



PRESS RELEASE

PRODUCER PRICE INDEX (2018=100) December 2021

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Table A. Year-on-Year and Month-on-Month Growth Rates of Producer Price Index for Total Manufacturing (2018=100): December 2020, November 2021^r, and December 2021^p

Category	December 2020	November 2021 ^r	December 2021 ^p
Producer Price Index (2018=100)	92.7	92.8	93.3
Year-on-Year Growth (%)	-3.7	1.1	0.6
Month-on-Month Growth (%)	0.9	0.1	0.5

p - preliminary, r – revised

Source: Philippine Statistics Authority

Year-on-Year

The Producer Price Index (PPI) for manufacturing continued to register an increment with an annual rate of 0.6 percent in December 2021. This was slower than the increase of 1.1 percent in November 2021. In December 2020, the PPI posted a decrement with an annual rate of -3.7 percent. (Tables A and 1)

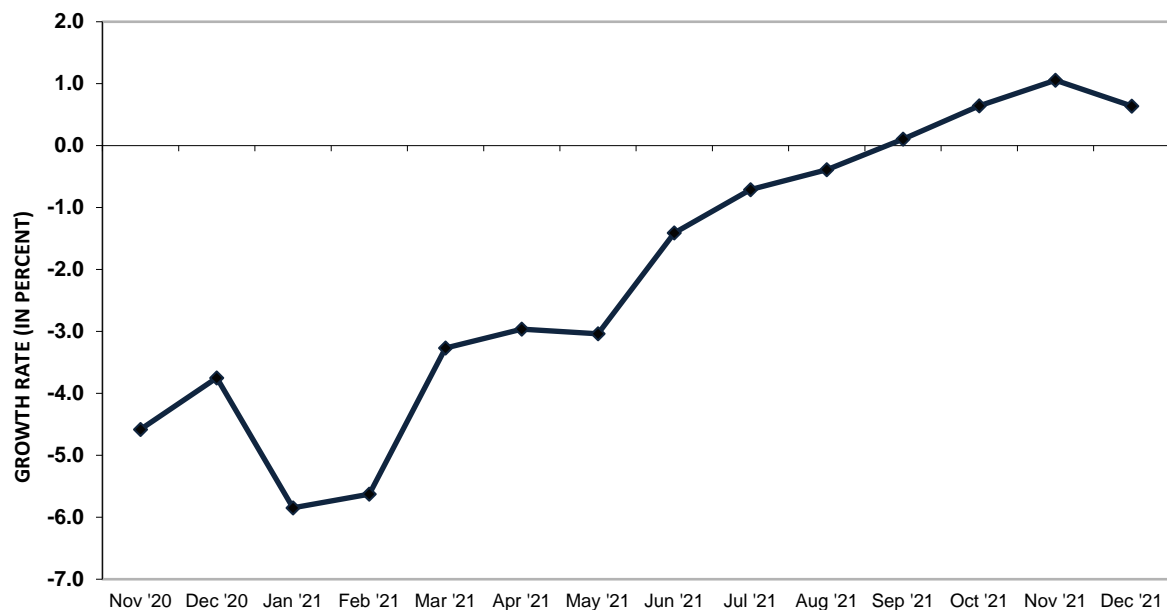
The increase in PPI in December 2021 was brought about by the positive growth rates of 15 industry divisions. Of these, **manufacture of coke and refined petroleum products** was the major contributing factor which posted a double-digit annual increment of 18.6 percent. (Tables C-1 and 1)

On the other hand, **manufacture of wood, bamboo, cane, rattan**



articles and related products, with an annual decline of -13.0 percent, led the remaining seven industry divisions that recorded decrements in December 2021. (Tables C-1 and 1)

Figure 1. Year-on-Year Change in PPI for Total Manufacturing
November 2020 - December 2021^P
(2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

Table B. Annual Average PPI and Year-on-Year Growth Rate
(January – December, 2019-2021)

Category	2019 (Jan-Dec. 2019)	2020 (Jan-Dec. 2020)	2021 ^P (Jan-Dec. 2021)
Annual Average Producer Price Index (2018=100)	97.6	93.1	91.5
Annual Average Year-on-Year Growth (%)	-2.3	-4.6	-1.8

p - preliminary

Source: Philippine Statistics Authority

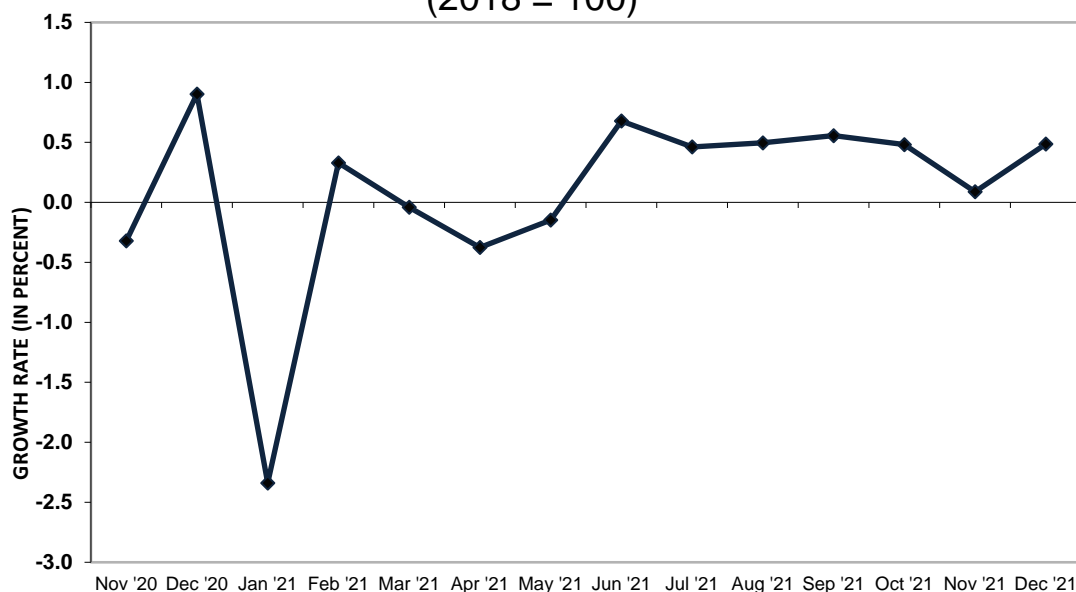
The annual average growth rate of PPI in 2021 showed a contraction of -1.8 percent. This was slower than the annual average decrement of -4.6 percent in 2020. Prior to the pandemic, the annual average year-on-year growth of PPI was -2.3 percent. (Table B)

Month-on-Month

Month-on-month, the PPI for manufacturing posted an increment with a monthly growth rate of 0.5 percent in December 2021 which was faster than the increase of 0.1 percent in November 2021. In December 2020, the PPI also posted a monthly increase of 0.9 percent. (Tables A and 1)

Sixteen industry divisions recorded positive monthly growth rates in December 2021 with **manufacture of wood, bamboo, cane, rattan articles, and related products** registering the highest monthly increment of 2.4 percent. On the contrary, two industry divisions of the PPI recorded monthly decrements, with **manufacture of machinery and equipment except electrical** posting the highest monthly drop of -1.0 percent. The monthly growth rates of the four remaining industry divisions were at 0.0 percent. (Tables C-2 and 1)

Figure 2. Month-on-Month Change in PPI for Total Manufacturing
November 2020 - December 2021^P
(2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

Table C-1. Year-on-Year Growth Rates of PPI in Percent
by Industry Division: November 2021 and December 2021^P
(2018=100)

INDUSTRY DIVISION	Nov 2021	Dec 2021 ^P
With Positive Growth Rates in December 2021		
1. Manufacture of coke and refined petroleum products	20.9	18.6
2. Manufacture of basic metals	7.9 ^r	8.3
3. Manufacture of chemical and chemical products	6.2 ^r	5.4
4. Manufacture of food products	2.6 ^r	1.7
5. Manufacture of beverages	3.0	3.2
6. Manufacture of rubber and plastic products	5.8 ^r	5.8
7. Manufacture of electrical equipment	5.8 ^r	5.7
8. Manufacture of transport equipment	1.6 ^r	1.5
9. Manufacture of paper and paper products	1.6 ^r	1.7
10. Manufacture of textiles	5.5	5.1
11. Manufacture of basic pharmaceutical products and pharmaceutical preparations	2.0	1.1
12. Manufacture of tobacco products	0.8	0.8
13. Manufacture of leather and related products, including footwear	1.7	1.6
14. Manufacture of other non-metallic mineral products	-0.1 ^r	0.2
15. Manufacture of wearing apparel	0.3 ^r	0.5
With Negative Growth Rates in December 2021		
1. Manufacture of computer, electronic, and optical products	-12.3 ^r	-12.8
2. Manufacture of wood, bamboo, cane, rattan articles, and related products	-14.4	-13.0
3. Manufacture of machinery and equipment except electrical	-3.0 ^r	-4.1
4. Other manufacturing and repair and installation of machinery and equipment	-1.3 ^r	-1.5
5. Manufacture of fabricated metal products, except machinery and equipment	-1.6	-0.6
6. Printing and reproduction of recorded media	-1.3	-1.3
7. Manufacture of furniture	-0.9 ^r	-0.6

p – preliminary, r – revised
Source: Philippine Statistics Authority

Table C-2. Month-on-Month Growth Rates of PPI in Percent
by Industry Division: November 2021 and December 2021^p
(2018=100)

INDUSTRY DIVISION	Nov 2021	Dec 2021 ^p
With Positive Growth Rates in December 2021		
1. Manufacture of computer, electronic, and optical products	0.3 ^r	1.4
2. Manufacture of chemical and chemical products	0.6 ^r	0.7
3. Manufacture of food products	0.5 ^r	0.2
4. Manufacture of other non-metallic mineral products	0.1 ^r	0.7
5. Manufacture of basic metals	-0.2 ^r	0.4
6. Manufacture of coke and refined petroleum products	0.5	0.3
7. Manufacture of beverages	0.1	0.4
8. Manufacture of wood, bamboo, cane, rattan articles, and related products	-0.7	2.4
9. Manufacture of fabricated metal products, except machinery and equipment	-1.2	0.6
10. Manufacture of transport equipment	-0.4 ^r	a/
11. Manufacture of furniture	-0.5 ^r	0.2
12. Other manufacturing and repair and installation of machinery and equipment	-0.7 ^r	0.1
13. Manufacture of wearing apparel	-0.9 ^r	a/
14. Manufacture of paper and paper products	0.8 ^r	a/
15. Manufacture of leather and related products, including footwear	-0.2	a/
16. Manufacture of rubber and plastic products	0.4	a/
With Zero Growth Rates in December 2021		
1. Manufacture of textiles	0.6	0.0
2. Manufacture of basic pharmaceutical products and pharmaceutical preparations	0.1	0.0
3. Manufacture of tobacco products	0.0	0.0
4. Printing and reproduction of recorded media	0.0	0.0
With Negative Growth Rates in December 2021		
1. Manufacture of machinery and equipment except electrical	-2.7 ^r	-1.0
2. Manufacture of electrical equipment	0.1 ^r	-0.1

p – preliminary, r - revised

a/ – less than 0.05 percent increase

Source: Philippine Statistics Authority

DENNIS S. MAPA, Ph.D.

Undersecretary

National Statistician and Civil Registrar General

TECHNICAL NOTES

Introduction

Starting with the January 2021 reference period, the Producer Price Index (PPI) for Manufacturing uses the 2018 as base year, from the previously used 2000 base period. The PPI for Manufacturing measures the changes in the producer price of key commodities produced by the Manufacturing sector. One of its uses is as a deflator to derive the Volume of Production Index (VoPI) and Volume of Net Sales Index (VoNSI).

The PPI for Manufacturing is generated from the results of the Producer Price Survey (PPS) which is conducted nationwide. The survey gathers monthly producer prices of selected products included in the market basket of PPI from sample establishments.

Method of Index Computation

The PPI utilizes the chained Paasche-type method of index computation where the base year is normalized. The weights are computed from the value of production from the Census of Philippine Business and Industry (CPBI) or Annual Survey of Philippine Business and Industry (ASPBI), whichever is the more recent. The weights are updated as soon as new results of the CPBI or ASPBI are available, and are applied at the beginning of each survey year.

For the 2021 PPI, the base year used is 2018 and the weights of the industry divisions and industry groups were computed based on the final results of the 2018 CPBI for Manufacturing establishments with total employment of 20 and over.

The computation of PPI adopts the following formula:

1) Computation of Index for Industry Group Level

a. Monthly Index at the base year

$$PPI_{ijm} = \frac{H_{ijm}}{H_{ij0}} \times 100$$

where:

PPI_{ijm} = PPI for industry group j in industry division i at current month m

H_{ijm} = harmonic mean of price relatives of products for industry group j in industry division i at month m of the base year computed as:

$$H_{ijm} = \frac{n_{ij}}{\sum_{h=1}^{n_{ij}} \frac{1}{p_{hijm}/p_{hij0}}} \times 100$$

H_{ij0} = average of the harmonic mean of price relatives of products for industry group j in industry division i at base year

p_{hijm} = producer price of commodity h for industry group j in industry division i at current month m

p_{hij0} = average monthly producer price of commodity h for industry group j in industry division i at base year

n_{ij} = total number of representative commodities for industry group j in industry division i

b. Monthly Index after the base year

$$PPI_{ijm} = PPI_{ij(m-1)} \times \frac{n_{ij}}{\sum_{h=1}^{n_{ij}} \frac{1}{p_{hijm}/p_{hij(m-1)}}}$$

where:

PPI_{ijm} = PPI for industry group j in industry division i at current month m

$PPI_{ij(m-1)}$ = PPI for industry group j in industry division i at previous month m-1

- p_{hijm} = producer price of commodity h for industry group j in industry division i at current month m
 $p_{hij(m-1)}$ = producer price of commodity h for industry group j in industry division i for the previous month m-1
 n_{ij} = total number of representative commodities for industry group j in industry division i

2) Computation of Index for Industry Division Level

$$PPI_{im} = \frac{1}{\sum_{j=1}^{p_i} \left(W_{ij} \times \frac{1}{PPI_{ijm}} \right)}$$

where:

- PPI_{im} = PPI for industry division i at current month m
 PPI_{ijm} = PPI for industry group j in industry division i at current month m
 W_{ij} = weight for industry group j in industry division i
 p_i = number of industry groups in industry division i

Note:

Industry divisions with no industry groups use the same computation of index as that for industry group level.

3) Computation of Index for Total Manufacturing

$$PPI_m = \frac{1}{\sum_{i=1}^{22} \left(W_i \times \frac{1}{PPI_{im}} \right)}$$

where:

- PPI_m = PPI for total manufacturing at current month m
 PPI_{im} = PPI for industry division i at current month m
 W_i = weight for industry division i

- **Computation of Growth Rates**

Year-on-year growth rates are computed by dividing the current month's index by the index of the same month of the previous year less 1.

Month-on-month growth rates are computed by dividing the current month's index by the previous month's index less 1.

- **Imputation and Revision**

Imputation is done for sample establishments that are in operation during the reference period but with no received response during the release date. Results are revised accordingly when the actual data are received, and these revisions are reflected in the next release.

- **Industry Coverage**

Starting with the January 2013 reference month, PPI utilizes the 2009 Philippine Standard Industrial Classification (PSIC) to classify sectors and industries. Selected industry groups of the 2009 PSIC were grouped to form the 22 industry divisions of the 2021 PPS. These are presented in the table below.

2009 PSIC CODE	INDUSTRY DESCRIPTION
C10	Manufacture of food products*
C11	Manufacture of beverages
C12	Manufacture of tobacco products
C13	Manufacture of textiles
C14	Manufacture of wearing apparel
C15	Manufacture of leather and related products, including footwear
C16	Manufacture of wood, bamboo, cane, rattan articles, and related products products*

2009 PSIC CODE	INDUSTRY DESCRIPTION
C17	Manufacture of paper and paper products
C18	Printing and reproduction of recorded media
C19	Manufacture of coke and refined petroleum products
C20	Manufacture of chemical and chemical products*
C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
C22	Manufacture of rubber and plastic products*
C23	Manufacture of other non-metallic mineral products*
C24	Manufacture of basic metals*
C25	Manufacture of fabricated metal products, except machinery and equipment*
C26	Manufacture of computer, electronic, and optical products*
C27	Manufacture of electrical equipment*
C28	Manufacture of machinery and equipment except electrical*
C29, C30	Manufacture of transport equipment*

2009 PSIC CODE	INDUSTRY DESCRIPTION
C31	Manufacture of furniture
C32, C33	Other manufacturing

** Industry divisions categorized further into industry groups*