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ROYAL GOVERNMENT OF BHUTAN
NATIONAL STATISTICS BUREAU
THIMPHU



Producer Price Index (PPI) Third Quarter-2023

Economic and Environmental
Statistics Division
National Statistics Bureau

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Foreword

The National Statistics Bureau (NSB) is pleased to release the **Producer Price Index (PPI)** Bulletin for the third quarter (July-September), 2023. This is the 43rd series of PPI bulletin published by the Bureau.

The PPI is a measure of average price change of goods and services over time. It measures price change from producer's perspective unlike the Consumer Price Index (CPI) which measures the price change from the purchaser's perspective.

Bhutan's PPI covers logging, mining and quarrying, manufacturing, Electricity, gas, steam and air conditioning supply, transport, and Information & communication sectors. It covers domestically produced goods and services.

The NSB would like to express its sincere gratitude to all government agencies, private companies, and corporations for providing the data for the publication of this bulletin. We look forward to your continued support and co-operation in the future as well.

December, 2023

National Statistics Bureau

Thimphu: Bhutan

Highlights

Year-on-Year inflation

The year-on-year (YoY) inflation for July, August, and September 2023, as measured by the Producer Price Index (PPI), is recorded at (1.12)%, (1.45)%, and (2.23)% respectively. This represents an average decrease of 2.61% from the third quarter of the previous year.

The Electricity, gas, steam, & air conditioning supply and transport sectors were the primary drivers of inflation during the third quarter (July-September) of 2023. The electricity, gas, steam, and air conditioning supply sector observed a price increase of 3.39% compared to the same quarter of the previous year, while the transportation sector saw an increase of 5.34%. The rise in public bus fares in August 2023 was the main contributor to the inflation in the Transport sector.

Meanwhile, the Manufacturing sector recorded a decrease of 7.20%, 7.88%, and 7.33% in the months of July, August, and September respectively. Also, the Mining and Quarrying sector showed a decrease of 7.25% during the quarter. The information and communication sector shows a decline of 1.34% in the month of July but it remains same for the August and September months.

Forestry and Logging sector prices remained unchanged.

Month-to-month inflation

The month-to-month inflation for August and September was recorded at 0.35% and 0.37%, while in July the inflation dropped by 1.16%.

This was associated with a decrease in the price of the manufacturing sector by 1.09% and 1.59% in the months of July and August while prices rises in the September month by 1.00%. And also due to a decline in the price of Mining and quarrying by 8.39% in July month but it bounce to 0.43% and 0.16% in the months of August and September correspondingly.

Prices remained the same for Electricity, gas, steam, and air conditioning supply, the Information and communication sector, and the forestry and logging sector in all three months.

Table 1: Annual and monthly PPI and inflation by industry

ISIC Code	Sectors	Weights (%)	PPI Index Level (2017=100)							Monthly Inflation (%)			Annual Inflation (%)		
			Jul-22	Aug-22	Sep-22	Jun-23	Jul-23	Aug-23	Sep-23	Jul-23	Aug-23	Sep-23	Jul-23	Aug-23	Sep-23
	All Industry	1.00	99.77	100.48	101.63	99.82	98.66	99.00	99.37	-1.16	0.35	0.37	-1.12	-1.47	-2.23
A	Forestry & Logging	0.04	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
B	Mining and quarrying	0.09	105.22	106.64	107.08	107.27	98.26	98.68	98.84	-8.39	0.43	0.16	-6.61	-7.46	-7.69
C	Manufacturing	0.34	96.40	95.57	95.95	90.45	89.46	88.04	88.92	-1.09	-1.59	1.00	-7.20	-7.88	-7.33
D	Electricity, gas, steam and air conditioning supply	0.27	100.21	100.21	103.61	103.61	103.61	103.61	103.61	0.00	0.00	0.00	3.39	3.39	0.00
H	Transport	0.21	103.06	107.79	108.10	108.99	108.96	113.44	113.56	-0.03	4.11	0.11	5.72	5.24	5.05
J	Information and communication	0.05	97.25	95.94	95.94	95.94	95.94	95.94	95.94	0.00	0.00	0.00	-1.34	0.00	0.00

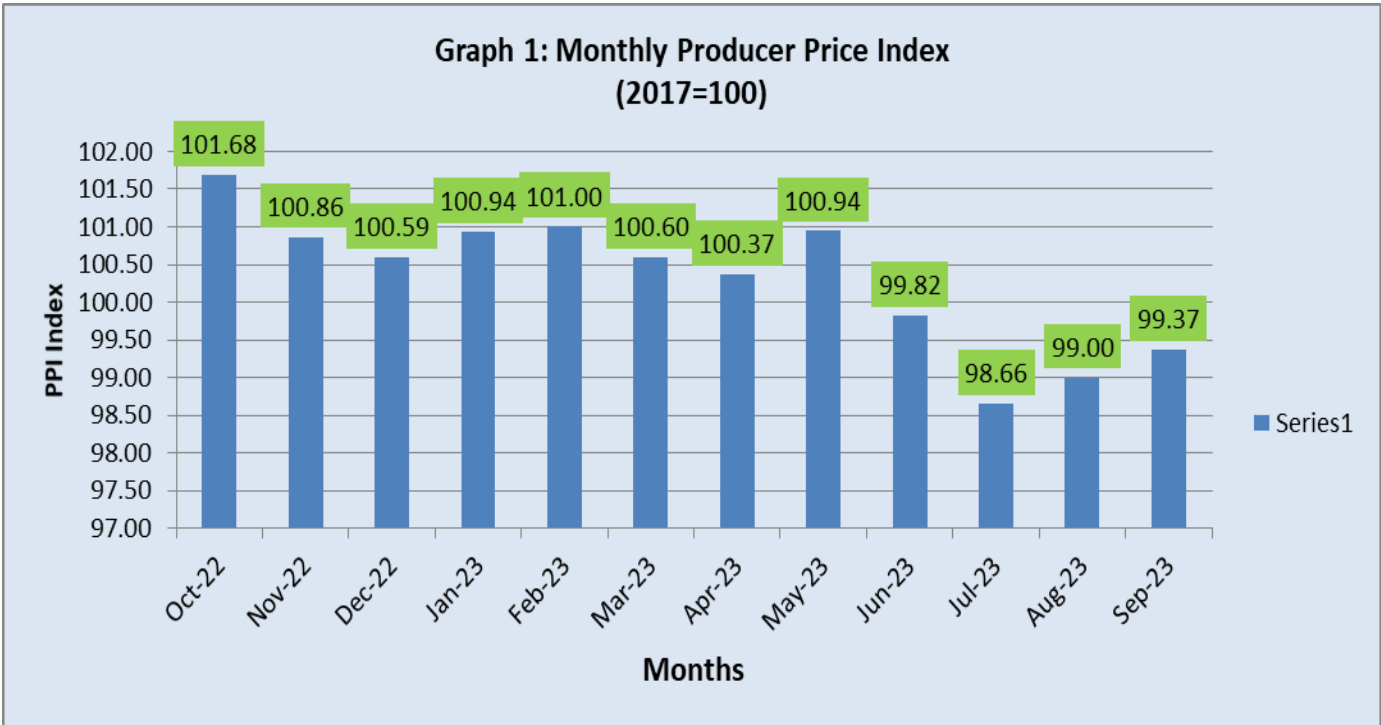
Table 2: Annual and monthly PPI and inflation at sub-group level by industry classification

ISIC Code	ISIC description	Weights (%)	PPI Index Level (2017=100)							Monthly Inflation (%)			Annual Inflation (%)		
			Jul-22	Aug-22	Sep-22	Jun-23	Jul-23	Aug-23	Sep-23	Jul-23	Aug-23	Sep-23	Jul-23	Aug-23	Sep-23
	All Industry	1.00	99.77	100.48	101.63	99.82	98.66	99.00	99.37	-1.16	0.35	0.37	-1.12	-1.47	-2.23
A	Forestry and Logging	0.0395	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
02	Forestry and logging	0.0395	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
022	logging	0.0395	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
B	Mining and quarrying	0.0910	105.22	106.64	107.08	107.27	98.26	98.68	98.84	-8.39	0.43	0.16	-6.61	-7.46	-7.69
05	mining of coal and lignite	0.0282	102.01	102.01	102.01	98.89	99.21	100.21	100.57	0.32	1.02	0.36	-2.74	-1.76	-1.41
051	mining of hard coal	0.0282	102.01	102.01	102.01	98.89	99.21	100.21	100.57	0.32	1.02	0.36	-2.74	-1.76	-1.41
08	other mining and quarrying	0.0628	106.70	108.80	109.44	111.26	97.84	98.01	98.08	-12.06	0.16	0.07	-8.30	-9.92	-10.38
081	quarrying of sand, stone and clay	0.0628	106.70	108.80	109.44	111.26	97.84	98.01	98.08	-12.06	0.16	0.07	-8.30	-9.92	-10.38
C	Manufacturing	0.3357	96.40	95.57	95.95	90.45	89.46	88.04	88.92	-1.09	-1.59	1.00	-7.20	-7.88	-7.33
10	Manufacturing of food products	0.0202	100.69	103.91	103.91	104.29	104.32	104.43	104.43	0.03	0.11	0.00	3.61	0.49	0.49
103	Processing and preserving of fruits and vegetables	0.0114	101.22	107.02	107.02	112.61	112.67	112.88	112.88	0.05	0.19	0.00	11.31	5.47	5.47
104	Manufacture of vegetables and animal oils and fats	0.0031	101.22	107.02	107.02	112.61	112.67	112.88	112.88	0.05	0.19	0.00	11.31	5.47	5.47
108	Prepared animal feeds	0.0057	100.00	100.00	100.00	91.45	91.45	91.45	91.45	0.00	0.00	0.00	-8.55	-8.55	-8.55
11	Manufacture of beverages	0.0389	100.15	100.15	100.15	100.34	100.34	100.34	100.34	0.00	0.00	0.00	0.19	0.19	0.19
110	Manufacture of beverages	0.0389	100.15	100.15	100.15	100.34	100.34	100.34	100.34	0.00	0.00	0.00	0.19	0.19	0.19

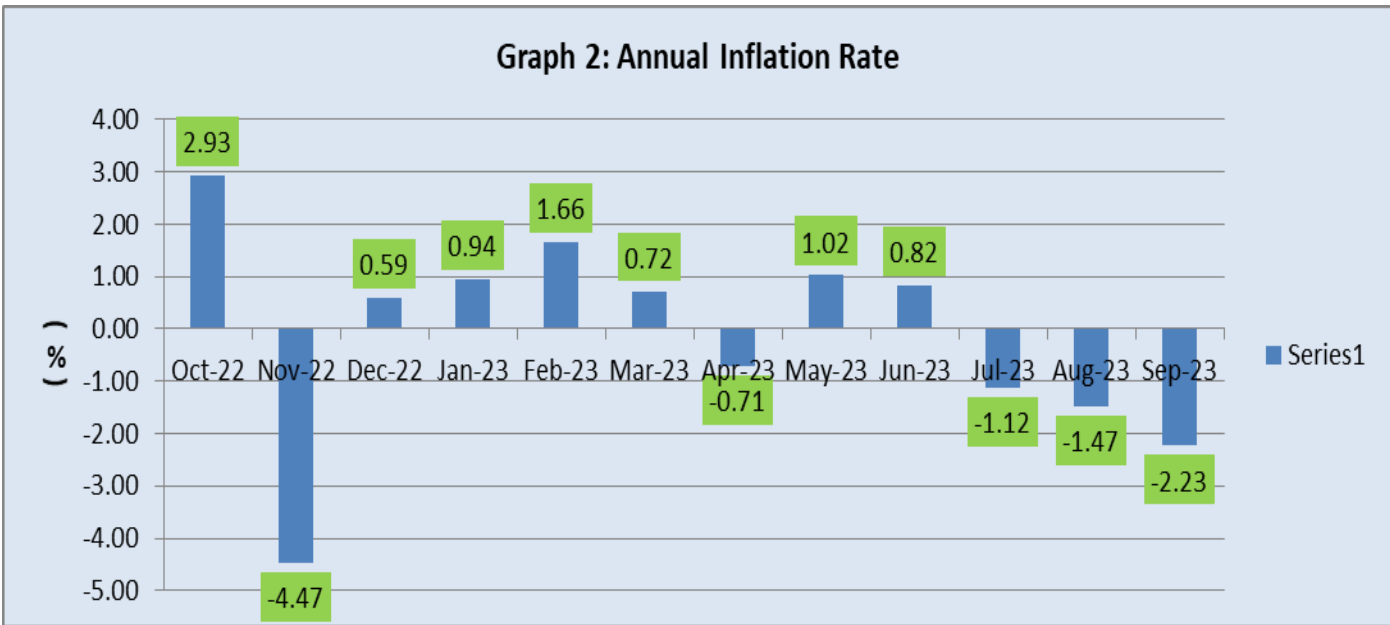
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	0.0064	95.98	95.98	95.98	95.98	95.98	95.98	95.98	0.00	0.00	0.00	0.00	0.00	0.00
161	Sawmilling and planing of wood	0.0020	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
162	Manufacture of products of wood, cork, straw and plaiting materials	0.0044	94.21	94.21	94.21	94.21	94.21	94.21	94.21	0.00	0.00	0.00	0.00	0.00	0.00
18	Printing and reproduction of recorded media	0.0048	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
181	Printing and services related to printing	0.0048	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Manufacture of chemical and chemical products	0.0269	102.04	102.04	94.58	86.41	92.99	92.99	92.99	7.62	0.00	0.00	-8.87	-8.87	-1.68
201	Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms	0.0269	102.04	102.04	94.58	86.41	92.99	92.99	92.99	7.62	0.00	0.00	-8.87	-8.87	-1.68
22	Manufacture of rubber and plastic products	0.0248	101.62	101.51	101.27	104.53	104.72	104.72	104.49	0.19	0.00	-0.22	3.05	3.17	3.18
222	manufacture of plastic products	0.0248	101.62	101.51	101.27	104.53	104.72	104.72	104.49	0.19	0.00	-0.22	3.05	3.17	3.18
23	Manufacture of other non-metallic mineral products	0.0660	102.61	103.96	103.67	112.04	110.19	112.10	112.10	-1.65	1.73	0.00	7.39	7.84	8.14
239	Manufacture of non-metallic mineral products n.e.c	0.0660	102.61	103.96	103.67	112.04	110.19	112.10	112.10	-1.65	1.73	0.00	7.39	7.84	8.14
24	Manufacture of basic	0.1370	89.69	86.88	89.21	75.01	72.53	69.15	70.88	-3.31	-4.66	2.50	-	-20.41	-20.55

	metals												19.14		
241	manufacture of basic iron and steel	0.1370	89.69	86.88	89.21	75.01	72.53	69.15	70.88	-3.31	-4.66	2.50	-	-20.41	-20.55
31	Manufacture of furniture	0.0108	100.00	100.00	100.00	102.67	102.67	102.67	102.67	0.00	0.00	0.00	2.67	2.67	2.67
310	Manufacture of furniture	0.0108	100.00	100.00	100.00	102.67	102.67	102.67	102.67	0.00	0.00	0.00	2.67	2.67	2.67
D	Electricity, gas, steam and air conditioning supply	0.2716	100.21	100.21	103.61	103.61	103.61	103.61	103.61	0.00	0.00	0.00	3.39	3.39	0.00
35	Electricity, gas, steam and air conditioning supply	0.2716	100.21	100.21	103.61	103.61	103.61	103.61	103.61	0.00	0.00	0.00	3.39	3.39	0.00
351	Electric power generation, transmission and distribution	0.2716	100.21	100.21	103.61	103.61	103.61	103.61	103.61	0.00	0.00	0.00	3.39	3.39	0.00
H	Transport and Storage	0.2099	103.06	107.79	108.10	108.99	108.96	113.44	113.56	-0.03	4.11	0.11	5.72	5.24	5.05
49	land transport and transport via pipeline	0.0962	100.00	110.32	110.32	110.32	110.32	119.82	119.82	0.00	8.61	0.00	10.32	8.61	8.61
492	Other land transport	0.0962	100.00	110.32	110.32	110.32	110.32	119.82	119.82	0.00	8.61	0.00	10.32	8.61	8.61
51	Air transport	0.1105	105.87	105.82	106.40	108.07	108.01	108.50	108.71	-0.05	0.45	0.20	2.02	2.53	2.17
511	Passenger air transport	0.1105	105.87	105.82	106.40	108.07	108.01	108.50	108.71	-0.05	0.45	0.20	2.02	2.53	2.17
53	Postal and Courier activities	0.0032	100.99	101.11	101.23	101.48	101.47	101.58	101.63	-0.01	0.11	0.05	0.47	0.47	0.39
531	Postal activities	0.0027	100.00	100.00	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
532	Courier activities	0.0129	106.94	107.74	108.68	110.48	110.38	111.20	111.56	-0.09	0.74	0.33	3.22	3.21	2.65
J	Information and communication	0.0522	100.00	100.00	100.00	95.94	95.94	95.94	95.94	0.00	0.00	0.00	-4.06	-4.06	-4.06
61	Telecommunication	0.0522	97.25	95.94	95.94	95.94	95.94	95.94	95.94	0.00	0.00	0.00	-1.34	0.00	0.00
612	Wireless telecommunication activities	0.0522	97.25	95.94	95.94	95.94	95.94	95.94	95.94	0.00	0.00	0.00	-1.34	0.00	0.00

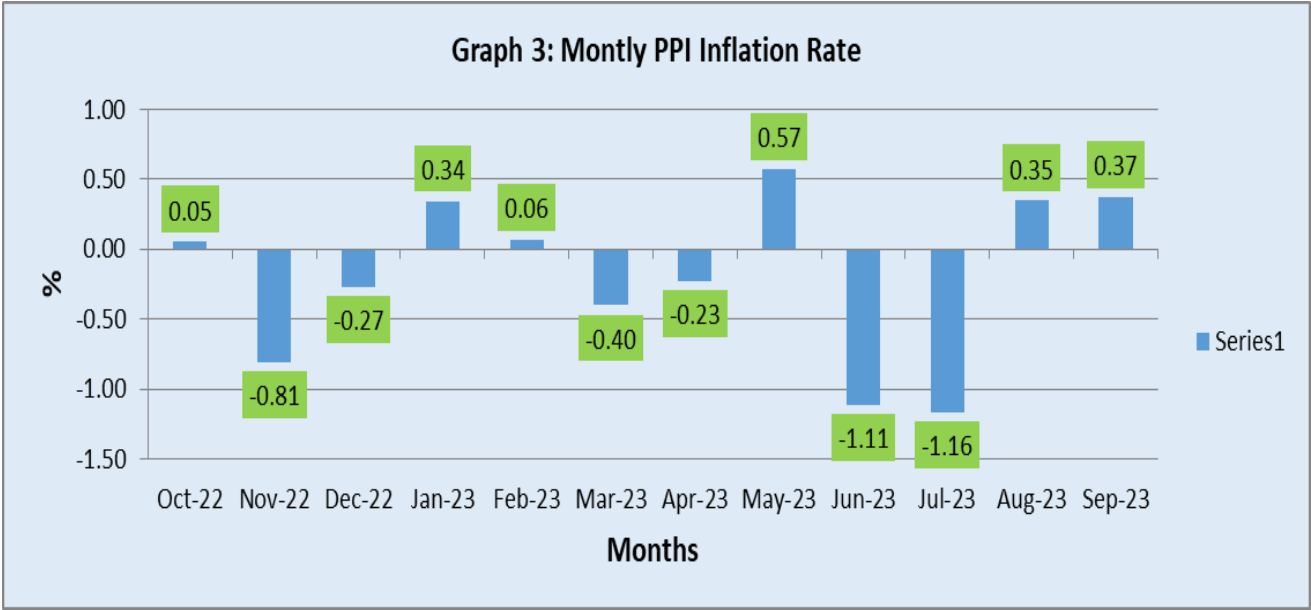
Graph 1: Time series of monthly Producer Price Index (PPI)



Graph 2: Year-on-year inflation rate



Graph 3: Month-to-month inflation rate



Technical Note

Definition

Producer Price Index (PPI) is the measure of average change over time in the prices received by the domestic producer of goods and services. It shows the average change in the prices of goods and services with reference to a particular reference period known as Index reference.

Scope and Coverage

The PPI covers domestically produced goods and services that are destined for domestic as well as export markets. The sectors included are logging, mining and quarrying, manufacturing, utilities (electricity and water), transport, and the Information & communication sector. PPI is classified and compiled by activity (ISIC rev. 4) and also by product (CPC rev. 2).

Weights

Weights denote the significance or relative importance of each level or group to the total. PPI weights are developed using the total value of turnover figure from the establishment Economic Census of Bhutan ECoB 2017 which is carried out by the National Statistics Bureau (NSB).

Index Reference

The index reference for the calculation of the PPI is 2017 which is normally set as 100.

Price Collection

Point-in-time prices are collected for the PPI compilation i.e. price of a product on the 15th day of every month or the nearest trading day to the 15th of the month

Index calculation methodology

Geometric Modified Laspeyre's formula is used for compiling PPI

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

Uses of PPI

1. As deflator in National Accounts to estimate the real growth rate
2. As a lead indicator of inflationary trends
3. Indexation of cost escalation in long-term contracts of goods and services
4. Business Analysis
5. Current cost accounting

Calculating Index Changes

Movement of the Price index from one month to another is usually expressed in terms of percent changes, rather than as changes in index points. Index point changes are affected by the level of the index in relation to its base period, whereas percent changes are not. The following example shows the computation of index points and percent changes.

Index point change

All industry's Price Index	104.50
The less previous price index	101.25
Equals index point change	3.25

Index percent change

Index point change	3.25
Divided by Previous Price Index	101.25
Equals	0.032
Result multiplied by 100	0.032×100
Equals percent changes	3.2

Revision Policy

If the data are not received on time from the sources, the index published for that particular quarter will be marked as "Provisional" and this will be finalized when the next quarter index is published.

Dissemination

PPI Bulletin will be compiled and published on a quarterly basis. It will be made available in hard copy as well as in electronic version through our website (www.nsb.gov.bt).