

SPECIAL RELEASE

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

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Consumer Price Index

The Consumer Price Index (CPI) of Ilocos Region in November 2020 was recorded at 124.4. This means that on the average, prices of goods and services in the region have increased by 24.4 percent from the base year 2012.

The region's CPI was recorded at 119.9 in November 2019 and 122.9 in October 2020.

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



Source: PSA, Price Statistics Division

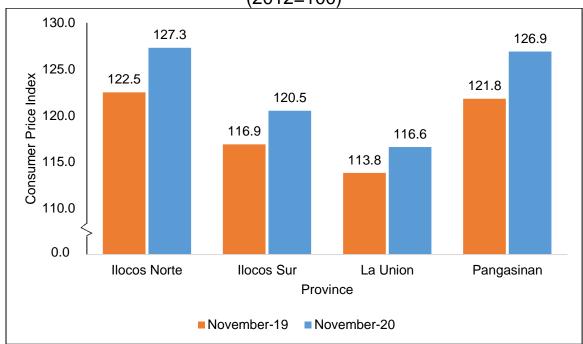
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By Province

Among the provinces, Ilocos Norte posted the highest price index in November 2020 at 127.3, followed by Pangasinan at 126.9, and Ilocos Sur at 120.5. However, La Union recorded the lowest at 116.6 in the same period.

In November 2019, Ilocos Norte had the highest price index at 122.5. It was followed by Pangasinan at 121.8, by Ilocos Sur at 116.9, and La Union at 113.8.

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



Source: PSA, Price Statistics Division

By Commodity Group

The top three commodity groups that recorded high price indices in the region in November 2020 were alcoholic beverages and tobacco (224.3), food and non-alcoholic beverages (134.0), 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 (104.8), and recreation and culture (110.7). (see Table 1)



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

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Commodity Group	Region	Norte	Sur	La Union	Pangasinan
Food and Non-Alcoholic Beverages	134.0	134.4	131.4	129.7	135.7
Alcoholic Beverages and Tobacco	224.3	203.7	172.1	222.5	243.6
Clothing and Footwear	118.3	133.0	120.0	120.0	113.7
Housing, Water, Electricity, Gas and Other Fuels	113.5	127.6	109.4	96.2	116.3
Furnishings, Household Equipment and Routine Maintenance of the House	124.9	115.0	118.0	114.8	131.6
Health	123.1	130.1	113.5	108.9	129.1
Transport	104.8	100.9	113.3	103.8	103.6
Communication	101.7	101.3	101.3	103.4	101.4
Recreation and Culture	110.7	106.0	107.8	106.8	114.4
Education	111.3	97.4	78.9	102.8	121.4
Restaurant and Miscellaneous Goods and Services	119.0	124.6	113.4	112.7	120.7

Source: PSA, Price Statistics Division

Inflation Rate of the Region

Headline inflation in Ilocos Region settled to 3.8 percent in November 2020. Its inflation rate in the previous month was 2.7 percent while 0.5 percent in November 2019.

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

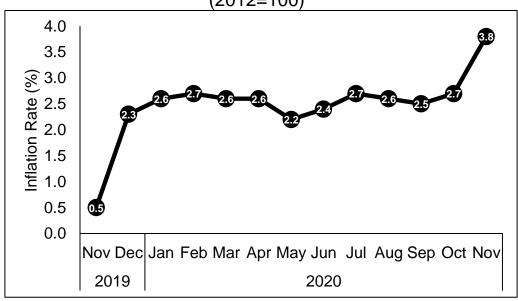




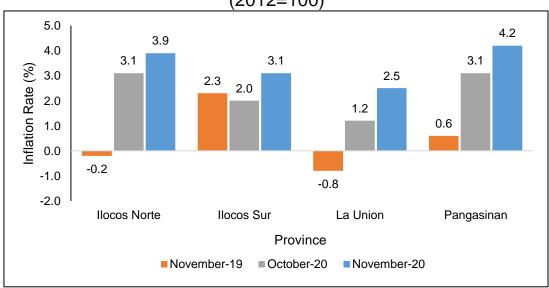
Figure 3 shows that for the past year the highest inflation rate in the region was recorded this month – November 2020 at 3.8 percent. Meanwhile, the lowest inflation rate was noted in the same month in 2019 at 0.5 percent. The inflation rate of the region increased by 1.1 percentage points from October 2020 to November 2020. Moreover, the inflation rate in November 2020 had increased by 3.3 percentage points compared to the inflation rate in November 2019.

Inflation Rate by Province

Among the provinces in the region, Pangasinan posted the highest at 4.2 percent in November 2020. This was followed by Ilocos Norte at 3.9 percent and Ilocos Sur at 3.1 percent. The lowest inflation rate was recorded in La Union at 2.5 percent.

All provinces posted an increase in their inflation rate from October 2020 to November 2020. Moreover, La Union posted the highest increase in inflation rate with 1.3 percentage points.

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



Inflation Rate 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 recorded in transport commodity. However, Ilocos Norte and La Union recorded transport commodity to have the lowest inflation rate. Meanwhile, Pangasinan and Ilocos Sur recorded the lowest in Recreation and Culture and Housing, Water, Electricity, Gas and Other Fuels, respectively.

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

Commodity Group	llocos Region	llocos Norte	llocos Sur	La Union	Pangasinan
Food and Non-Alcoholic Beverages	4.8	2.9	3.6	3.7	5.8
Alcoholic Beverages and Tobacco	19.4	10.2	6.0	16.1	25.7
Clothing and Footwear	3.0	4.2	2.3	4.9	2.2
Housing, Water, Electricity, Gas and Other Fuels	1.2	6.2	-2.4	-1.6	1.7
Furnishings, Household Equipment and Routine Maintenance of the House	1.1	0.8	2.1	3.1	0.5
Health	2.1	2.6	2.7	1.9	1.9
Transport	3.3	-0.8	13.1	-2.2	3.4
Communication	0.1	0.0	0.4	0.3	0.0
Recreation and Culture	-0.4	0.3	-0.1	-0.7	-0.6
Education	1.4	0.0	0.0	0.0	2.0
Restaurant and Miscellaneous Goods and Services	3.7	8.3	4.8	5.0	2.2

Source: PSA, Price Statistics Division

Purchasing Power of Peso



The Purchasing Power of the Peso (PPP) in Ilocos Region was posted at Php0.80 in November 2020. This means that the purchasing capability of Php1.00 in 2012 decreased by 20 centavos in November 2020.

Among the provinces, La Union posted the highest PPP in November 2020 with PhP0.86. This was followed by Ilocos Sur with Php0.83 PPP. Meanwhile, the least was recorded both in Ilocos Norte and Pangasinan with PhP0.79. (see Figure 5)



It can also be observed in Figure 5 that PPPs in all the provinces went down from November 2019 to November 2020. Ilocos Norte, Ilocos Sur, and Pangasinan posted a decrease of PhP0.03 PPP while La Union recorded a decrease of PhP0.02 PPP.

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

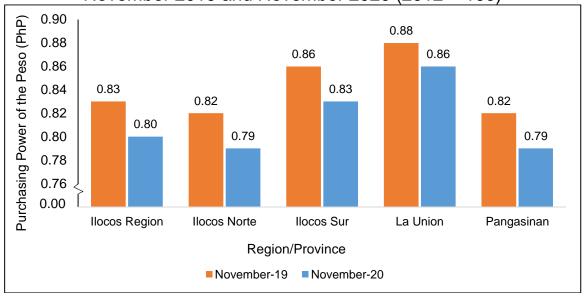


Table 3. Consumer Price Index and Inflation Rate for All Income Households by Commodity Sub-Group, Ilocos Region November 2019 and November 2020 (2012=100)

Commodity Crown	CPI		Inflation Rate	
Commodity Group	Nov-20	Nov-19	Nov-20	Nov-19
ALL ITEMS	124.4	119.9	3.8	0.5
FOOD AND NON-ALCOHOLIC	134.0	127.9	4.8	-0.9
BEVERAGES	104.0		_	0.0
Food	135.0	128.5	5.1	-1.1
Bread and cereals (ND)	121.4	121.4	0.0	-5.9
Rice	121.8	123.3	-1.2	-8.0
Corn	178.5	154.4	15.6	1.0
Other Cereals, Flour, Cereal Preparation, Bread, Pasta and Other Bakery Products	117.8	113.8	3.5	2.2
Meat (ND)	138.5	123.0	12.6	2.0
Fish and Seafood (ND)	153.9	141.7	8.6	6.7
Milk, cheese and eggs (ND)	122.2	117.3	4.2	1.8
Oils and fats (ND)	103.4	100.9	2.5	1.3
Fruit (ND)	168.8	160.5	5.2	6.2
Vegetables (ND)	177.3	164.8	7.6	-6.8
Sugar, jam, honey, chocolate and confectionery (ND)	116.4	116.2	0.2	0.7
Food products n.e.c. (ND)	113.1	114.6	-1.3	1.9
Non-Alcoholic Beverages	120.7	118.9	1.5	1.1
Coffee, tea and cocoa (ND)	109.0	107.0	1.9	0.4
Mineral water, soft drinks, fruit and vegetable juices (ND)	129.4	127.7	1.3	1.6
ALCOHOLIC BEVERAGES, TOBACCO AND OTHER VEGETABLE-BASED TOBACCO PRODUCTS	224.3	187.9	19.4	3.6
Alcoholic Beverages	153.5	138.9	10.5	2.3

		:PI	Inflation Rate		
Commodity Group	Nov-20	Nov-19	Nov-20	Nov-19	
Cnivito (NID)	148.7		11.1		
Spirits (ND)		133.9		1.2	
Wine (ND)	144.3 166.0	139.5 151.7	3.4 9.4	3.9 4.7	
Beer (ND) Tobacco		247.7	25.4	4.7	
	310.6	247.7			
Tobacco (ND)	310.6		25.4	4.6	
Other Vegetable-Based Tobacco Products	••				
Other vegetable-based tobacco products					
NON-FOOD	114.4	112.0	2.1	1.6	
CLOTHING AND FOOTWEAR	118.3	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	115.5	2.4	1.9	
Shoes and other footwear (SD)	118.3	115.5	2.4	1.9	
Repair and hire of footwear (S)	110.0	110.0	0.0	0.3	
HOUSING, WATER, ELECTRICITY, GAS AND	440.5	440.4	4.0	4.0	
OTHER FUELS	113.5	112.1	1.2	1.8	
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	112.4	115.5	-2.7	1.3	
Materials for the maintenance and repair of the				1	
dwelling	110.3	114.4	-3.6	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	95.4	99.6	-4.2	0.4	
Electricity (ND)	90.7	98.7	-8.1	0.2	
Gas (ND)	92.7	94.6	-2.0	-2.8	
Liquid fuels (ND)	73.7	91.1	-19.1	-9.3	
Solid fuels (ND)	111.9	107.0	4.6	4.4	
FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE	124.9	123.5	1.1	1.0	
Furniture And Furnishings, Carpets And Other Floor Coverings	104.6	103.9	0.7	0.4	
Furniture and furnishings (D)	104.5	103.9	0.6	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	112.4	112.0	0.7	0.6	
Major household appliances whether electric or not			0.7	0.0	
(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	109.6	107.7	1.8	0.2	
Major tools and equipment (D)	105.1	105.0	0.1	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	107.7	1.7	0.7	
Domestic services and household services (S)	156.2	155.2	0.6	1.4	
HEALTH	123.1	120.6	2.1	1.6	
Medical Products, Appliances And Equipment	113.4	110.9	2.3	0.4	
Pharmaceutical Products (ND)	113.4	110.8	2.3	0.4	
Other medical products (ND)	121.7	118.0	3.1	0.0	
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	C	PI	Inflation Rate		
Commodity Group	Nov-20	Nov-19	Nov-20	Nov-19	
Therapeutic appliances and equipment (D)	115.2	113.4	1.6	0.0	
Outpatient Services	135.9	129.1	5.3	5.9	
Medical services	138.4	130.5	6.1	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	
TRANSPORT	104.8	101.5	3.3	-1.0	
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	85.5	98.1	-12.8	-1.8	
Spare parts and accessories for personal transport					
equipment (SD)	108.9	108.7	0.2	0.0	
Fuel and lubricants for personal transport equipment	81.2	96.2	-15.6	-2.0	
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	110.2	104.5			
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	140.0	144.1	-2.3	-14.9	
COMMUNICATION	101.7	101.6	0.1	0.0	
Postal Services	123.3	123.3	0.0	0.0	
Postal services (S)	123.3	123.3	0.0	0.0	
Telephone And Telefax Equipment	100.2	100.2	0.0	0.0	
	100.2	100.2	0.0	0.0	
Telephone and telefax equipment (S) Telephone And Telefax Services	100.2	100.2	0.0	0.0	
Telephone and telefax services (S) RECREATION AND CULTURE	101.9 110.7	101.8 111.1	0.1	0.0 -0.1	
	110.7	111.1	-0.4	-0.1	
Audio-Visual Photography And Information Processing Equipment	102.3	102.0	0.3	0.0	
Equipment for the reception, recording and				+	
reproduction of sound and pictures (D)	100.7	100.4	0.3	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	104.1	0.2	0.0	
Repair of audio-visual, photographic and information	100.8	100.5	0.3	0.0	
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	8.0	0.0	
Other Recreational Items And Equipment, Gardens					
And Pets	122.9	120.1	2.3	-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)	143.3	133.8	7.1	0.0	
Pets and related products (ND)	112.7	108.5	3.9	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	0.0	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	107.1	0.7	0.0	
Newspapers and periodicals (ND)	103.7	103.0	0.7		
	103.0	102.8		0.0	
Miscellaneous printed matter (ND)			0.6	0.0	
Stationery and drawing materials (ND) EDUCATION	111.2 111.3	108.8 109.8	2.2 1.4	0.0	
LDUCATION	111.3	103.0	1.4	6.6	



Commondity Crown	С	PI	Inflation Rate		
Commodity Group	Nov-20	Nov-19	Nov-20	Nov-19	
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	5.5	
First stage of tertiary education services (S)	91.2	89.6	1.8	5.7	
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	
RESTAURANTS AND MISCELLANEOUS GOODS AND SERVICES	119.0	114.8	3.7	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	116.3	110.6	5.2	0.5	
Hairdressing salons and personal grooming establishments	132.6	113.4	16.9	2.1	
Electric appliances for personal care (SD)					
Other appliances, articles and products for personal care	113.0	110.0	2.7	0.3	
Personal Effects, N.E.C.	110.2	109.1	1.0	0.2	
Jewellery, clocks and watches (D)	115.7	114.0	1.5	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	

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/subgroups. 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.
- 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.

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

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.

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

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.

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\begin{split} I_{\text{5-digit,current month}} &= \left(GM_{PR}\right) * \left(I_{\text{5-digit,previous month}}\right) \\ \text{Where:} \\ &I_{\text{5-digit,current month}} = \text{Index of the 5-digit group (sub-class)} \\ & \text{for the current month} \\ &GM_{PR} = \text{Geometric mean of price relatives} \\ &I_{\text{5-digit,previous month}} = \text{Index of the 5-digit group (sub-class)} \\ & \text{for the previous month} \end{split}
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Step 4: Compute the index for the 4-digit group (Class).

$$I_{\text{4-digit}} = \frac{\displaystyle\sum_{i=1}^{n} \left(W_{(5\text{-digit})i}\right) \left(I_{(5\text{-digit})i}\right)}{\displaystyle\sum_{i=1}^{n} \left(W_{(5\text{-digit})i}\right)}$$
 Where:
$$I_{\text{(4-digit)}} = \text{index of the 4-digit group}$$

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

$$I_{(6\text{-digit})i} = \text{index of the 5-digit group}$$



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).

$$I_{2\text{-digit}} = \frac{\displaystyle\sum_{i=1}^{n} (W_{(3\text{-digit})i}) (I_{(3\text{-digit})i})}{\displaystyle\sum_{i=1}^{n} (W_{(3\text{-digit})i})}$$
Where:
$$I_{(2\text{-digit})} = \text{index of the 2-digit group}$$

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

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

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:

 $I_{all\ items}$ = 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 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.

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

