



# SPECIAL RELEASE

## Summary Inflation Report of the Consumer Price Index in Ilocos Region: October 2020 (2012=100)

Date of Release: 29 December 2020

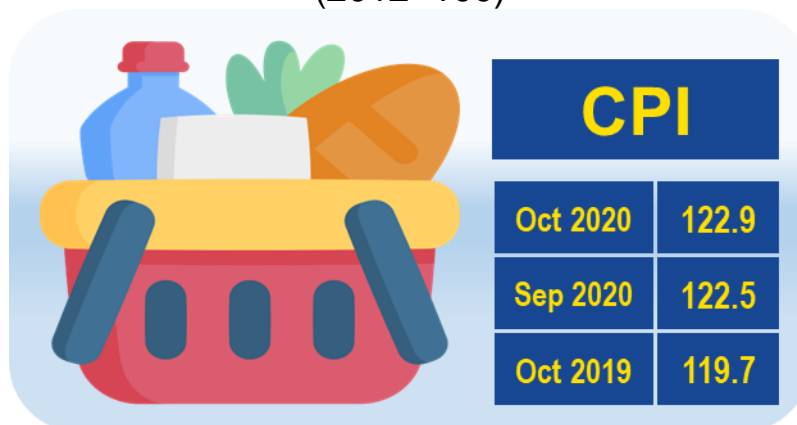
Reference No. 2020-55

### Consumer Price Index

The Consumer Price Index (CPI) of Ilocos Region in October 2020 was posted at 122.9. This means that on average, prices of goods and services in the region have increased by 22.9 percent from the base year 2012.

The region's CPI was recorded at 119.7 in October 2019 and 122.5 in September 2020.

Figure 1. Consumer Price Index, Ilocos Region  
October 2019, September 2020, and October 2020  
(2012=100)



Data Source: PSA, Price Statistics Division

Image Source: flaticon.com

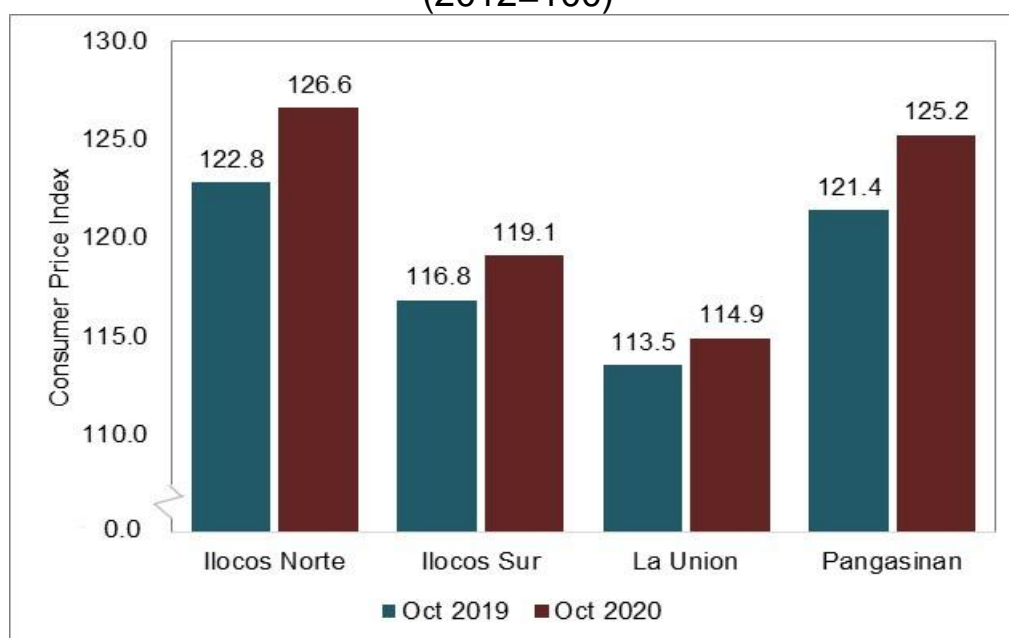
### By Province

Among the provinces, Ilocos Norte posted the highest price index in October 2020 at 126.6, followed by Pangasinan at 125.2,

and Ilocos Sur at 119.1. Meanwhile, La Union recorded the lowest price index at 114.9 in the same period.

Similarly, in October 2019, Ilocos Norte recorded the highest price index at 122.8, followed by Pangasinan at 121.4, Ilocos Sur at 116.8, and La Union at 113.5. (see Figure 2)

Figure 2. Consumer Price Index by Province, Ilocos Region  
October 2019 and October 2020  
(2012=100)



Source: PSA, Price Statistics Division

## By commodity Group

Table 1. Consumer Price Index by Commodity Group and by Province  
Ilocos Region: October 2020 (2012 = 100)

Commodity Group	Ilocos Region	Ilocos Norte	Ilocos Sur	La Union	Pangasinan
Food and Non-Alcoholic Beverages	131.0	132.9	129.1	125.7	132.4
Alcoholic Beverages and Tobacco	216.8	202.3	171.8	222.5	230.0
Clothing and Footwear	118.2	132.9	120.0	120.0	113.7
Housing, Water, Electricity, Gas and Other Fuels	112.9	127.3	107.2	95.5	116.0
Furnishings, Household Equipment and Routine Maintenance of the House	124.9	114.9	118.0	114.7	131.6
Health	123.1	130.1	113.4	108.8	129.1
Transport	105.2	101.3	113.9	104.1	103.9
Communication	101.7	101.3	101.3	103.4	101.4
Recreation and Culture	110.6	105.9	107.7	106.8	114.4
Education	111.3	97.4	78.9	102.8	121.4
Restaurant and Miscellaneous Goods and Services	118.7	124.4	113.4	112.9	120.2

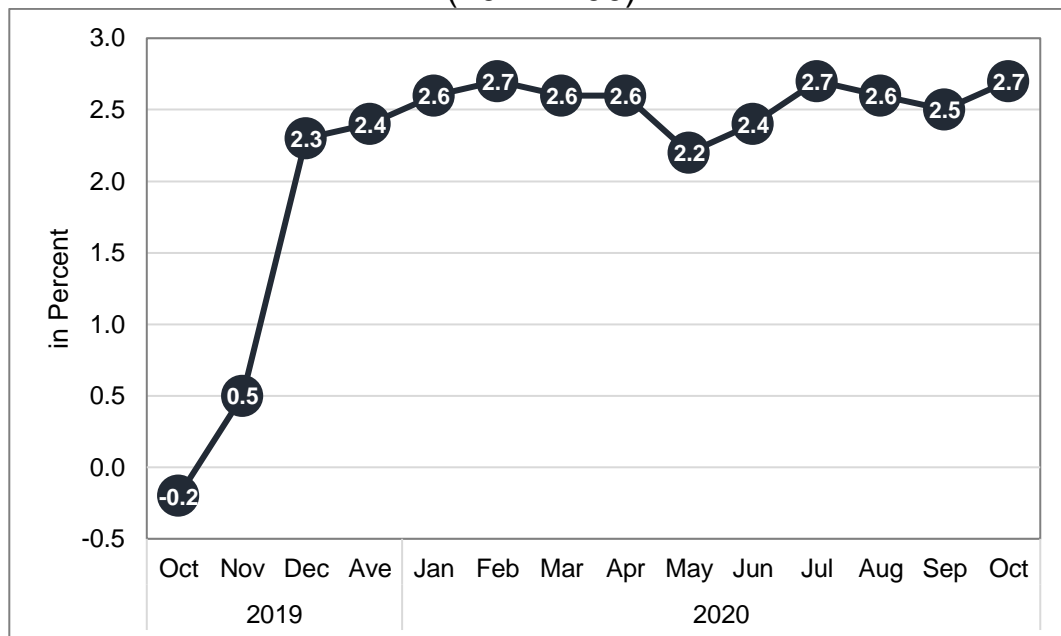
Source: PSA, Price Statistics Division

The top three commodity groups that recorded high price indices in the region in October 2020 were: alcoholic beverages and tobacco (216.8); food and non-alcoholic beverages (131.0); and furnishings, household equipment and routine maintenance of the house (124.9). On the other hand, the bottom three commodity groups with low price indices were: communication (101.7); transport (105.2); and recreation and culture (110.6).

## Inflation Rate

Headline inflation in the Ilocos Region settled to 2.7 percent in October 2020. Its annual rate in the previous month was 2.5 percent. A negative inflation rate was recorded in October 2019 at 0.2 percent.

Figure 3. Headline Inflation Rates in Ilocos Region, All Items  
October 2019 – October 2020  
(2012=100)



Source: PSA, Price Statistics Division

It can be manifested in Figure 3 that the highest inflation rate in the region was recorded in February, July, and October 2020, all at 2.7 percent.

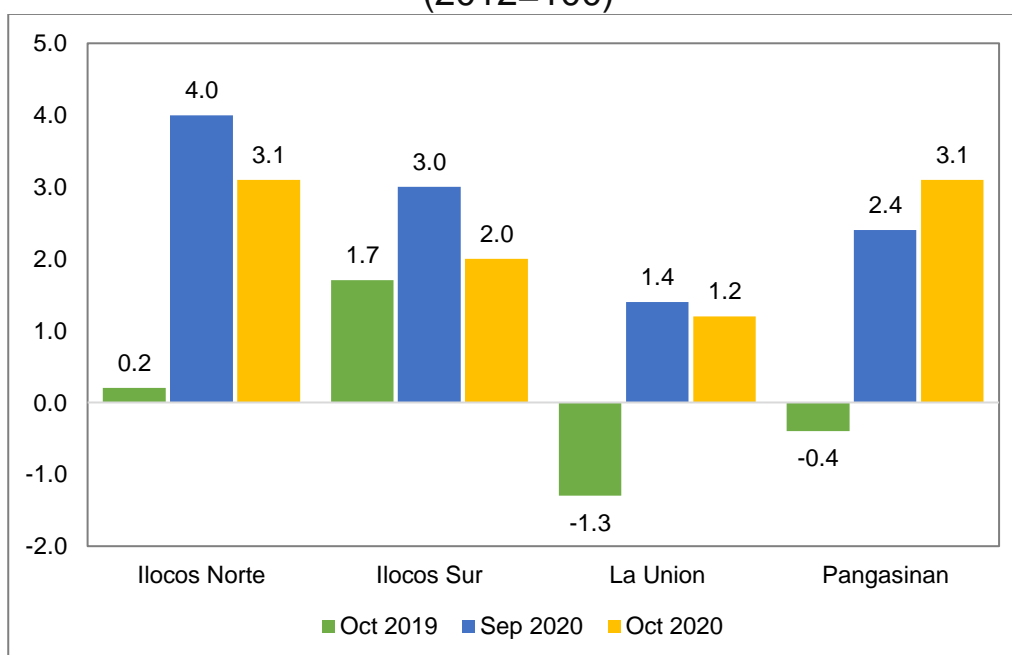
The inflation rate of the region decreased by 0.2 percentage point from September 2020 to October 2020. The inflation rate in October 2020 is higher by 2.9 percentage points compared to the inflation rate in October 2019.

## By Province

Among the provinces in the region, Ilocos Norte and Pangasinan posted the highest inflation rate both at 3.1 percent in October 2020. This was followed by Ilocos Sur at 2.0 percent. Meanwhile, the lowest inflation rate was observed in La Union at 1.2 percent.

Only Pangasinan posted an increase in the inflation rate from September 2020 to October 2020. Ilocos Norte, Ilocos Sur, and La Union recorded decreases in the inflation rate in the same period. Ilocos Sur registered the highest decrease in the inflation rate with one percentage point from 3.0 percent in September 2020 to 2.0 percent in October 2020.

Figure 4. Headline Inflation Rates by Province, Ilocos Region  
October 2019, September 2020, and October 2020  
(2012=100)



Source: PSA, Price Statistics Division

## By Commodity Group

By commodity group, alcoholic beverages and tobacco recorded the highest inflation rate in Ilocos Norte, La Union and Pangasinan. In Ilocos Sur, the highest inflation rate was registered in the transport commodity. Meanwhile, transport commodities recorded the lowest inflation rate in Ilocos Norte. Housing, water, electricity, gas, and other fuels posted the lowest inflation rate in Ilocos Sur and La Union, while recreation and culture in Pangasinan.

Table 2. Year-on-Year Inflation Rates for All Income Households by Commodity Group and by Province, Ilocos Region  
October 2020 (2012 = 100)

Commodity Group	Ilocos Region	Ilocos Norte	Ilocos Sur	La Union	Pangasinan
Food and Non-Alcoholic Beverages	3.4	1.8	2.8	1.0	4.5
Alcoholic Beverages and Tobacco	16.1	9.5	5.9	19.7	18.7
Clothing and Footwear	3.0	4.2	2.3	4.9	2.2
Housing, Water, Electricity, Gas and Other Fuels	-0.3	4.9	-5.9	-2.9	0.5
Furnishings, Household Equipment and Routine Maintenance of the House	1.1	0.7	2.3	3.1	0.5
Health	2.1	2.6	2.6	1.8	1.9
Transport	2.9	-0.9	13.2	-2.2	2.8
Communication	0.1	0.0	0.4	0.3	0.0
Recreation and Culture	-0.5	0.2	-0.2	-0.7	-0.6
Education	1.4	0.0	0.0	0.0	2.0
Restaurant and Miscellaneous Goods and Services	3.4	8.1	4.8	5.2	1.8

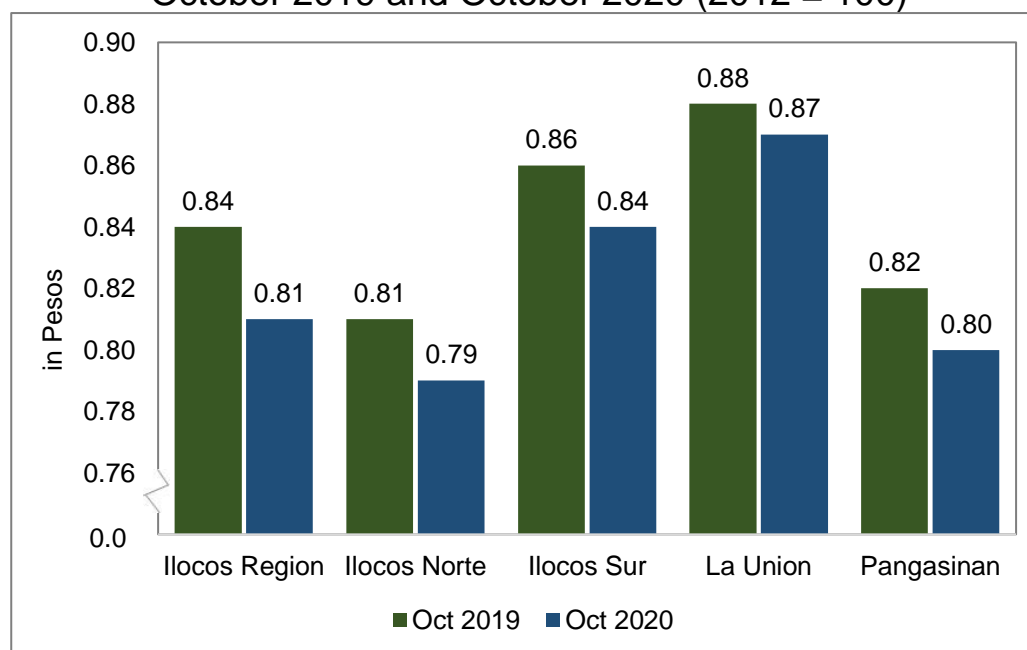
Source: PSA, Price Statistics Division

## Purchasing Power of Peso



The Purchasing Power of the Peso (PPP) in the Ilocos Region was posted at PhP0.81 in October 2020. This means that the purchasing capability of PhP1.00 in 2012 decreased by 19 centavos in October 2020.

Figure 5. Purchasing Power of the Peso by Province, Ilocos Region  
October 2019 and October 2020 (2012 = 100)



Source: PSA, Price Statistics Division

Among the provinces, La Union posted the highest PPP in October 2020 with PhP0.87. This was followed by Ilocos Sur with PhP0.84 PPP. Pangasinan registered a PPP of PhP0.80 while the least was recorded in Ilocos Norte with PhP0.79.

It can be gleaned in Figure 5 that PPPs in all the provinces went down from October 2019 to October 2020. Ilocos Norte, Ilocos Sur, and Pangasinan posted the highest decrease at PhP0.02 PPP while La Union recorded a decrease of PhP0.01 PPP.

Table 3. Consumer Price Index and Inflation Rate for All Income Households by Commodity Sub-Group, Ilocos Region October 2019 and October 2020, (2012=100)

Commodity Group	CPI		Inflation Rate	
	Oct 20	Oct 19	Oct 20	Oct 19
<b>ALL ITEMS</b>	122.9	119.7	2.7	-0.2
<b>FOOD AND NON-ALCOHOLIC BEVERAGES</b>	131.0	126.7	3.4	-2.5
Food	131.8	127.2	3.6	-2.8
Bread and cereals (ND)	121.4	121.4	0.0	-7.1
Rice	121.9	123.4	-1.2	-9.5
Corn	178.7	154.4	15.7	-0.3
Other Cereals, Flour, Cereal Preparation, Bread, Pasta and Other Bakery Products	117.5	113.7	3.3	2.2
Meat (ND)	133.5	121.5	9.9	1.1
Fish and Seafood (ND)	149.8	136.9	9.4	4.3
Milk, cheese and eggs (ND)	122.2	116.7	4.7	1.3
Oils and fats (ND)	103.6	100.9	2.7	1.3
Fruit (ND)	165.0	162.5	1.5	5.8
Vegetables (ND)	158.1	161.2	-1.9	-12.0
Sugar, jam, honey, chocolate and confectionery (ND)	116.4	116.1	0.3	0.3
Food products n.e.c. (ND)	112.4	114.6	-1.9	1.9
Non-Alcoholic Beverages	120.7	118.8	1.6	1.0
Coffee, tea and cocoa (ND)	109.0	106.9	2.0	0.3
Mineral water, soft drinks, fruit and vegetable juices (ND)	129.4	127.7	1.3	1.6
<b>ALCOHOLIC BEVERAGES, TOBACCO AND OTHER VEGETABLE-BASED TOBACCO PRODUCTS</b>	216.8	186.8	16.1	3.0
Alcoholic Beverages	152.5	138.3	10.3	1.8
Spirits (ND)	147.6	133.9	10.2	1.2
Wine (ND)	143.8	139.5	3.1	3.9
Beer (ND)	165.3	149.7	10.4	3.3
Tobacco	295.1	246.0	20.0	3.9
Tobacco (ND)	295.1	246.0	20.0	3.9
Other Vegetable-Based Tobacco Products	..	..	..	..
Other vegetable-based tobacco products	..	..	..	..
<b>NON-FOOD</b>	114.1	112.5	1.4	1.7
<b>CLOTHING AND FOOTWEAR</b>	118.2	114.8	3.0	2.7
Clothing	118.3	114.5	3.3	3.1
Clothing materials (SD)	111.4	110.4	0.9	2.1
Garments (SD)	118.3	114.6	3.2	3.1
Other articles of clothing and clothing accessories (SD)	116.0	110.2	5.3	0.3
Cleaning, repair and hire of clothing (S)	114.7	110.2	4.1	3.4
Footwear	118.3	115.4	2.5	1.8
Shoes and other footwear (SD)	118.3	115.4	2.5	1.8
Repair and hire of footwear (S)	110.0	110.0	0.0	0.3
<b>HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS</b>	112.9	113.2	-0.3	2.7
Actual Rentals For Housing	127.8	121.8	4.9	2.8
Actual rentals paid by tenants (S)	127.8	121.8	4.9	2.8
Maintenance And Repair Of The Dwelling	112.8	115.5	-2.3	1.3
Materials for the maintenance and repair of the dwelling	110.8	114.4	-3.1	1.0
Services for the maintenance and repair of the dwelling	123.7	121.8	1.6	3.6
Water Supply And Miscellaneous Services Relating To The Dwelling	103.2	102.4	0.8	0.0
Water supply (ND)	103.2	102.4	0.8	0.0
Electricity, Gas And Other Fuels	93.9	102.2	-8.1	2.8
Electricity (ND)	89.1	103.6	-14.0	5.6
Gas (ND)	89.9	93.5	-3.9	-6.2
Liquid fuels (ND)	72.7	95.5	-23.9	-8.7
Solid fuels (ND)	111.9	106.2	5.4	3.6

Table 3 Continuation

Commodity Group	CPI		Inflation Rate	
	Oct 20	Oct 19	Oct 20	Oct 19
<b>FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE</b>	124.9	123.5	1.1	1.0
Furniture And Furnishings, Carpets And Other Floor Coverings	104.4	103.9	0.5	0.4
Furniture and furnishings (D)	104.3	103.9	0.4	0.5
Carpets and other floor coverings (D)	114.9	112.1	2.5	1.8
Household Textiles	112.4	110.8	1.4	0.9
Household textiles (SD)	112.4	110.8	1.4	0.9
Household Appliances	112.8	112.0	0.7	0.6
Major household appliances whether electric or not (D)	112.6	111.6	0.9	0.5
Small electric household appliances (SD)	113.2	112.6	0.5	0.8
Repair of household appliances (S)	122.0	119.9	1.8	1.3
Glassware, Tableware And Household Utensils	115.3	114.1	1.1	1.2
Glassware, tableware and household utensils (SD)	115.3	114.1	1.1	1.2
Tools And Equipment For House And Garden	109.8	107.7	1.9	0.2
Major tools and equipment (D)	105.4	105.0	0.4	0.0
Small tools and miscellaneous accessories (SD)	114.2	110.4	3.4	0.3
Goods And Services For Routine Household Maintenance	128.7	127.2	1.2	1.1
Non-durable household goods (ND)	109.5	107.6	1.8	0.7
Domestic services and household services (S)	156.2	155.2	0.6	1.4
<b>HEALTH</b>	123.1	120.6	2.1	1.6
Medical Products, Appliances And Equipment	113.4	110.9	2.3	0.4
Pharmaceutical Products (ND)	113.3	110.8	2.3	0.4
Other medical products (ND)	120.3	118.0	1.9	0.0
Therapeutic appliances and equipment (D)	115.2	113.4	1.6	0.0
Outpatient Services	135.8	129.1	5.2	5.9
Medical services	138.3	130.5	6.0	6.6
Dental services (S)	137.6	131.2	4.9	6.5
Paramedical services (S)	121.2	120.0	1.0	1.4
Hospital Services	130.4	129.1	1.0	1.6
Hospital services (In-Patient Services)	130.4	129.1	1.0	1.6
<b>TRANSPORT</b>	105.2	102.2	2.9	-3.0
Purchase Of Vehicles	114.7	100.0	14.7	0.0
Motorcycle	107.5	99.9	7.6	0.0
Bicycle and tricycle	144.2	100.2	43.9	0.0
Operation Of Personal Transport Equipment	86.4	99.7	-13.3	-7.4
Spare parts and accessories for personal transport equipment (SD)	108.9	108.7	0.2	0.0
Fuel and lubricants for personal transport equipment	82.3	98.1	-16.1	-8.7
Maintenance and repair of personal transport equipment	109.5	109.4	0.1	0.0
Other services with respect of personal transport equipment (S)	..	..	..	..
Transport Services	116.2	104.5	11.2	-0.6
Passenger transport by railway	..	..	..	..
Passenger transport by road	115.6	103.7	11.5	0.0
Passenger transport by air	140.8	144.1	-2.3	-14.9
Passenger transport by sea and inland waterway	..	..	..	..
<b>COMMUNICATION</b>	101.7	101.6	0.1	0.0
Postal Services	123.3	123.3	0.0	2.5
Postal services (S)	123.3	123.3	0.0	2.5
Telephone And Telefax Equipment	100.2	100.2	0.0	0.0
Telephone and telefax equipment (S)	100.2	100.2	0.0	0.0
Telephone And Telefax Services	101.9	101.8	0.1	0.0
Telephone and telefax services (S)	101.9	101.8	0.1	0.0



Table 3 Continuation

Commodity Group	CPI		Inflation Rate	
	Oct 20	Oct 19	Oct 20	Oct 19
<b>RECREATION AND CULTURE</b>	110.6	111.1	-0.5	-0.1
Audio-Visual Photography And Information Processing Equipment	102.2	102.0	0.2	0.0
Equipment for the reception, recording and reproduction of sound and pictures (D)	100.6	100.4	0.2	0.0
Photographic and cinematographic equipment and optical instruments (D)	101.1	99.8	1.3	0.0
Information processing equipment (D)	104.3	104.1	0.2	0.0
Recording media (SD)	106.8	106.5	0.3	0.0
Repair of audio-visual, photographic and information processing equipment (S)	107.3	107.3	0.0	0.0
Other Major Durables For Recreation And Culture	110.5	109.6	0.8	0.0
Musical instruments and major durables for indoor recreation (D)	110.5	109.6	0.8	0.0
Other Recreational Items And Equipment, Gardens And Pets	122.7	120.1	2.2	-0.7
Games, toys and hobbies (SD)	119.9	119.3	0.5	-1.3
Equipment for sport, camping and open-air recreation	123.2	123.2	0.0	0.0
Gardens, plants and flowers (ND)	142.7	133.8	6.7	0.0
Pets and related products (ND)	112.3	108.5	3.5	0.0
Recreational And Cultural Services	137.1	150.0	-8.6	0.0
Recreational and sporting services (S)	128.0	128.0	0.0	0.0
Cultural services (S)	105.2	104.8	0.4	0.0
Games of chance (S)	200.0	240.0	-16.7	0.0
Newspapers, Books And Stationery	108.6	107.1	1.4	0.0
Books (SD)	105.7	105.0	0.7	0.0
Newspapers and periodicals (ND)	103.0	102.8	0.2	0.0
Miscellaneous printed matter (ND)	109.7	109.0	0.6	0.0
Stationery and drawing materials (ND)	111.1	108.8	2.1	0.0
<b>EDUCATION</b>	111.3	109.8	1.4	7.6
Pre-Primary (Pre-School) And Primary (Elementary) Education	152.7	150.4	1.5	9.3
Pre-primary education services (S)	152.8	151.2	1.1	4.2
Primary education services (S)	152.7	150.1	1.7	10.7
Secondary (High School) Education	140.8	140.8	0.0	8.1
Secondary education services (S)	140.8	140.8	0.0	8.1
Post-Secondary Non-Tertiary (Technical-Vocational) Education	120.0	120.0	0.0	0.0
Post-secondary non-tertiary education services (S)	120.0	120.0	0.0	0.0
Tertiary (Baccalaureate And Post-Graduate) Education	91.5	89.9	1.8	7.4
First stage of tertiary education services (S)	91.2	89.6	1.8	7.6
Second stage of tertiary education services (S)	102.2	102.2	0.0	2.2
Education Not Definable By Level	101.0	101.0	0.0	0.0
Education services not definable by level (S)	101.0	101.0	0.0	0.0
<b>RESTAURANTS AND MISCELLANEOUS GOODS AND SERVICES</b>	118.7	114.8	3.4	2.1
Catering Services	123.1	119.2	3.3	3.7
Restaurants, cafes and the like (S)	123.1	119.2	3.3	3.7
Personal Care	115.5	110.6	4.4	0.5
Hairdressing salons and personal grooming establishments	131.2	113.4	15.7	2.1
Electric appliances for personal care (SD)	..	..	..	..
Other appliances, articles and products for personal care	112.3	110.0	2.1	0.3
Personal Effects, N.E.C.	110.1	109.1	0.9	0.2
Jewellery, clocks and watches (D)	114.9	114.0	0.8	0.4
Other personal effects (SD)	108.9	107.9	0.9	0.1
Other Services, N.E.C.	100.0	100.0	0.0	0.0
Other services, n.e.c.	100.0	100.0	0.0	0.0

Source: PSA, Price Statistics Division

## 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***

*The Philippine Statistics Authority (PSA) released the Consumer Price Index (CPI) for All Income Households with base year 2012 on 06 March 2018. The 2012-based CPI is the tenth in the rebasing series. This was announced in Press Release Number 2018-031 dated 22 February 2018. Data users can expect two sets of the CPI as the new series shall be issued simultaneously with the 2006-based series until June 2018. The CPI series for July 2018 onwards shall be 2012-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 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.

## **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 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 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 2012 as the base year:

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

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

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

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

### 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.

$$\text{GM}_{\text{PR}} = \left( \prod_{i=1}^n \text{PR}_i \right)^{1/n}$$

Where:

$\text{GM}_{\text{PR}}$  = Geometric mean of price relatives

$\text{PR}_i$  = Price relative of each commodity

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

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

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

Where:

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

$\text{GM}_{\text{PR}}$  = Geometric mean of price relatives

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

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

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

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

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

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

Where:

$I_{\text{all items}}$  = 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:


$$\text{Inflation Rate} = \frac{\text{CPI}_2 - \text{CPI}_1}{\text{CPI}_1} \times 100$$

Where:  $\text{CPI}_2$  – is the CPI in the second period  
 $\text{CPI}_1$  – 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.

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

  
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