

# PRESS RELEASE

## PRODUCER PRICE INDEX (2018=100) December 2022

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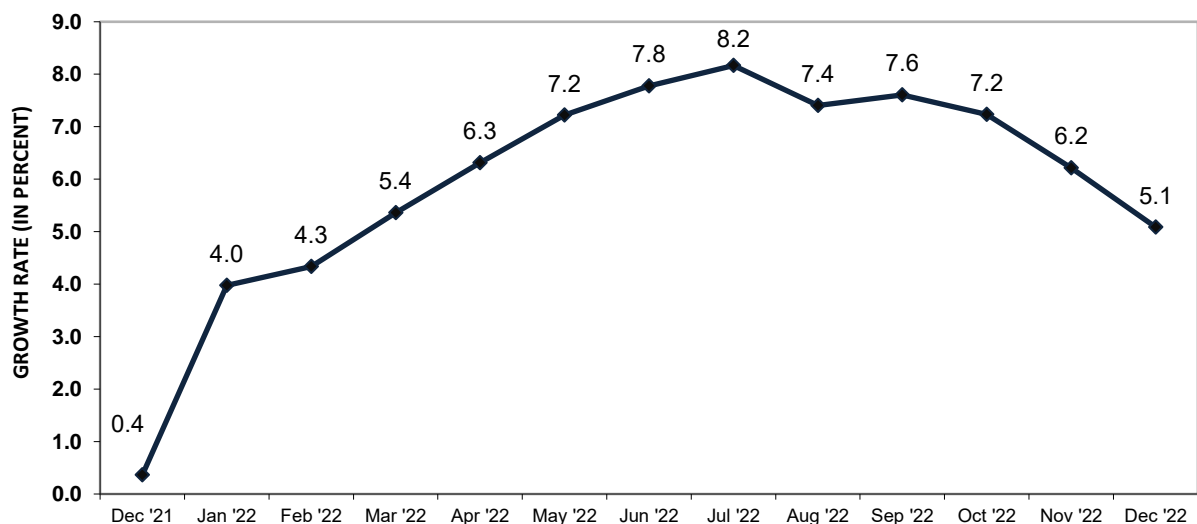
Table A. PPI and Year-on-Year Growth Rates for Manufacturing Sector  
(2018=100):  
December 2021, November 2022<sup>r</sup>, and December 2022<sup>p</sup>

Category	December 2021	November 2022 <sup>r</sup>	December 2022 <sup>p</sup>
<b>Producer Price Index (2018=100)</b>	<b>93.0</b>	<b>98.6</b>	<b>97.7</b>
<b>Year-on-Year Growth (%)</b>	<b>0.4</b>	<b>6.2</b>	<b>5.1</b>
<b>Month-on-Month Growth (%)</b>	<b>0.2</b>	<b>-0.9</b>	<b>-0.9</b>

p - preliminary, r - revised

Source: Philippine Statistics Authority

Figure 1. Year-on-Year Change in Producer Price Index for Total Manufacturing: December 2021 - December 2022<sup>p</sup>



p - preliminary

Source: Philippine Statistics Authority

## **A. Year-on-Year Growth for December 2022**

### **1. Manufacture of computer, electronic and optical products industry division was the main driver of slower annual increase of producer price for manufacturing sector**

The Producer Price Index (PPI) for manufacturing registered an annual increase of 5.1 percent in December 2022. This was slower than the 6.2 percent annual increment observed last November 2022. In December 2021, the PPI posted an annual increase of 0.4 percent. (Figure 1, and Tables A and 1)

The slower year-on-year growth of PPI in December 2022 than its annual growth in November 2022 was primarily brought about by the slower annual upturns in the index of manufacture of computer, electronic and optical products industry division with 2.3 percent annual increase in December 2022, from 5.2 percent in November 2022. The manufacture of computer, electronic and optical products contributed 40.3 percent to the slower annual growth of the manufacturing sector in December 2022. Out of the 22 industry divisions for the manufacturing sector, this is the second industry division with the highest weight<sup>1</sup> in the computation of PPI.

Other main contributors to the slower annual growth rate of PPI in December 2022 were manufacture of coke and refined petroleum products with 9.2 percent annual growth rate during the period from 11.6 percent in the previous month, and manufacture of transport equipment with an annual growth of 4.2 percent in December 2022, from 5.4 percent in the previous month. In addition, slowdowns were observed in the annual growth rates of the indices of 12 industry divisions, which include the manufacture of food products.

On the contrary, there were four industry divisions that registered higher annual growth rates in December 2022 than in November 2022. These were the following:

- a. Manufacture of rubber and plastic products, 5.6 percent;
- b. Other manufacturing and repair and installation of machinery

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<sup>1</sup> Refer to the Method of Computation in the Technical Notes

- and equipment, 3.2 percent;
- c. Manufacture of furniture, 1.9 percent; and
- d. Manufacture of basic pharmaceutical products and pharmaceutical preparations, 1.2 percent.

The index of manufacture of machinery and equipment except electrical registered an annual growth rate of 1.8 percent during the month, from an annual drop in the previous month.

Furthermore, the indices of manufacture of textiles and manufacture of tobacco products retained their year-on-year increases in November 2022 at 2.9 percent and 2.5 percent, respectively. (Tables B and 1)

Table B. Year-on-Year Growth Rates of PPI in Percent  
by Industry Division: November 2022<sup>r</sup> and December 2022<sup>p</sup>

INDUSTRY DIVISION	November 2022 <sup>r</sup>	December 2022 <sup>p</sup>
<b>With Slower Annual Growth Rates</b>		
1. Manufacture of computer, electronic and optical products	5.2 <sup>r</sup>	2.3
2. Manufacture of coke and refined petroleum products	11.6 <sup>r</sup>	9.2
3. Manufacture of transport equipment	5.4 <sup>r</sup>	4.2
4. Manufacture of food products	8.1 <sup>r</sup>	7.6
5. Manufacture of fabricated metal products, except machinery and equipment	4.9 <sup>r</sup>	3.5
6. Manufacture of chemical and chemical products	8.0 <sup>r</sup>	7.0
7. Manufacture of basic metals	2.8 <sup>r</sup>	2.4
8. Manufacture of electrical equipment	2.2 <sup>r</sup>	0.7
9. Manufacture of beverages	5.0	4.7
10. Manufacture of wood, bamboo, cane, rattan articles and related products	4.2 <sup>r</sup>	2.3
11. Manufacture of wearing apparel	3.7 <sup>r</sup>	2.5
12. Manufacture of other non-metallic mineral products	3.5 <sup>r</sup>	3.3
13. Printing and reproduction of recorded media	1.1 <sup>r</sup>	0.8
14. Manufacture of paper and paper products	5.5 <sup>r</sup>	5.4
15. Manufacture of leather and related products, including footwear	5.0 <sup>r</sup>	4.6

Table B. Year-on-Year Growth Rates of PPI in Percent – cont'd.  
by Industry Division: November 2022<sup>r</sup> and December 2022<sup>p</sup>

INDUSTRY DIVISION	November 2022 <sup>r</sup>	December 2022 <sup>p</sup>
<b>With Higher Annual Growth Rates</b>		
16. Manufacture of rubber and plastic products	5.3	5.6
17. Other Manufacturing and Repair and installation of machinery and equipment	2.4 <sup>r</sup>	3.2
18. Manufacture of furniture	1.4 <sup>r</sup>	1.9
19. Manufacture of basic pharmaceutical products and pharmaceutical preparations	0.4	1.2
<b>With Positive Annual Growth Rate from Negative Annual Growth Rate in November 2022</b>		
20. Manufacture of machinery and equipment except electrical	-0.2 <sup>r</sup>	1.8
<b>With Constant Annual Growth Rate</b>		
21. Manufacture of textiles	2.9	2.9
22. Manufacture of tobacco products	2.5	2.5

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

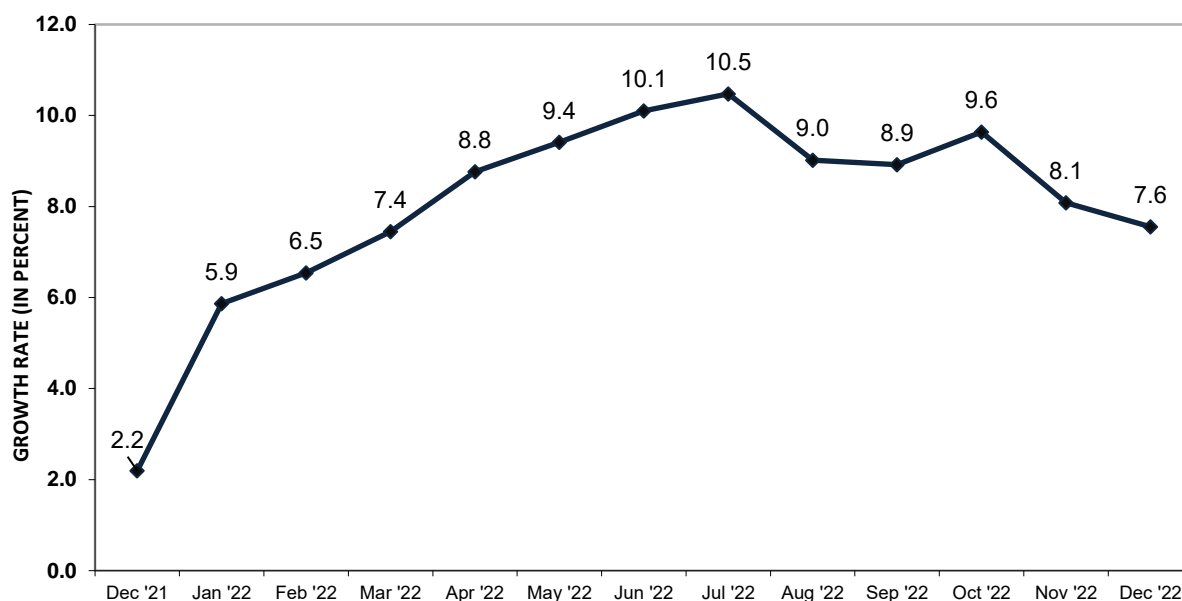
**2. Processing and preserving of fish, crustaceans and mollusks was the main contributor to the slowdown in the annual increase of producer price for food manufacturing.**

The PPI for the manufacture of food products continued to post a positive growth with an annual rate of 7.6 percent in December 2022. This was slower compared with the November 2022 annual growth rate of 8.1 percent, but faster relative to December 2021 annual increase of 2.2 percent. (Figure 2, Tables 1 and 2)

The deceleration in annual growth of the PPI for manufacture of food products in December 2022 from November 2022 was predominantly attributed by the slower annual increase in the index of processing and preserving of fish, crustaceans and mollusks industry group with 11.2 percent annual increment in December 2022, from 16.2 percent in

the previous month. Other primary contributors to the slower year-on-year growth of PPI for manufacture of food products were manufacture of vegetable and animal oils and fats with 0.2 percent annual increase during the month, from 2.5 percent in November 2022, and manufacture of grain mill products, starches and starch products with 13.4 percent annual upturn in December 2022, from 15.6 percent in the previous month. (Table 2)

Figure 2. Year-on-Year Change in PPI for Food Manufacturing  
December 2021 - December 2022<sup>p</sup>



p - preliminary  
Source: Philippine Statistics Authority

## B. Month-on-Month Growth for December 2022

### 3. Manufacture of computer, electronic and optical products was the main driver to the monthly decline of producer price for manufacturing sector.

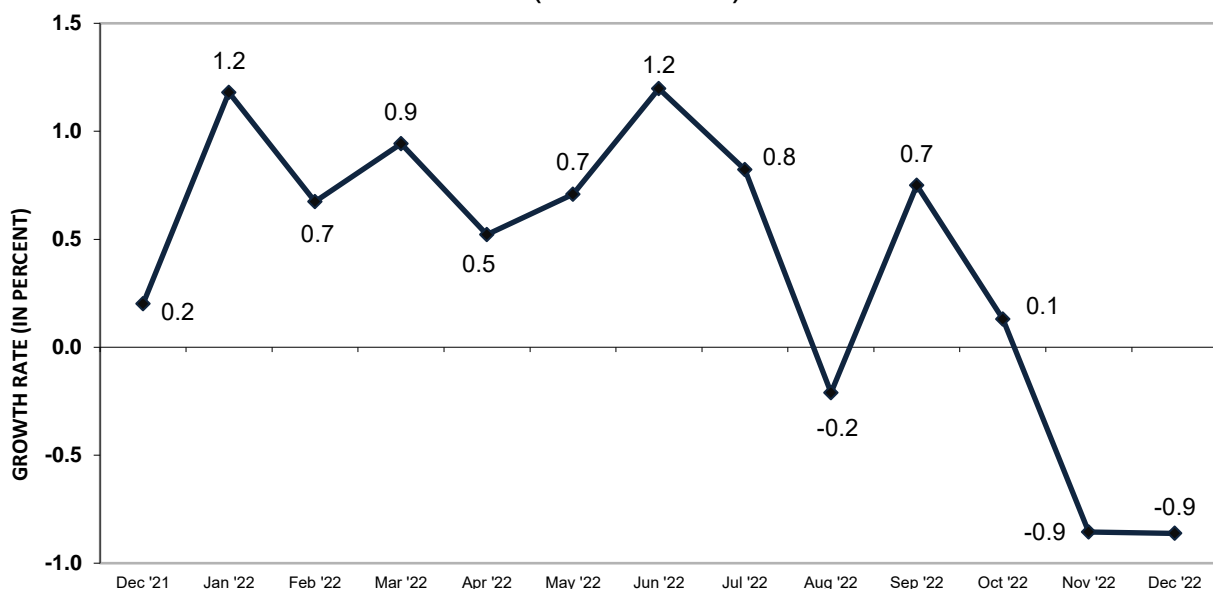
Month-on-month, the PPI for manufacturing posted a decrement of -0.9 percent in December 2022, which was the same monthly rate in November 2022. In December 2021, the PPI recorded a monthly increment of 0.2 percent. (Figure 3, and Tables A and 1)

The monthly decline of PPI in December 2022 was mostly contributed by the monthly decrease in the index of manufacture of computer,

electronic and optical products of -2.9 percent. This industry division contributed more than half or 52.1 percent to the month-on-month growth rate of the manufacturing sector in December 2022. Completing the top three contributors were manufacture of coke and refined petroleum products, and manufacture of transport equipment with monthly drops of -1.8 percent and -1.3 percent, respectively. In addition, seven industry divisions exhibited month-on-month decrements in their indices during the month.

On the other hand, the PPI of nine industry divisions exhibited monthly increments during the period, with manufacture of machinery and equipment except electrical posting the largest increase at 0.9 percent. The monthly growth rates of three industry divisions, namely, manufacture of beverages, manufacture of leather and related products, including footwear, and manufacture of textiles were at 0.0 percent. (Tables C and 1)

Figure 3. Month-on-Month Change in PPI for Total Manufacturing  
December 2021 - December 2022<sup>p</sup>  
(2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

Table C. Month-on-Month Growth Rates of PPI in Percent by Industry  
 Division: November 2022<sup>r</sup> and December 2022<sup>p</sup>  
 (2018=100)

INDUSTRY DIVISION	November 2022 <sup>r</sup>	December 2022 <sup>p</sup>
<b>With Negative Growth Rates in December 2022</b>		
1. Manufacture of computer, electronic and optical products	-1.7 <sup>r</sup>	-2.9
2. Manufacture of coke and refined petroleum products	-1.9 <sup>r</sup>	-1.8
3. Manufacture of transport equipment	-0.4 <sup>r</sup>	-1.3
4. Manufacture of fabricated metal products, except machinery and equipment	b/ <sup>r</sup>	-1.3
5. Manufacture of electrical equipment	-0.4 <sup>r</sup>	-1.6
6. Manufacture of wearing apparel	-0.7 <sup>r</sup>	-0.9
7. Manufacture of chemical and chemical products	-0.1 <sup>r</sup>	-0.2
8. Printing and reproduction of recorded media	0.3 <sup>r</sup>	-0.3
9. Manufacture of basic metals	a/ <sup>r</sup>	b/
10. Manufacture of paper and paper products	0.6 <sup>r</sup>	b/
<b>With Positive Growth Rates in December 2022</b>		
1. Manufacture of machinery and equipment except electrical	-0.6 <sup>r</sup>	0.9
2. Manufacture of furniture	-1.2 <sup>r</sup>	0.6
3. Manufacture of wood, bamboo, cane, rattan articles and related products	0.1	0.5
4. Manufacture of other non-metallic mineral products	-3.0 <sup>r</sup>	0.4
5. Other Manufacturing and Repair and installation of machinery and equipment	-0.8 <sup>r</sup>	0.3
6. Manufacture of food products	-0.9 <sup>r</sup>	0.2
7. Manufacture of rubber and plastic products	0.1	0.2
8. Manufacture of basic pharmaceutical products and pharmaceutical preparations	-0.1	0.1
9. Manufacture of tobacco products	0.8	a/
<b>With Zero Growth Rates in December 2022</b>		
1. Manufacture of beverages	0.0	0.0
2. Manufacture of leather and related products, including footwear	0.0 <sup>r</sup>	0.0
3. Manufacture of textiles	0.0	0.0

p - preliminary, r - revised

a/ - less than 0.05 percent increase; b/ - less than 0.05 percent decrease

Source: Philippine Statistics Authority

#### **4. Processing and preserving of fruits and vegetables was the main contributor to the monthly increment in the producer price for food manufacturing.**

On a month-on-month basis, the PPI for the manufacture of food products recorded an increase with a monthly growth rate of 0.2 percent in December 2022, from a monthly decline of -0.9 percent in the previous month. In December 2021, the PPI for the manufacture of food products grew faster with a monthly increment of 0.7 percent. (Figure 4, Tables 1 and 2)

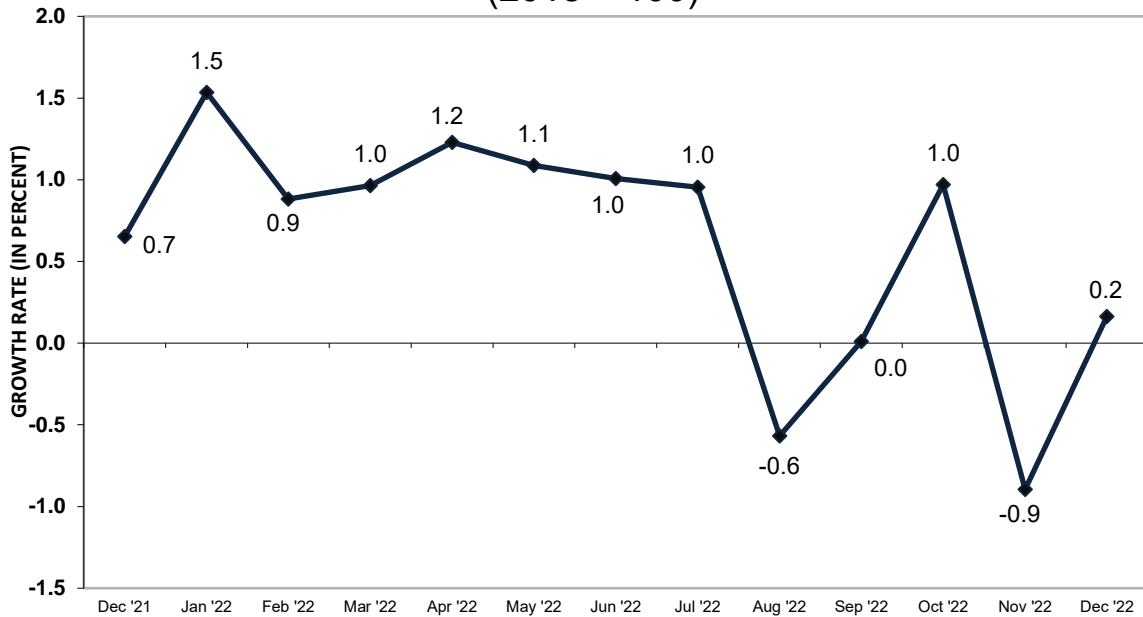
The monthly increase in PPI during the period was brought about by three of the eight industry groups of food manufacturing. This was led by the processing and preserving of fruits and vegetables, which registered a monthly growth rate of 3.0 percent, from a -4.7 percent monthly drop in the previous month. The processing and preserving of fruits and vegetables industry group contributed 64.1 percent to the month-on-month upturn of the PPI for the manufacture of food products.

Other contributors were manufacture of dairy products with 0.8 percent in December 2022, from a monthly decrement of -2.2 percent in the previous month, and manufacture of vegetable and animal oils and fats with monthly growth rate of 0.2 percent during the period, from -1.1 percent in November 2022.

On the contrary, the PPI of four industry groups under the manufacture of food products recorded monthly decreases in December 2022, with processing and preserving of fish, crustaceans and mollusks registering the fastest monthly drop of -3.6 percent. The monthly growth rate of processing and preserving of meat was at 0.0 percent. (Table 2)



Figure 4. Month-on-Month Change in PPI for Food Manufacturing  
December 2021 - December 2022<sup>p</sup>  
(2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

### C. Annual Average PPI and Growth Rates for 2022

Table D. Annual Average PPI and Year-on-Year Growth Rate  
(January – December, 2020 - 2022)

Category	2020	2021	2022 <sup>p</sup>
<b>Annual Average PPI (2018=100)</b>	<b>93.1</b>	<b>91.5</b>	<b>97.3</b>
<b>Annual Average Year-on-Year Growth (%)</b>	<b>-4.6</b>	<b>-1.8</b>	<b>6.4</b>

The annual average growth rate of PPI in 2022 showed an expansion of 6.4 percent. In 2021 and 2020, annual average declines of -1.8 percent and -4.6 percent, respectively, were observed. (Table D)

The expansion in the annual average year-on-year growth of PPI in 2022 was mainly attributed by the upsurge in the annual average growth rate in the index of manufacture of computer, electronic and optical products of 2.8 percent, from -14.3 percent in 2021. Came second was manufacture of food products with faster annual average rate of 8.5 percent in December 2022, from 1.0 percent in the previous year. On third place was

the manufacture of coke and refined petroleum products with accelerated annual average growth of 16.9 percent in 2022 from 5.1 percent in 2021. (Table 1)

Meanwhile, the upturn in the PPI for manufacture of food products in 2022 from 2021 was mainly contributed by the annual increases noted in the indices of manufacture of grain mill products, starches and starch products at 16.5 percent in 2022; manufacture of other food products, which includes bakery products, sugar, prepared meals, among others, 7.5 percent; and manufacture of prepared animal feeds, 13.2 percent. (Table 2)

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# TECHNICAL NOTES

## Introduction

Starting with the January 2021 reference period, the Producer Price Index (PPI) for Manufacturing uses 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 these are applied at the beginning of each survey year.

For the 2022 PPI, the base year used is 2018 and the weights of the industry divisions and industry groups were computed based on the results of the 2019 ASPBI 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

Note:

A linking factor is computed every time weights are changed. The linking factor is used to adjust new series for comparability with the old series.

- **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 2022 PPS. These are presented in the table below.

<b>2009 PSIC CODE</b>	<b>INDUSTRY DESCRIPTION</b>
C10	Manufacture of food products*
C11	Manufacture of beverages
C12	Manufacture of tobacco products
C13	Manufacture of textiles
C14	Manufacture of wearing apparel

2009 PSIC CODE	INDUSTRY DESCRIPTION
C15	Manufacture of leather and related products, including footwear
C16	Manufacture of wood, bamboo, cane, rattan articles, and related products products*
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*

<b>2009 PSIC CODE</b>	<b>INDUSTRY DESCRIPTION</b>
C29, C30	Manufacture of transport equipment*
C31	Manufacture of furniture
C32, C33	Other manufacturing

*\*Industry divisions categorized further into industry groups*