SPECIAL RELEASE

**The Consumer Price Index in La Union
(2012=100)
4th Quarter of 2021 Report**

Date of Release: 22 March 2022
Reference No: 2022-17

La Union's CPI posted at 120.0 in 4th Quarter 2021

The average Consumer Price Index (CPI) in La Union in 4th quarter 2021 was recorded at 120.0. The said figure was 3.6 percentage points higher than the average CPI in the same period of 2020 at 116.4 and 1.1 percentage points higher than the past quarter's CPI at 118.9.

La Union's average CPI of 120.0 in 4th quarter 2021 means that, on the average, prices of goods and services have increased by 20.0 percent from 2012. This further means that a basket of commodities which can be purchased at PhP100.00 by an average Filipino household in 2012 can be bought at PhP120.00 in 4th quarter of 2021.

The province's average CPI in 4th quarter 2020 and 4th quarter 2021 were lower than Ilocos Region's CPI which were posted at 124.2 and 129.0, respectively.

**FIGURE 1. Consumer Price Index, All Items
La Union: October – December, 2020 and 2021
(2012=100)**
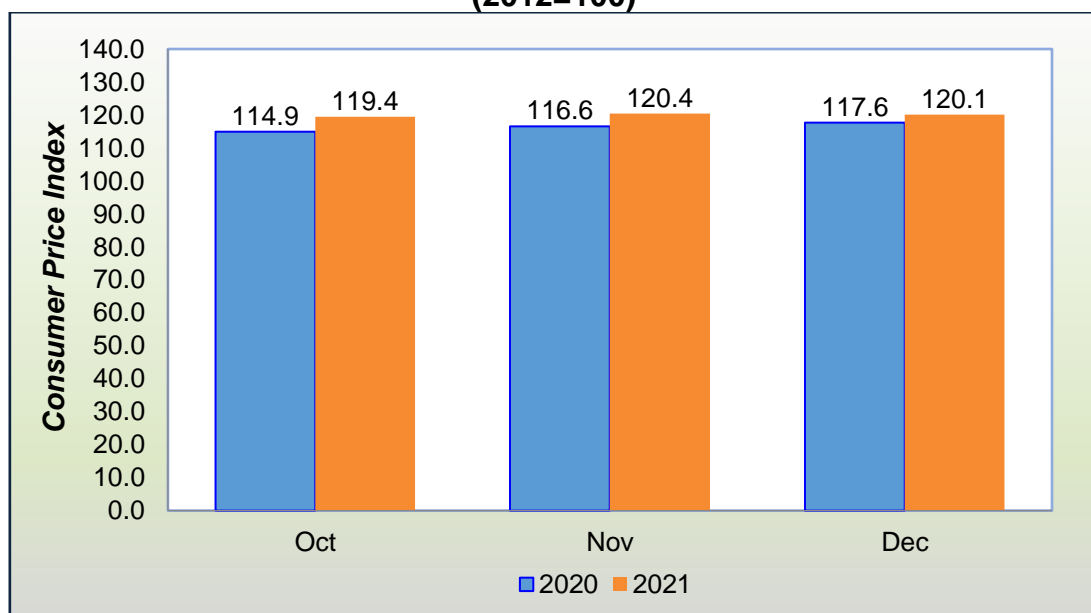
*Source: Retail Price Survey of Commodities for the Generation of Consumer Price Index
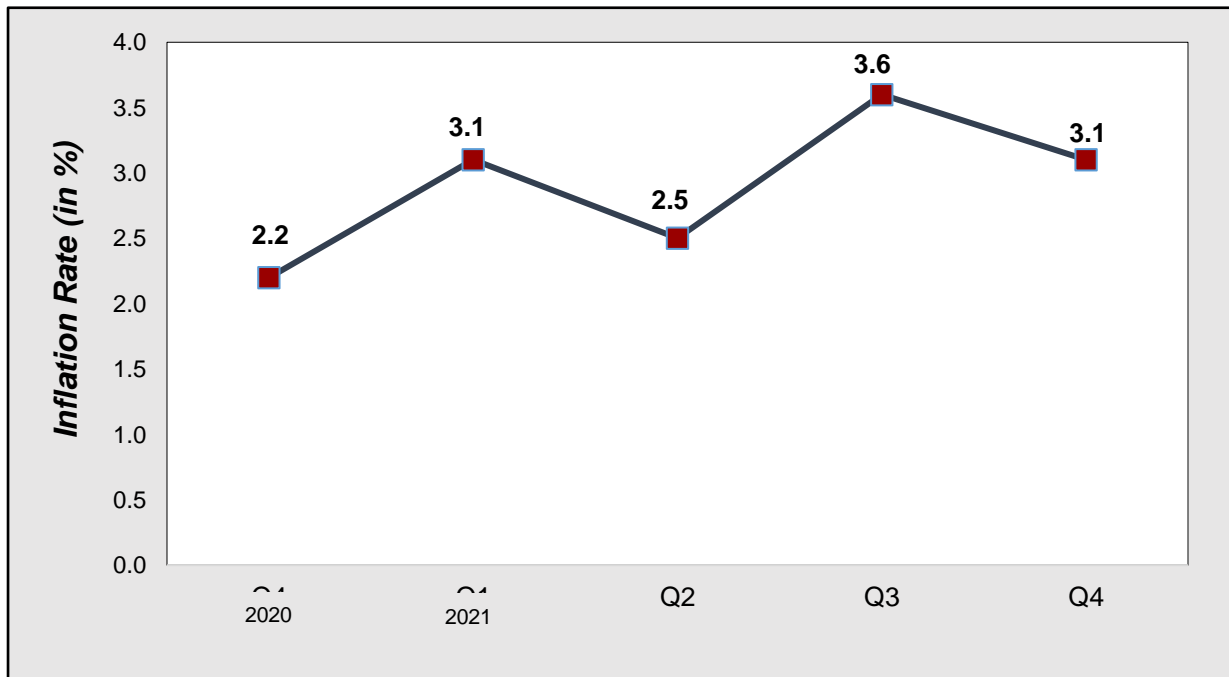Philippine Statistics Authority*

The CPI in the province were higher in October, November, and December 2021 at 119.4, 120.4, and 120.1, respectively compared with their respective figures in October, November, and December last year at 114.9, 116.6, and 117.6. (Figure 1)

In 4th quarter 2021, the highest CPI was posted in November while in the same period a year ago, the highest CPI was noted in December.

La Union's inflation decelerates to 3.1 percent in 4th Quarter 2021

La Union's year-on-year headline inflation slowed down to an average of 3.1 percent in 4th quarter 2021 from a quarter-ago average of 3.6 percent. (Figure 2)

FIGURE 2. Headline Inflation Rates in La Union
4th Quarter 2020 – 4th Quarter 2021
(2012=100)

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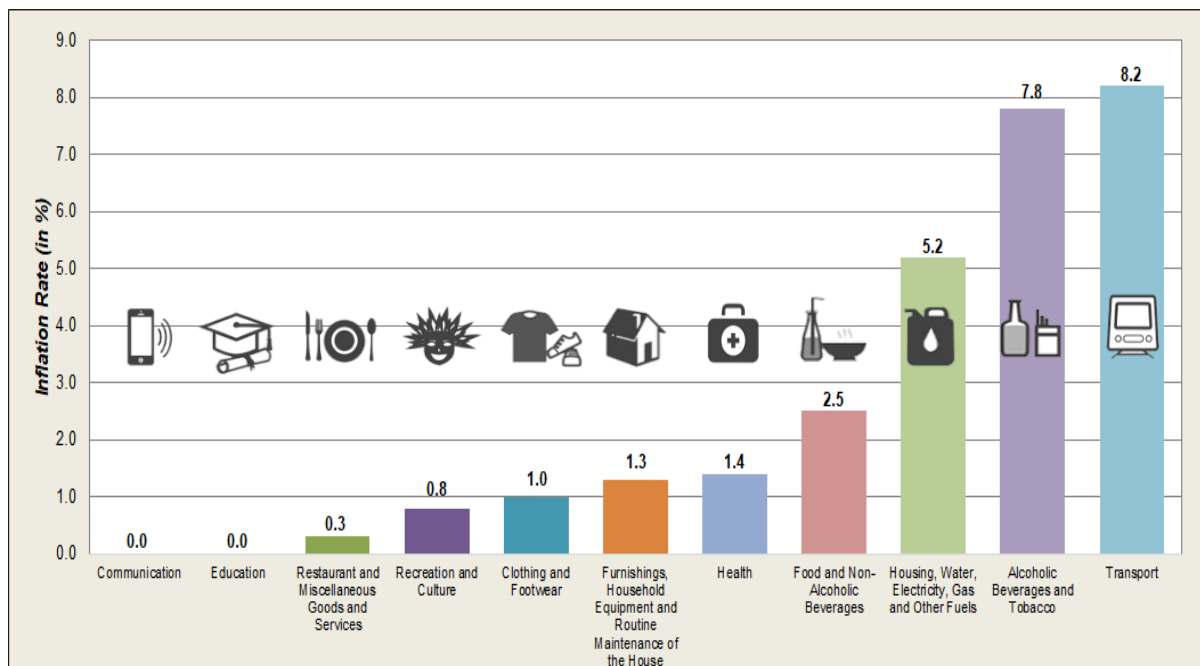*Philippine Statistics Authority*

Among major commodity groups in 4th quarter 2021, the transport index posted the highest average annual inflation rate at 8.2 percent. It was followed by the average inflation in the indices of alcoholic beverages and tobacco at 7.8 percent and housing, water, electricity, gas and other fuels at 5.2 percent.

The transport index posted the highest average annual inflation in 4th quarter of 2021.

The Fifth Bldg., Gov. Ancheta St., Barangay IV, City of San Fernando, La Union 2500
TeleFax Number: (072) 888-5740
E-mail: psa.launion@yahoo.com

2

On the other hand, the lowest average annual inflation during the quarter was seen in the indices of education and communication, both with zero growth rates. (Figure 3)

FIGURE 3. Inflation Rates by Commodity Groups
La Union: 4th Quarter 2021
(2012=100)

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

The downward trend in the annual average inflation of the province from 3rd quarter 2021 to 4th quarter 2021 was contributed by slowdowns in the annual average increment of the heavily-weighted food and non-alcoholic beverages index from 4.8 percent to 2.5 percent. Lower annual gains were also recorded in the indices of alcoholic beverages and tobacco (7.8% from 8.3%); clothing and footwear (1.0% from 2.6%); and health (1.4% from 1.7%).

On the other hand, higher annual growths were recorded in the indices of housing, water, electricity, gas and other fuels (5.2% from 3.4%); furnishings, household equipment, and routine maintenance of the house (1.3% from 1.2%); transport (8.2% from 6.3%); and recreation and culture (0.8% from 0.4%).

Meanwhile, the annual average inflation in the restaurant and miscellaneous goods and services index remained at 0.3 percent. Also, the annual average inflation in the indices of communication and education remained at zero growth in 4th quarter 2021. (Table 1)

The Fifth Bldg., Gov. Ancheta St., Barangay IV, City of San Fernando, La Union 2500
TeleFax Number: (072) 888-5740
E-mail: psa.launion@yahoo.com

3

Table 1. Average Year-on-Year Inflation Rates for All Income Households by Commodity Group, La Union: 4th Quarter 2020, and 3rd and 4th Quarter 2021 (2012=100)

Commodity Group	Inflation Rate		
	4th Quarter 2020	3rd Quarter 2021	4th Quarter 2021
Food and Non-Alcoholic Beverages	3.1	4.8	2.5
Alcoholic Beverages and Tobacco	18.9	8.3	7.8
Clothing and Footwear	4.9	2.6	1.0
Housing, Water, Electricity, Gas and Other Fuels	-2.2	3.4	5.2
Furnishings, Household Equipment and Routine Maintenance of the House	3.2	1.2	1.3
Health	1.9	1.7	1.4
Transport	-2.3	6.3	8.2
Communication	0.3	0.0	0.0
Recreation and Culture	-0.7	0.4	0.8
Education	0.0	0.0	0.0
Restaurant and Miscellaneous Goods and Services	5.0	0.3	0.3

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

In 4th quarter 2021, a downward trend was observed in the headline inflation rates of the province at 3.9 percent, 3.3 percent, and 2.1 percent in October, November and December, respectively. On the contrary, an uptrend in the province's inflation was recorded at 1.2 percent, 2.5 percent, and 3.0 percent in October, November, and December of 2020, respectively.   (Figure 4)

FIGURE 4.   Headline Inflation Rates, All Items
La Union: October – December 2020 and 2021
(2012=100)
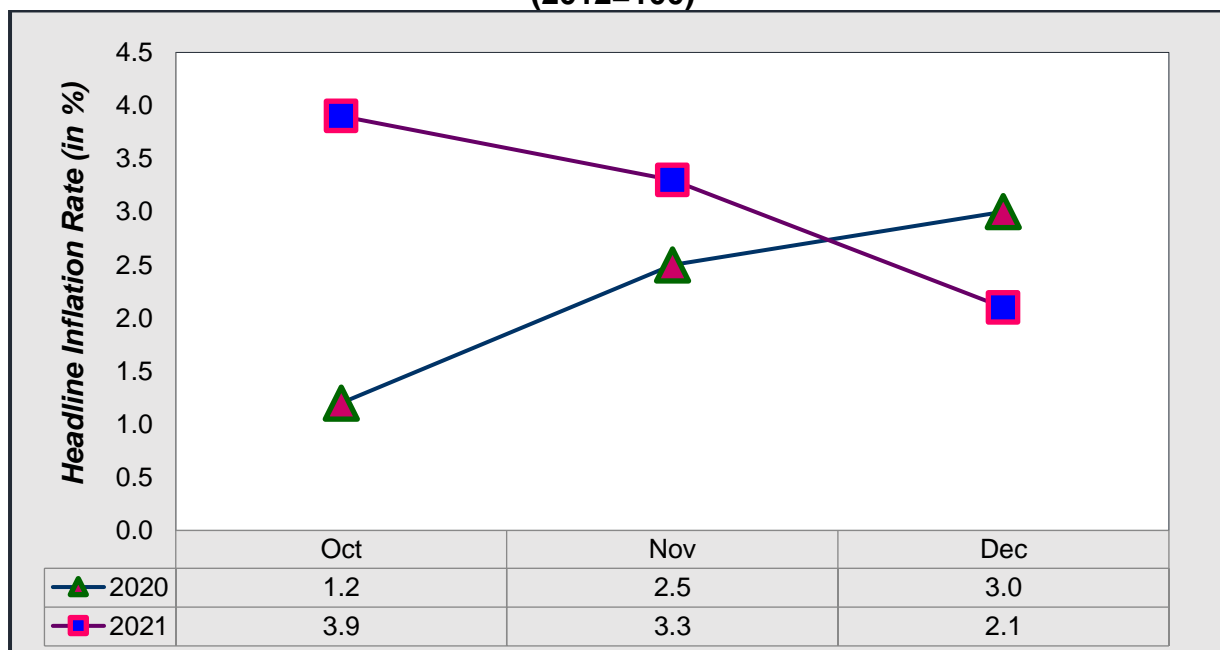
	Oct	Nov	Dec
2020	1.2	2.5	3.0
2021	3.9	3.3	2.1

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

The Fifth Bldg., Gov. Ancheta St., Barangay IV, City of San Fernando, La Union 2500
TeleFax Number: (072) 888-5740
E-mail: psa.launion@yahoo.com

4

PPP in La Union decreases at PhP0.83 in 4th Quarter 2021

The average Purchasing Power of the Peso (PPP) in La Union decreased to PhP0.83 in 4th quarter 2021 from PhP0.84 in 3rd quarter 2021. This means that the purchasing capability of PhP1.00 in 2012 decreased by 17 centavos in 4th quarter 2021. In 4th quarter 2020, La Union's average PPP was recorded at PhP0.86. (Figure 5)

FIGURE 5.   Purchasing Power of the Peso
La Union: October - December, 2020 and 2021
(2012=100)

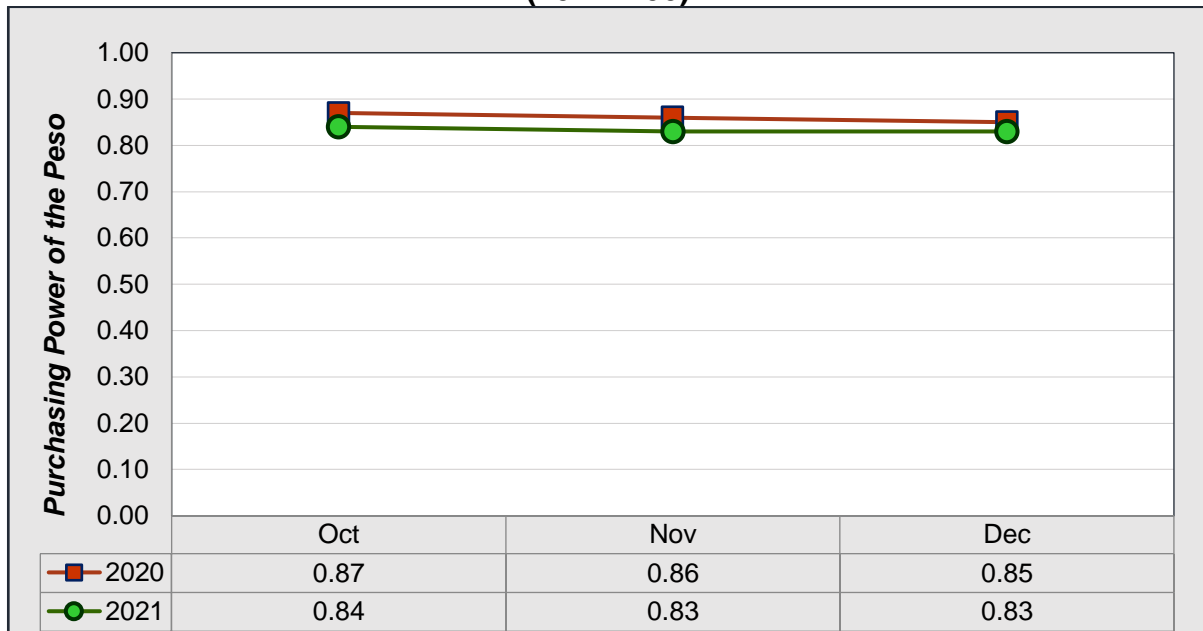|	Oct	Nov	Dec
2020	0.87	0.86	0.85
2021	0.84	0.83	0.83

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

La Union's average PPP in 4th quarter 2021 was higher than Ilocos Region's average PPP of PhP0.77. The region's average PPP a quarter ago was posted at PhP0.78 and in 4th quarter 2020, at PhP0.80.

In 4th quarter 2021, the PPP in the province declined to PhP0.83 in November from PhP0.84 in October and remained at PhP0.83 in December. In the same period a year ago, the PPP in the province continued to decrease at PhP0.87, PhP0.86, and PhP0.85 in October, November, and December, respectively.

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 2012 and Adopting the Chain Method in the 2012-based CPI

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 2012 base year from the current 2006 base year.

The year 2012 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 2012-based CPI, the updating of the 2006 basket through the Survey of Key Informants was conducted from 07 October to 15 November 2013. 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 2010 Philippine Classification of Individual Consumption According to Purpose (COICOP) which is based on the United Nations COICOP.

The Fifth Bldg., Gov. Ancheta St., Barangay IV, City of San Fernando, La Union 2500
TeleFax Number: (072) 888-5740
E-mail: psa.launion@yahoo.com

6

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 2012-based CPI were derived from the expenditure data of the 2012 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 2012 FIES expenditure data were used to directly estimate the 2012 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 2012 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.

The Fifth Bldg., Gov. Ancheta St., Barangay IV, City of San Fernando, La Union 2500
TeleFax Number: (072) 888-5740
E-mail: psa.launion@yahoo.com

7

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 PSA employed the weighted arithmetic mean of price relatives and the "Chain" method to provide timely indicators since this method allows the inclusion or exclusion of commodities in the market basket to address the changing consumer taste and preferences and technological changes. Below are the steps in the computation of CPI using the 2012 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.

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

Where:

$I_{5\text{-digit,current month}}$ = Index of the 5-digit group (sub-class) for the current month
GM_{PR} = Geometric mean of price relatives
$I_{5\text{-digit,previous month}}$ = Index of the 5-digit group (sub-class) for the previous month

The Fifth Bldg., Gov. Ancheta St., Barangay IV, City of San Fernando, La Union 2500
TeleFax Number: (072) 888-5740
E-mail: psa.launion@yahoo.com

8

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

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

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).

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

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).

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

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

The Fifth Bldg., Gov. Ancheta St., Barangay IV, City of San Fernando, La Union 2500
TeleFax Number: (072) 888-5740
E-mail: psa.launion@yahoo.com

9

Step 7: Compute the index for All Items.

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

Where:

$I_{all\ items}$ = 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:

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

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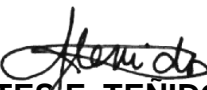CPI_1 – is the CPI in the previous period

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 which 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.

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

DANITES E. TEÑIDO, Ph.D.
Chief Statistical Specialist

/RBB

The Fifth Bldg., Gov. Ancheta St., Barangay IV, City of San Fernando, La Union 2500
TeleFax Number: (072) 888-5740
E-mail: psa.launion@yahoo.com

10