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NATIONAL STATISTICS BUREAU
Royal Government of Bhutan



CONSUMER PRICE INDEX (CPI) BULLETIN DECEMBER 2017

ECONOMIC AND ENVIRONMENTAL STATISTICS DIVISION
NATIONAL STATISTICS BUREAU

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FOREWORD

National Statistics Bureau (NSB) is pleased to release the Consumer Price Index (CPI) Bulletin for December 2017. This is the 49th series of monthly CPI Bulletin published by Economic and Environmental Statistics Division, NSB.

The Bulletin is compiled using December 2012 as the price reference period and tracks the price movements of 151 items in 20 districts and 2 major urban areas. The rebased CPI uses the Geometric Modified Laspeyres formula, and has separate indices for domestic and imported goods and services.

We thank all agencies and stakeholders for their support in bringing out this bulletin and look forward for their continued support.

January 2018

National Statistics Bureau

GRAPH 1: YEAR-ON-YEAR INFLATION



YEAR-ON-YEAR INFLATION RATE

The Consumer Price Index in December 2017 [i.e., from December 2016 to December 2017] increased by 3.30%. This was 0.41 percentage point lower than the previous month which was 3.71%. The prices of food increased by 6.97% while non-food items increased only by 0.93%.

The prices of local goods and services increased by 2.72% with corresponding increase in food prices by 6.58% and non-food prices by 0.51%.

Prices of imported goods and services increased by 3.84% due to increase in food prices by 7.29% while non-food increased only by 1.36%.

Table 1: Year on Year Index & percent change (National)

Group	Weights	Index (December 2012=100)												percent change(%)					
		2016						2017						2017					
		Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Food	39.92	127.26	127.90	128.61	129.36	131.66	132.35	136.47	137.27	137.38	138.36	140.03	141.58	7.24	7.32	6.82	6.96	6.36	6.97
Non-Food	60.08	123.22	123.47	123.67	124.01	125.38	126.49	128.15	128.45	128.20	128.34	127.86	127.67	4.00	4.04	3.66	3.49	1.98	0.93
Overall	100	124.82	125.22	125.62	126.12	127.85	128.80	131.41	131.90	131.79	132.25	132.59	133.05	5.28	5.34	4.91	4.86	3.71	3.30

Table 2: Year-on-Year Index & percentage change (Domestic)

Group	Weights	Index (December 2012=100)												Percent change(%)					
		2016						2017						2017					
		Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Food	17.77	130.42	131.00	132.09	133.04	135.21	135.93	139.95	140.23	139.76	140.60	142.69	144.87	7.31	7.05	5.81	5.68	5.53	6.58
Non-Food	30.24	124.41	124.80	124.88	125.05	127.55	129.71	130.91	131.00	130.97	131.08	131.10	130.38	5.23	4.97	4.88	4.82	2.78	0.51
Total	48.01	126.60	127.06	127.50	127.95	130.34	131.98	134.19	134.35	134.16	134.53	135.27	135.56	6.00	5.74	5.22	5.14	3.79	2.72

Table 3: Year-on-Year Index & percentage change (Import)

Group	Weights	Index (December 2012=100)												Percent change(%)					
		2016						2017						2017					
		Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Food	22.15	124.64	125.33	125.75	126.35	128.73	129.40	133.60	134.78	135.35	136.44	137.78	138.83	7.19	7.54	7.63	7.99	7.04	7.29
Non-Food	29.84	122.03	122.14	122.46	122.97	123.22	123.31	125.41	125.92	125.44	125.63	124.66	124.99	2.76	3.09	2.43	2.16	1.17	1.36
Total	51.99	123.14	123.49	123.85	124.40	125.54	125.87	128.83	129.62	129.57	130.13	130.09	130.71	4.63	4.97	4.62	4.61	3.63	3.84

Table 4: Year on Year index: Group Level

12 Major Groups	Weights	Index (December 2012=100)												Percent change(%)					
		2016						2017						2017					
		Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Food and non-alcoholic beverages	36.89	126.25	126.95	127.71	128.50	130.94	131.68	135.90	136.63	136.75	137.79	139.55	141.01	7.64	7.63	7.08	7.23	6.58	7.08
Alcoholic beverages and narcotics	3.03	140.12	140.14	140.14	140.34	140.73	140.73	143.69	145.27	145.24	145.52	146.04	148.70	2.55	3.66	3.64	3.69	3.78	5.66
Clothing and footwear	9.20	126.34	127.13	127.12	128.27	128.57	128.57	131.45	131.99	131.73	132.00	132.03	132.44	4.05	3.82	3.63	2.91	2.69	3.02
Housing, water, gas, electricity and other fuels	21.70	127.64	127.67	127.88	127.95	131.46	134.61	136.78	136.94	136.93	136.95	136.96	136.96	7.16	7.26	7.07	7.03	4.19	1.75
Furnishing, household equipment and routine maintenance of the house	2.20	129.95	130.13	130.44	130.45	130.52	130.52	132.23	132.40	132.27	132.36	132.38	133.09	1.75	1.74	1.40	1.46	1.42	1.96
Health	4.68	108.79	108.79	108.79	108.79	108.79	108.79	109.98	110.47	110.51	110.47	110.47	110.98	1.10	1.55	1.58	1.55	1.55	2.02
Transport	11.98	126.74	127.27	127.86	128.16	128.49	128.65	129.29	129.72	128.63	128.80	126.33	124.48	2.01	1.93	0.61	0.50	-1.68	-3.24
Communication	3.03	95.61	95.61	95.61	95.61	95.61	95.61	95.63	95.62	95.62	95.62	95.62	95.62	0.02	0.01	0.01	0.01	0.01	0.01
Recreation and culture	2.35	109.62	109.67	109.69	111.49	111.39	111.39	111.64	111.55	111.63	111.81	111.79	111.79	1.84	1.71	1.77	0.28	0.36	0.36
Education	1.64	132.27	132.27	132.27	132.27	132.27	132.27	136.63	136.63	136.63	136.63	136.63	136.63	3.29	3.29	3.29	3.29	3.29	3.29
Restaurants and hotels	1.24	125.72	125.72	125.72	125.89	127.69	127.69	128.06	128.77	128.77	130.63	131.00	132.86	1.86	2.42	2.42	3.76	2.59	4.05
Miscellaneous goods and services	2.06	125.47	125.70	125.90	125.99	126.29	126.29	128.09	128.73	128.75	129.33	129.31	129.71	2.08	2.41	2.26	2.65	2.39	2.71
All	100.00	124.82	125.22	125.62	126.12	127.85	128.80	131.41	131.90	131.79	132.25	132.59	133.05	5.28	5.34	4.91	4.86	3.71	3.30

Table 5: Year-on-year Index & Percent Change: Food Group

Group	Weights	Index (December 2012=100)												Percent change(%)					
		2016						2017						2017					
		Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Bread and Cereals	9.75	127.67	128.29	129.00	130.15	131.36	131.64	134.58	135.77	136.41	136.93	138.85	139.35	5.41	5.83	5.75	5.20	5.70	5.86
Meat	3.10	132.43	132.62	132.91	133.09	133.35	133.47	138.35	139.38	140.12	141.71	142.46	142.90	4.47	5.10	5.42	6.47	6.83	7.07
Fish	1.06	144.04	143.91	146.95	147.39	147.91	147.91	160.20	162.89	162.88	162.63	164.22	164.57	11.21	13.18	10.83	10.34	11.03	11.26
Milk, cheese and eggs	6.88	128.04	128.28	128.62	128.74	128.43	128.44	128.37	128.26	128.09	128.97	129.89	132.32	0.26	-0.02	-0.42	0.18	1.14	3.01
Oils and fats	3.19	114.08	114.04	114.62	114.35	114.65	114.69	117.47	118.12	118.01	118.17	118.85	119.01	2.98	3.58	2.96	3.33	3.67	3.77
Fruit	1.68	126.59	125.64	124.83	126.03	128.15	128.17	135.27	134.75	133.69	135.75	139.71	145.23	6.86	7.25	7.10	7.71	9.02	13.31
Vegetables	7.82	126.71	128.99	130.71	132.61	142.50	145.83	156.79	158.17	157.98	160.53	164.17	167.01	23.73	22.63	20.87	21.06	15.21	14.53
Sugar, jam, honey etc	0.98	112.30	112.35	112.92	112.72	113.05	113.05	113.73	113.08	113.39	113.93	114.30	114.26	1.27	0.64	0.42	1.08	1.11	1.07
Food products n.e.c	0.64	133.91	134.79	135.54	136.42	137.19	137.85	139.45	138.50	137.88	138.20	139.07	139.09	4.14	2.76	1.73	1.30	1.37	0.90
Coffee, tea and cocoa	0.68	128.45	129.28	129.84	130.09	130.37	130.37	131.16	132.40	132.54	132.54	133.46	133.46	2.11	2.41	2.08	1.89	2.37	2.37
Mineral water, softdrinks & juices	1.11	111.61	111.93	111.94	112.17	112.48	112.48	112.81	113.02	113.58	113.59	113.90	114.41	1.08	0.98	1.46	1.27	1.26	1.71
Mineral water, softdrinks & juices	0.65	119.30	119.54	119.54	119.54	119.54	119.54	119.69	120.66	120.66	120.66	120.80	121.01	0.33	0.93	0.93	0.93	1.05	1.23
Wine	0.44	124.44	124.45	124.45	124.45	124.45	124.45	124.52	124.53	124.53	124.55	124.55	123.11	0.07	0.07	0.07	0.08	0.08	-1.08
Beer	0.56	112.35	112.35	112.35	112.35	112.35	112.35	113.19	113.19	113.19	113.97	114.87	115.64	0.75	0.75	0.75	1.43	2.24	2.92
Narcotics	1.38	171.69	171.58	171.58	172.13	173.16	173.16	180.58	184.26	184.19	184.45	185.21	192.71	5.18	7.39	7.35	7.16	6.96	11.29

Table 6: Year-on-Year Index & Percent Change: Non-Food Group

Group	Weights	Index (December 2012=100)												Percent Change(%)					
		2016						2017						2017					
		Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Clothing	6.24	126.70	127.58	127.56	129.27	129.71	129.71	132.39	133.22	132.92	133.29	133.24	133.48	4.49	4.42	4.20	3.11	2.72	2.91
Footwear	2.96	125.56	126.19	126.19	126.19	126.19	126.19	129.50	129.44	129.28	129.32	129.52	130.29	3.13	2.58	2.44	2.48	2.63	3.25
Housing (rental)	15.12	128.39	128.39	128.46	128.46	133.43	137.92	139.14	139.14	139.14	139.14	139.14	139.14	8.38	8.38	8.31	8.31	4.28	0.88
Maintenancen & repair of the dwelling	1.88	114.17	114.49	114.49	114.59	114.59	114.59	114.83	115.50	115.29	115.42	115.51	115.54	0.58	0.89	0.70	0.72	0.80	0.82
Electricity, gas & other fuels	4.54	131.83	131.83	132.59	132.89	133.26	133.65	140.01	140.44	140.48	140.53	140.53	140.53	6.21	6.54	5.95	5.75	5.46	5.15
Furniture and furnishing, carpets and other floor coverings	0.37	120.92	120.92	121.21	121.21	121.21	121.21	122.33	124.42	123.95	124.29	124.29	126.43	1.17	2.90	2.26	2.54	2.54	4.30
Household textiles	0.57	156.37	156.64	156.64	156.64	156.71	156.71	159.49	159.52	159.14	159.19	159.19	159.32	2.00	1.84	1.60	1.63	1.58	1.67
Household appliances	0.42	114.61	114.91	114.97	114.97	114.97	114.97	116.77	116.42	116.56	116.58	116.58	117.74	1.89	1.31	1.38	1.40	1.40	2.41
Glassware, tableware & utensils	0.25	142.61	142.64	142.64	142.69	142.69	142.69	144.48	143.18	143.18	143.33	143.33	143.33	1.31	0.38	0.38	0.44	0.44	0.44
Tools and equipments for house and garden	0.24	118.60	118.08	118.21	118.21	118.21	118.21	118.48	117.80	117.80	117.80	117.79	117.79	-0.10	-0.24	-0.35	-0.35	-0.36	-0.36
Goods and services for household maintenance	0.35	120.20	120.86	122.19	122.19	122.56	122.56	124.28	124.79	124.79	124.79	124.95	125.22	3.39	3.25	2.13	2.13	1.95	2.17
Purchase of vehicles	4.58	143.12	143.12	143.12	143.12	143.12	143.12	146.24	146.24	143.04	143.04	140.63	140.96	2.18	2.18	-0.05	-0.05	-1.74	-1.51
Fuels & Lubricants	3.11	107.34	105.80	107.45	108.42	109.14	109.46	107.62	109.24	109.24	109.80	104.49	104.57	0.26	3.25	1.67	1.27	-4.26	-4.47
Telephone and telefax equipment	0.17	90.98	91.01	91.01	91.01	91.01	91.01	91.33	91.25	91.25	91.25	91.25	91.25	0.39	0.26	0.26	0.26	0.26	0.26
Audio-visual, photographic & information processing equipments	0.48	107.36	107.36	107.36	107.36	107.36	107.36	107.38	107.55	107.55	107.65	107.54	107.54	0.02	0.17	0.17	0.27	0.16	0.16
Recreational & cultural services	0.92	97.04	97.04	97.04	100.95	100.35	100.35	100.35	100.36	100.39	100.39	100.39	100.39	3.40	3.41	3.45	-0.55	0.04	0.04
Newspapers, books & stationery	0.72	122.21	122.43	122.47	122.82	123.33	123.33	124.16	123.46	123.87	124.28	124.28	124.28	1.59	0.84	1.14	1.19	0.77	0.77
Catering services	1.05	124.50	124.50	124.50	124.54	126.32	126.32	126.45	127.23	127.23	129.38	129.76	131.94	1.57	2.20	2.20	3.89	2.73	4.45
Accommodation services	0.19	132.72	132.72	132.72	133.60	135.55	135.55	137.30	137.63	137.63	137.74	138.08	138.08	3.45	3.70	3.70	3.09	1.87	1.87
Personal care	1.59	121.51	121.64	121.87	121.87	122.24	122.24	123.43	123.95	123.97	124.69	124.66	125.15	1.58	1.90	1.72	2.31	1.98	2.38
Personal effects n.e.c	0.47	139.88	140.48	140.53	140.99	140.99	140.99	145.18	146.33	146.33	146.34	146.34	146.39	3.79	4.17	4.13	3.80	3.80	3.83

Table 7: Month-on-Month Index & Percent Change in the CPI (National)

		Index (December 2012=100)							Percent Change(%)						
Group	Weights	2017							2017						
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Food	39.92	135.04	136.47	137.27	137.38	138.36	140.03	141.58	-0.23	1.06	0.58	0.08	0.72	1.21	1.10
Non-Food	60.08	127.85	128.15	128.45	128.20	128.34	127.86	127.67	-0.01	0.23	0.24	-0.20	0.11	-0.37	-0.15
Overall	100.00	130.67	131.41	131.90	131.79	132.25	132.59	133.05	-0.10	0.56	0.37	-0.09	0.35	0.25	0.35
Purchasing Power of Ngultrum (Nu.)		77	76	76	76	76	75	75							

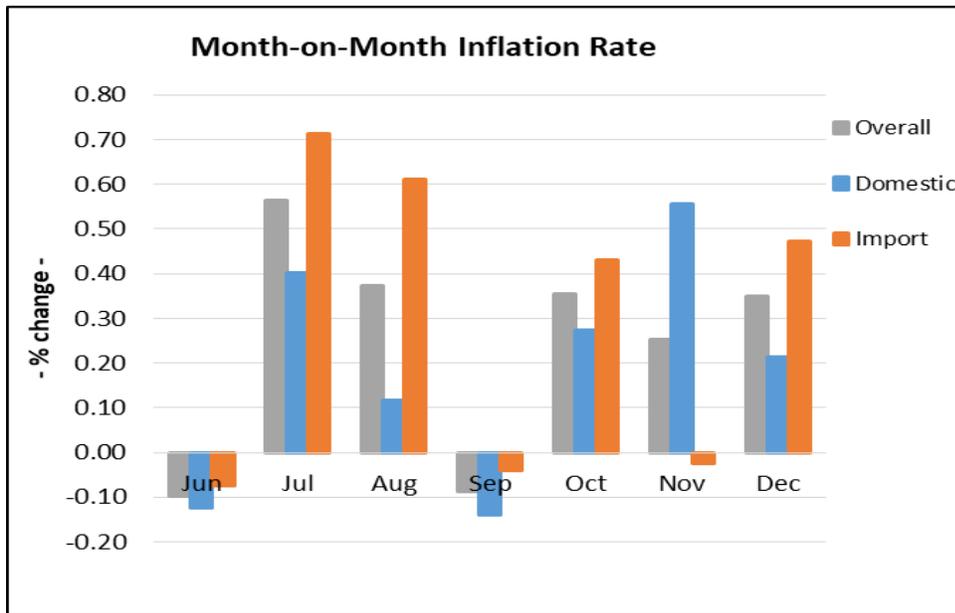
Table 8: Month-on-Month Index (Domestic)

		Index (December 2012=100)							Percent Change (%)						
Group	Weights	2017							2017						
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Food	17.77	139.26	139.95	140.23	139.76	140.60	142.69	144.87	-0.35	0.50	0.20	-0.34	0.60	1.48	1.53
Non-Food	30.24	130.47	130.91	131.00	130.97	131.08	131.10	130.38	0.01	0.34	0.07	-0.02	0.08	0.02	-0.55
Domestic	48.01	133.65	134.19	134.35	134.16	134.53	135.27	135.56	-0.12	0.40	0.12	-0.14	0.27	0.56	0.21

Table 9: Month-on-Month Percent Change in the CPI (Import)

		Index (December 2012=100)							Percent Change (%)						
Group	Weights	2017							2017						
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Food	22.15	131.60	133.60	134.78	135.35	136.44	137.78	138.83	-0.14	1.52	0.89	0.42	0.81	0.98	0.76
Non-Food	29.84	125.26	125.41	125.92	125.44	125.63	124.66	124.99	-0.03	0.12	0.41	-0.38	0.15	-0.77	0.26
Import	51.99	127.92	128.83	129.62	129.57	130.13	130.09	130.71	-0.07	0.71	0.61	-0.04	0.43	-0.03	0.47

GRAPH 2: MONTH-TO-MONTH INFLATION RATE (OVERALL, DOMESTIC AND IMPORTED)



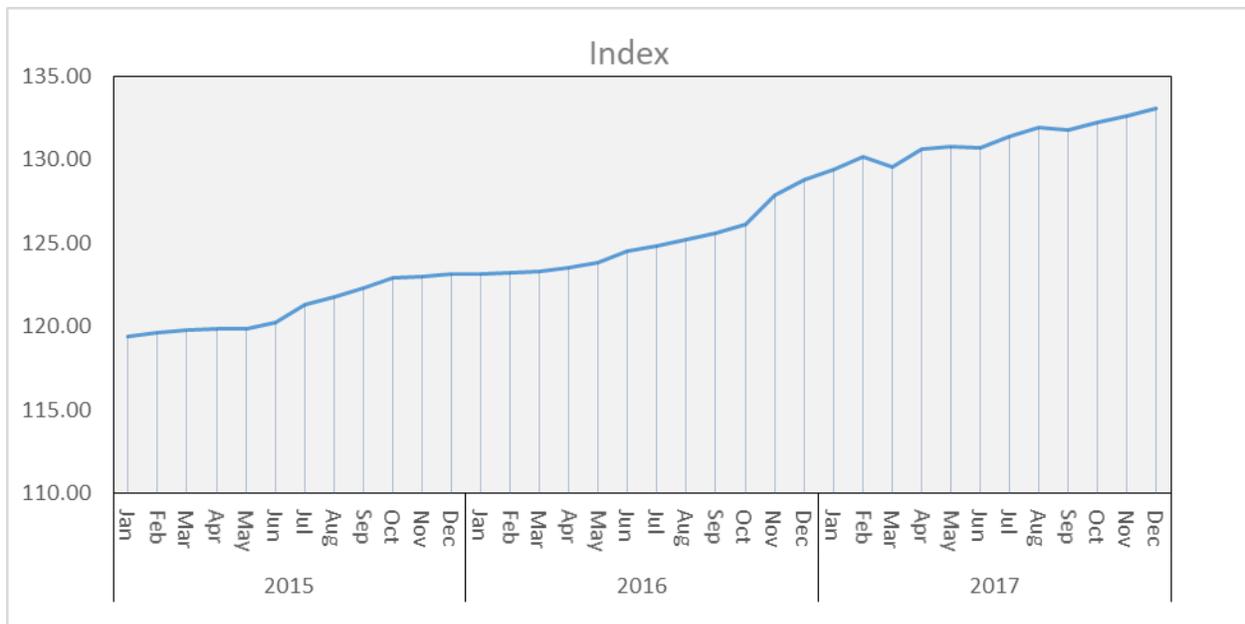
MONTH-TO-MONTH INFLATION RATE

The CPI for December over previous month of November increased by 0.35% mainly contributed by increase in food prices by 1.10% while non-food decreased by 0.15%.

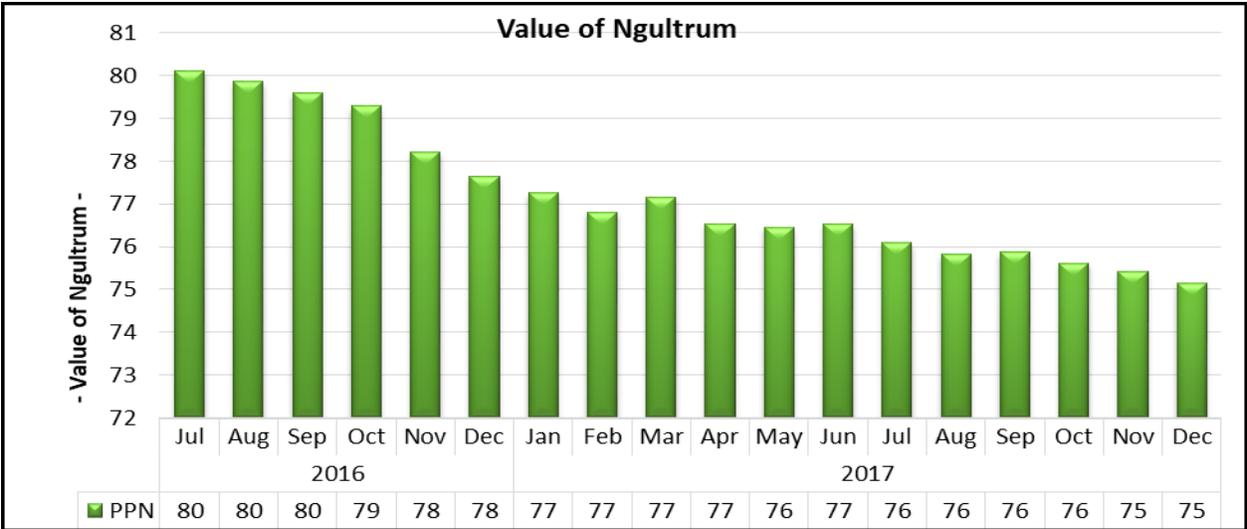
Price of local goods and services increased by 0.21% with corresponding increase in food by 1.48% however non-food prices dropped by 0.55%.

CPI of imported goods went up by 0.47% in December recording an increase in both food and non-food prices by 0.76% and 0.26% respectively.

GRAPH 3: TIME SERIES INDEX LEVEL TREND



GRAPH 4: PURCHASING POWER OF NGULTRUM (PPN)



The PPN, as measured by CPI was 75 Ngultrum as of December 2017. This means, Ngultrum 100 in December 2017 is worth only Ngultrum 75 at December 2012 prices. The PPN has decreased by 3.20% in the past 12 months (i.e. from December 2016 to December 2017) due to price increase in the economy.

TECHNICAL NOTES

1. Concept and Definition of CPI

The Consumer Price Index (CPI) is a measure of changes in the average retail prices of a market basket of goods and services purchased by households for day-to-day living. It shows how much, on average, prices of goods and services have increased or decreased from a particular reference period, commonly known as the base period.

2. Uses of CPI

- ✓ As an economic indicator: - CPI is one of the major indicators that determine the effectiveness of an economic policy. It is used to formulate fiscal and monetary policies and monitor their effect on the overall economy. Business executives, labor leaders, and other private citizens use CPI as a guide to make economic decisions.
- ✓ As a means of adjusting income payments: -Many collective bargaining agreements use CPI to determine wage rates, and index various payments to adjust the effects of inflation.
- ✓ As a deflator of economic series: - CPI or its components is used as a deflator to adjust for price changes in various economic data series (e.g., GDP).

3. Weights

The weights reflect the relative importance or contribution to the total consumption expenditures of all households. It is determined using the spending patterns of households during some previous weight reference period.

It is important for the weights to reflect the current consumption patterns of the household. The more current the weights, the more reflective they are of current consumer spending patterns. The international standards recommend rebasing CPI every 5 years.

The current CPI weights were updated in 2012 following the conduct of the Bhutan Living Standard Survey (BLSS) in March – May 2012. Expenditure details were broken down into imported and domestic goods to facilitate calculation of domestic and imported inflation.

4. Reference Period

There is no single "base period" for a price index. It can mean different things to different users. In practice, there are three "reference periods" used.

- ✓ Weight Reference Period is the period during which household consumption values are collected. The weight-reference period for the new rebased CPI is 2012, that is, the period when the BLSS was conducted.
- ✓ Index Reference Period is the period when the index is set to 100. In the new CPI, the index reference period is December 2012.
- ✓ Price Reference Period is the period of the first price of each product used to calculate the elementary indices (indices for individual CPI items). The price reference period for the new CPI is the fourth Quarter 2012.

5. Index Calculation Formula

Geometric Modified Laspeyres formula is used to calculate the CPI:

$$P_{GYo} = \prod_{i=1}^n \left(\frac{P_i^t}{P_i^0} \right)^{s_i^b}$$

S_i^b = Expenditure Shares of the Base Period (weight from BLSS)

P_i^t = Current Period Price

P_i^0 = Previous Period Price

$\left(\frac{P_i^t}{P_i^0} \right)$ = Price Relatives

6. Market Basket

Market basket refers to a sample of goods and services which is representative of all goods and services purchased by the households. The present market basket has 151 items (436 varieties) compared to 80 items (363 varieties) in the previous CPI basket. The new rebased CPI uses the Classification of Individual Consumption According to Purpose (COICOP). The 12 major groups are:

1. Food and Non-Alcoholics Beverages;
2. Alcoholic Beverages & Narcotics;
3. Clothing and Footwear;
4. Housing, Water, Electricity, Gas and Other Fuels;

5. Furnishing, Household Equipment and Routine Household Maintenance;
6. Health;
7. Transport;
8. Communication;
9. Recreation and Culture;
10. Education;
11. Restaurant and Hotels;
12. Miscellaneous Goods and Services.

7. Sample Outlets

Sample outlets are permanent establishments or retail shops from which monthly price of goods and services are collected or quoted. These include groceries, clothing and footwear, restaurants, hardware shops, vegetable vendors and service providers etc. The outlets are selected based on a set of pre-determined criteria. For current CPI, prices are collected from a sample of 557 outlets. Special procedures are applied to replace the outlets or the items, if they are no longer available or sold by the outlet.

8. Data Collection Method

Prices are collected online from the sampled outlets by price collectors using mobile application devices once every month.

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