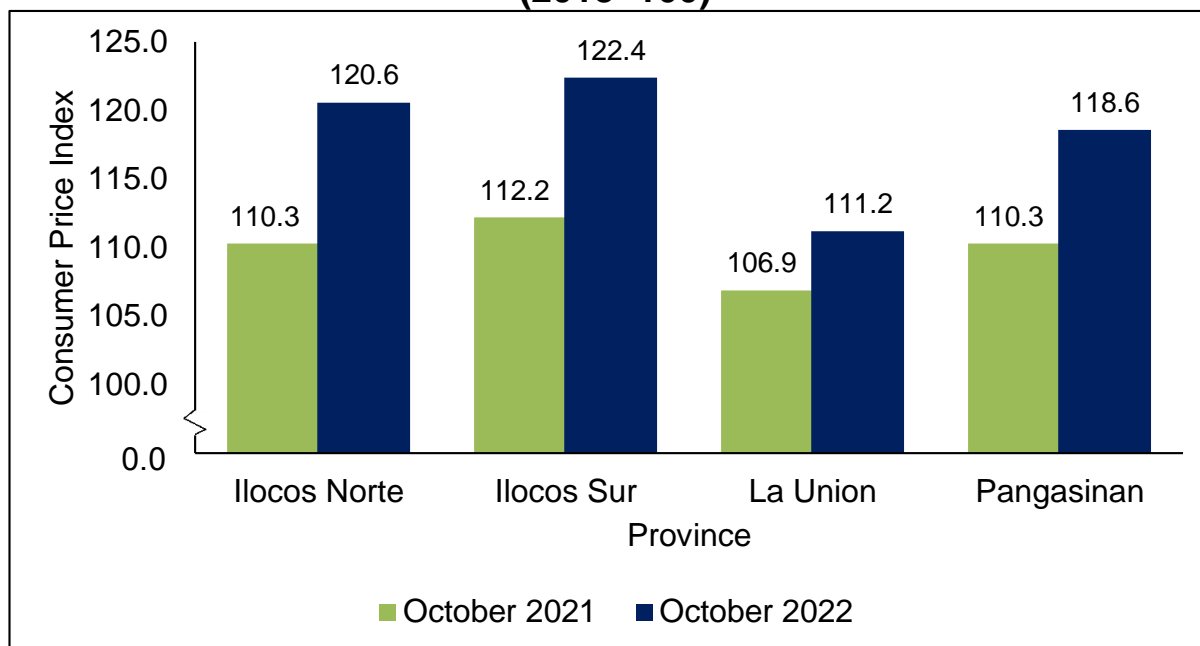


Source: Retail Price Survey of Commodities for the Generation of Consumer Price Index, Philippine Statistics Authority

Among the provinces, Ilocos Sur posted the highest price index in October 2022 at 122.4. Ilocos Norte followed at 120.6, and Pangasinan at 118.6. Meanwhile, La Union recorded the lowest price index of 111.2 during the period.

Compared to the October 2021 levels, all provinces marked increases in the price index. Ilocos Norte recorded the highest increase of 10.3 percentage points followed by Ilocos Sur with 10.2 percentage points. Pangasinan and La Union have increased by 8.3, and 4.3 percentage points, respectively.

## By Commodity Group

The top three commodity groups that recorded high price indices in October 2022 were: alcoholic beverages (146.8); financial services (146.0); and transport (124.2). On the other hand, the bottom three commodity groups with low price indices were: information and communication (101.4); recreation, sport and culture (109.4); and furnishings, household equipment and routine maintenance of the house (110.6).

## Table 1. Consumer Price Index by Commodity Group and Province, Ilocos Region: October 2022 (2018 = 100)

| Commodity Group | Ilocos Region | Ilocos Norte | Ilocos Sur | La Union | Pangasinan |
|---|---|---|---|---|---|
| Food and Non-Alcoholic Beverages | 120.1 | 123.5 | 121.0 | 114.7 | 120.7 |
| Alcoholic Beverages and Tobacco | 146.8 | 127.9 | 131.4 | 146.4 | 154.4 |
| Clothing and Footwear | 113.6 | 120.6 | 115.3 | 107.9 | 113.8 |
| Housing, Water, Electricity, Gas and Other Fuels | 120.0 | 130.1 | 128.3 | 104.6 | 120.0 |
| Furnishings, Household Equipment and Routine Maintenance of the House | 110.6 | 107.4 | 114.3 | 107.9 | 111.3 |
| Health | 115.6 | 115.3 | 119.4 | 108.6 | 117.2 |
| Transport | 124.2 | 122.1 | 127.9 | 122.2 | 124.4 |
| Information and Communication | 101.4 | 100.4 | 100.7 | 100.0 | 102.3 |
| Recreation, Sport and Culture | 109.4 | 106.0 | 105.4 | 106.6 | 112.6 |
| Education Services | 113.2 | 107.6 | 107.6 | 100.2 | 117.8 |
| Restaurant and Accommodation Services | 111.2 | 105.6 | 129.8 | 106.1 | 111.1 |
| Financial Services | 146.0 | 146.0 | 146.0 | 145.5 | 146.0 |
| Personal Care and Miscellaneous Goods and Services | 111.9 | 120.7 | 112.3 | 107.6 | 111.2 |

Source: Retail Price Survey of Commodities for the Generation of Consumer Price Index, Philippine Statistics Authority

## Inflation Rate

### Figure 3.  Headline Inflation Rates in Ilocos Region, All Items October 2021 – October 2022 (2018=100)
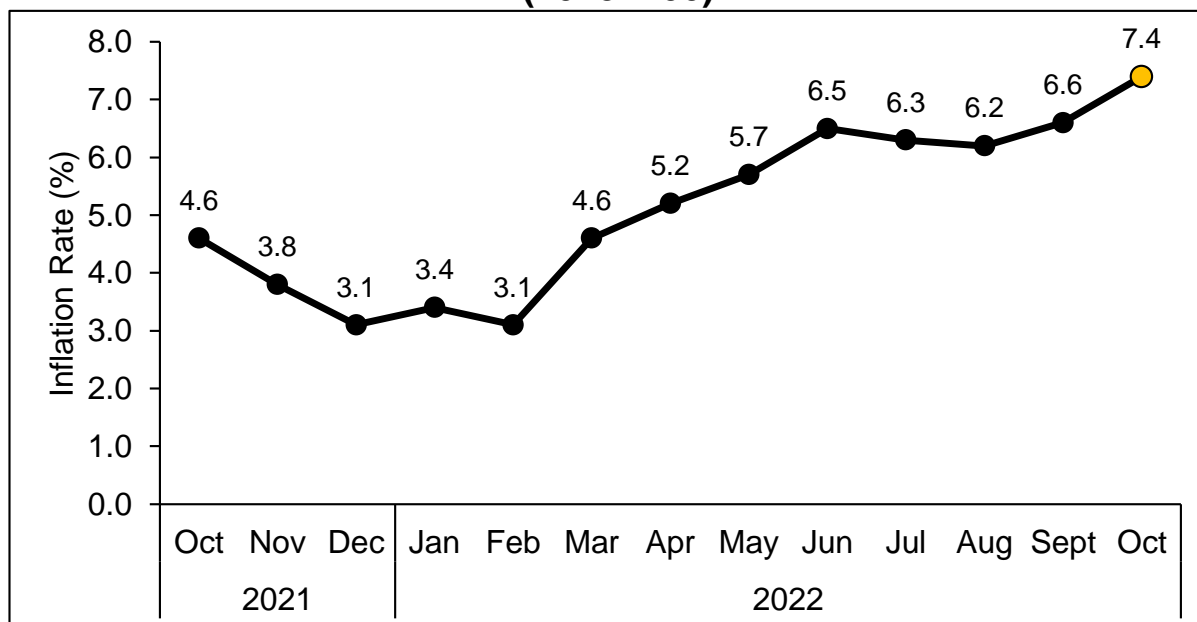


Source: Retail Price Survey of Commodities for the Generation of Consumer Price Index, Philippine Statistics Authority

As shown in Figure 3, the inflation rate of the Ilocos Region spiked from 6.6 percent in September 2022 to 7.4 percent in October 2022, an increase of 0.8 percentage point. Similarly, it is higher by 2.8 percentage points from the recorded rate of 4.6 percent in October 2021.

The commodity groups that contributed in the acceleration of the October 2022 inflation rate compared to the previous month in the region were:

a. Housing, Water, Electricity, Gas, and Other Fuels, 11.9 percent;
b. Food and Non-alcoholic beverages, 7.7 percent;
c. Personal Care, and Miscellaneous Goods and Services, 5.1 percent;
d. Furnishings, Household Equipment, and Routine Household Maintenance, 4.7 percent;
e. Clothing and footwear, 3.3 percent; and
f. Recreation, Sport and Culture, 3.2 percent.

On the other hand, lower increments were recorded in the indices of the following commodity groups:

a. Alcoholic Beverages and Tobacco, 6.4 percent; and
b. Transport, 10.0 percent;

Health, information and communication, education services, restaurants and accommodation services, and financial services remained stable in October 2022. (see Table 2)

### By Province

Among the provinces, Ilocos Norte posted the highest inflation rate at 9.3 percent in October 2022, followed by Ilocos Sur and Pangasinan at 9.1 percent, and 7.5 percent, respectively. The lowest inflation rate was registered in La Union at 4.0 percent.

Compared to their respective levels in October 2021, all the provinces, have increased inflation rates. Ilocos Norte and Ilocos Sur have increased by 5.5 percentage points, and 2.7 percentage points, respectively, while Pangasinan has 3.0 percentage points increase. Meanwhile, La Union's inflation rate went up by 0.4 percentage point.

**Figure 4. Headline Inflation Rates by Province, Ilocos Region October 2021 and October 2022 (2018=100)**
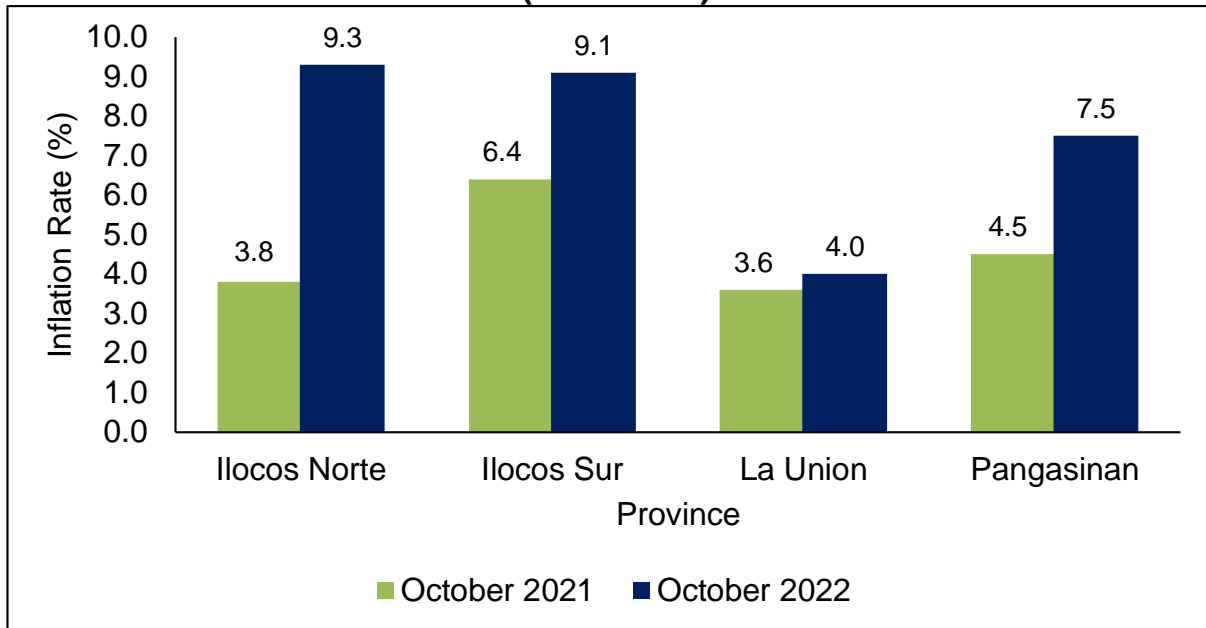


Source: Retail Price Survey of Commodities for the Generation of Consumer Price Index, Philippine Statistics Authority

## Purchasing Power of Peso

The Purchasing Power of the Peso (PPP) in the Ilocos Region in October 2022 was posted at Php0.85. This means that the purchasing capability of Php1.00 in 2018 has decreased by 15 centavos.

Among the provinces, La Union posted the highest PPP in October 2022 with Php0.90. It was followed by Pangasinan with Php0.84 PPP, and Ilocos Norte with Php0.83 PPP. Meanwhile, Ilocos Sur recorded the lowest PPP of Php0.82.

It can be gleaned in Figure 5 that PPPs in all the provinces of the region in October 2022 were lower than their respective levels in October 2021. Ilocos Norte has the highest decrease of Php0.08 followed by Ilocos Sur and Pangasinan both with Php0.07 decrease. Meanwhile, La Union registered decrease in their PPP at Php0.04.

## Figure 5. Purchasing Power of the Peso by Province
## Ilocos Region: October 2021 and October 2022 (2018 = 100)
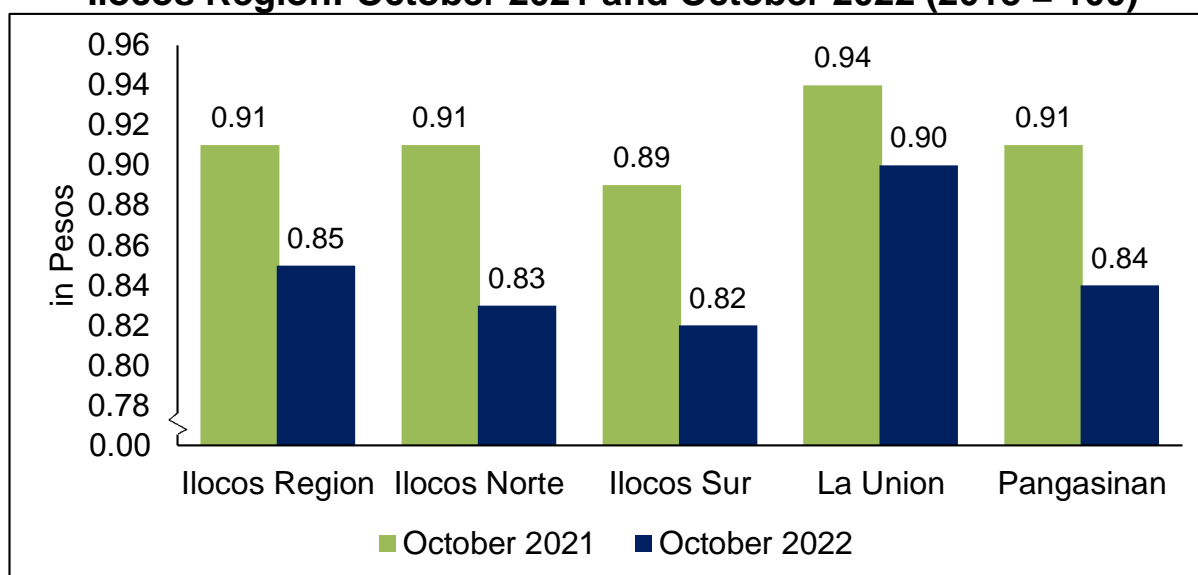


Source: Retail Price Survey of Commodities for the Generation of Consumer Price Index, Philippine Statistics Authority

## Table 2. Consumer Price Index and Inflation Rate for All Income Households by Commodity, Ilocos Region
## October 2022, September 2022 and October 2021
## (2018=100)

| Commodity Group | Inflation Rate | | | CPI | | |
|---|---|---|---|---|---|---|
| | Oct 22 | Sept 22 | Oct 21 | Oct 22 | Sept 22 | Oct 21 |
| ALL ITEMS | 7.4 | 6.6 | 4.6 | 118.1 | 117.1 | 110.0 |
| FOOD AND NON-ALCOHOLIC BEVERAGES | 7.7 | 5.1 | 4.8 | 120.1 | 117.5 | 111.5 |
| ALCOHOLIC BEVERAGES AND TOBACCO | 6.4 | 6.6 | 11.0 | 146.8 | 146.6 | 138.0 |
| CLOTHING AND FOOTWEAR | 3.3 | 3.0 | 2.7 | 113.6 | 113.2 | 110.0 |
| HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS | 11.9 | 11.3 | 4.7 | 120.0 | 119.1 | 107.2 |
| FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE | 4.7 | 4.1 | 2.9 | 110.6 | 109.9 | 105.6 |
| HEALTH | 5.7 | 5.7 | 3.4 | 115.6 | 115.5 | 109.4 |
| TRANSPORT | 10.0 | 15.6 | 10.7 | 124.2 | 126.9 | 112.9 |
| INFORMATION AND COMMUNICATION | 0.7 | 0.7 | 0.6 | 101.4 | 101.4 | 100.7 |
| RECREATION, SPORT AND CULTURE | 3.2 | 2.9 | 4.1 | 109.4 | 109.0 | 106.0 |
| EDUCATION SERVICES | 2.9 | 2.9 | 0.0 | 113.2 | 113.2 | 110.0 |
| RESTAURANTS AND ACCOMMODATION SERVICES | 2.6 | 2.6 | 1.6 | 111.2 | 111.2 | 108.4 |
| FINANCIAL SERVICES | 0.0 | 0.0 | 46.0 | 146.0 | 146.0 | 146.0 |
| PERSONAL CARE AND MISCELLANEOUS GOODS AND SERVICES | 5.1 | 4.9 | 2.2 | 111.9 | 111.7 | 106.5 |

Source: Retail Price Survey of Commodities for the Generation of Consumer Price Index, Philippine Statistics Authority

# TECHNICAL NOTES

The Philippine Statistics Authority generates and announces the monthly Consumer Price Index (CPI) based on a nationwide survey of prices for a given basket of goods and services.

The **CPI** is an indicator of the change in the average retail prices of a fixed basket of goods and services commonly purchased by households relative to a base year.  It shows how much on the average, prices of goods and services have increased or decreased from a particular reference period known as base year.  It also serves as a basis for economic analysis, collective bargaining agreements, for wage adjustments, and for monitoring the effects of government economic policy on households.

## *Rebasing of CPI to Base Year 2018 and Adopting the Chain Method in the 2018-based CPI*

*The Philippine Statistics Authority (PSA) released the Consumer Price Index (CPI) for All Income Households with base year 2018 on 04 February 2022.  The 2018-based CPI is the eleventh in the rebasing series.  This was announced in Press Release Number 2022-01 dated 04 January 2022. Data users can expect two sets of the CPI as the new series shall be issued simultaneously with the 2012-based series. The CPI series for January 2022 onwards shall be 2018-based.*

## 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 2018 base year from the current 2012 base year.

The year 2018 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 PSA Board Resolution No. 1, Series of 2017-146, which approved the synchronized rebasing of the price indices to base year 2006 and every six (6) years thereafter.

## 2. Determination of the Market Basket

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

Determining the right market basket 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.

To determine the commodities that will form the market basket for the 2018-based CPI, the updating of the 2006 basket through the Survey of Key Informants was undertaken in March 2021. The survey was conducted nationwide to store managers, sellers or proprietors and were asked of the most commonly purchased items or commodities. The commodities are grouped according to the 2020 Philippine Classification of Individual Consumption According to Purpose (PCOICOP) which is based on the United Nations COICOP.

## 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 2018-based CPI were derived from the expenditure data of the 2018 FIES, a survey that covered around 50,000 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 2018 FIES expenditure data were used to directly estimate the 2018 CPI weights at the national and regional levels. However, the 2012 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 utilized in selecting the 2018 FIES sample households.

The MS was drawn using regions as domains in generating estimates in all the household surveys of the PSA 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 by the provincial staff of the PSA. Except for food, beverage and tobacco (FBT) in the National Capital Region (NCR) and petroleum products which are monitored on a weekly basis, price collection is generally done twice a month. First collection phase is done in the first five days of the month while the second phase is on the 15th to 17th 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 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 price collection 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 price collection 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 in order that the collection of data can be done for the succeeding survey rounds.

d. Geographical location – the outlet is conveniently located and 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 the 2018 as the base year:

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

$$\text{Monthly Average Price of Commodity} = \frac{\begin{array}{l}\text{Outlet 1 (1}^{st}\text{ Phase) Price + Outlet 1 (2}^{nd}\text{ Phase) Price +}\\\text{Outlet 2 (1}^{st}\text{ Phase) Price + Outlet 2 (2}^{nd}\text{ Phase) Price +}\\\text{Outlet 3 Price + Outlet 4 Price + Outlet 5 Price + Outlet 6}\end{array}}{8}$$

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

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

### Step 3: Compute the index for the 5-digit group (Sub-Class).

Step 3.1: Compute the geometric mean of PRs for each 5-digit group.

$$GM_{PR} = \left(\prod_{i=1}^{n} PR_i\right)^{1/n}$$

Where:

$GM_{PR}$ = Geometric mean of price relatives

$PR_i$ = Price relative of each commodity

$n$ = number of commodities under the 5-digit group

Step 3.2: Compute the index for 5-digit group.

$$I_{\text{5-digit,current month}} = (GM_{PR}) * (I_{\text{5-digit,previous month}})$$

Where:

$I_{\text{5-digit,current month}}$ = Index of the 5-digit group (sub-class) for the current month

$GM_{PR}$ = Geometric mean of price relatives

$I_{\text{5-digit,previous month}}$ = Index of the 5-digit group (sub-class) for the previous month

### Step 4: Compute the index for the 4-digit group (Class).

$$I_{4\text{-digit}} = \frac{\sum\limits_{i=1}^{n} (W_{(5\text{-digit})i}) (I_{(5\text{-digit})i})}{\sum\limits_{i=1}^{n} (W_{(5\text{-digit})i})}$$

Where:

$I_{(4\text{-digit})}$ = index of the 4-digit group

$W_{(5\text{-digit})i}$ = weight of 5-digit group

$I_{(5\text{-digit})i}$ = index of the 5-digit group

### Step 5: Compute the index for the 3-digit group (Group).

$$I_{3\text{-digit}} = \frac{\sum\limits_{i=1}^{n} (W_{(4\text{-digit})i}) (I_{(4\text{-digit})i})}{\sum\limits_{i=1}^{n} (W_{(4\text{-digit})i})}$$

Where:

$I_{(3\text{-digit})}$ = index of the 3-digit group

$W_{(4\text{-digit})i}$ = weight of the 4-digit group

$I_{(4\text{-digit})I}$ = index of the 4-digit group

### Step 6: Compute the index for the 2-digit group (Division).

$$I_{2\text{-digit}} = \frac{\sum\limits_{i=1}^{n} (W_{(3\text{-digit})i}) (I_{(3\text{-digit})i})}{\sum\limits_{i=1}^{n} (W_{(3\text{-digit})i})}$$

Where:

$I_{(2\text{-digit})}$ = index of the 2-digit group

$W_{(3\text{-digit})i}$ = weight of the 3-digit group

$I_{(3\text{-digit})I}$ = index of the 3-digit group

### Step 7: Compute the index for All Items.

$$I_{\text{all items}} = \frac{\sum\limits_{i=1}^{n} (W_{(2\text{-digit})i}) (I_{(2\text{-digit})i})}{\sum\limits_{i=1}^{n} (W_{(2\text{-digit})i})}$$

Where:

$I_{\text{all items}}$ = index for All Items

$W_{(2\text{-digit})i}$ = weight of the 2-digit group (Division)

$I_{(2\text{-digit})I}$ = index of 2-digit group (Division)

### *Economic Indicators Derived from the CPI*

Two important indicators, the inflation rate and purchasing power of the peso (PPP), are derived from the CPI which are important in monitoring price stability and the value of the country's currency.

**Inflation Rate** is the annual rate of change or the year-on-year change of the CPI expressed in percent. The formula is:

$$\text{Inflation Rate} = \frac{CPI_2 - CPI_1}{CPI_1} \times 100$$

Where: $CPI_2$ – is the CPI in the second period
$CPI_1$ – is the CPI in the previous period

**Headline Inflation** is the rate of change in the weighted average prices of all goods and services in the CPI basket while **Core Inflation** refers to the rate of change in the CPI that excludes the following item/commodity groups: rice, corn, fruits and vegetables, and fuel items.

The **PPP** measures the real value of the peso in a given period relative to a chosen reference period. It is computed by getting the reciprocal of the CPI and multiplying the result by 100.

$$\frac{1}{CPI} \times 100$$

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