



# PRESS RELEASE

**PRODUCTION INDEX AND NET SALES INDEX  
(Monthly Integrated Survey of Selected Industries)  
December 2022  
(2018=100)**

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Table A. Year-on-Year Growth Rates of Production Index, Net Sales Index,  
and Producer Price Index for Total Manufacturing (2018=100)  
December 2021, November 2022<sup>r</sup>, and December 2022<sup>p</sup>

(in Percent)

INDICATOR	DECEMBER 2021	NOVEMBER 2022 <sup>r</sup>	DECEMBER 2022 <sup>p</sup>
<b>Production Index (2018=100)</b>			
Value of Production Index ( <i>VaPI</i> )	<b>19.6</b>	<b>12.5</b>	<b>10.1</b>
Volume of Production Index ( <i>VoPI</i> )	<b>19.2</b>	<b>5.9</b>	<b>4.8</b>
<b>Net Sales Index (2018=100)</b>			
Value of Net Sales Index ( <i>VaNSI</i> )	<b>21.9<sup>r</sup></b>	<b>17.8</b>	<b>17.6</b>
Volume of Net Sales Index ( <i>VoNSI</i> )	<b>21.5<sup>r</sup></b>	<b>10.9</b>	<b>12.0</b>
<b>Producer Price Index (2018=100)</b>	<b>0.4</b>	<b>6.2</b>	<b>5.1</b>

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

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

### 1. Value of Production Index

The Value of Production Index (*VaPI*) for manufacturing continued to register a two-digit year-on-year increment at 10.1 percent in December 2022, slower than the November 2022 annual growth of 12.5 percent. In December 2021, the *VaPI* accelerated annually at a rate of 19.6 percent. (Figure 2, Tables A and 1)

The slower year-on-year growth of *VaPI* in December 2022 than its annual growth in November 2022 was predominantly brought about by the slower annual increase in the index of manufacture of transport equipment industry division with 3.2 percent



annual increase in December 2022, from 20.5 percent in November 2022. The manufacture of transport equipment contributed 39.6 percent to the downtrend of the VaPI of the manufacturing sector in December 2022. Out of the 22 industry divisions for the manufacturing sector, this is the third industry division with the highest weight<sup>1</sup> in the computation of VaPI.

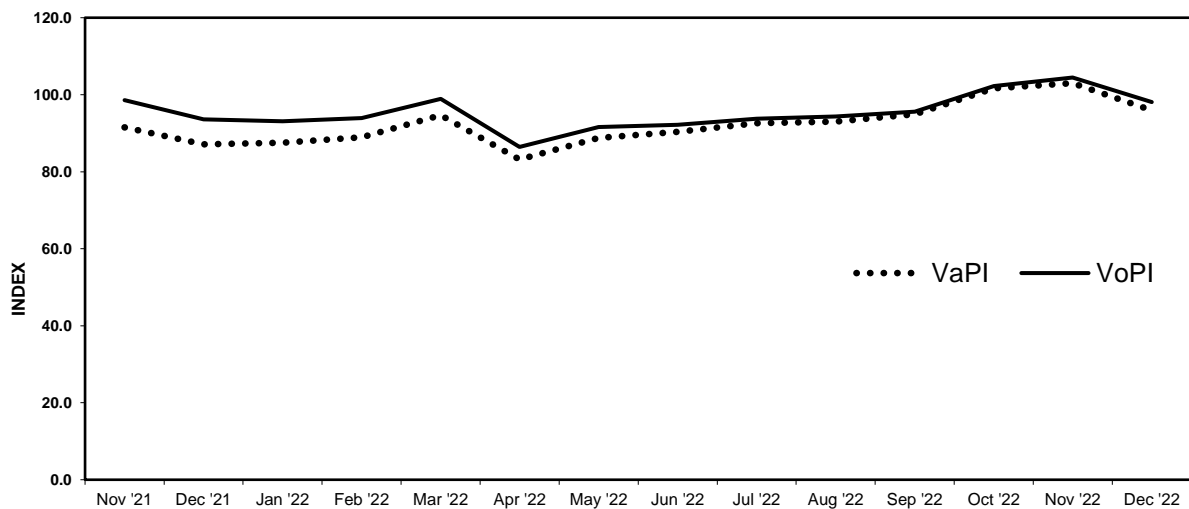
Other main contributors to the slower annual growth rate of VaPI in December 2022 were manufacture of computer, electronic and optical products with 24.1 percent annual increment during the period from 32.3 percent in the previous month, and manufacture of basic metals with an annual rate of -36.0 percent in December 2022, from -27.2 percent in the previous month. In addition to these, slowdowns were observed in the annual growth rates of the indices of nine industry divisions.

On the contrary, there were eight industry divisions that registered higher annual growth rates in December 2022 than in November 2022, which include the manufacture of food products. Among these industry divisions, manufacture of fabricated metal products, except machinery and equipment posted the highest annual growth rate of 58.2 percent in December 2022.

The index of manufacture of furniture registered an annual growth rate of 1.6 percent during the month from an annual drop in the previous month.

Meanwhile, the index of manufacture of tobacco products continued to exhibit a year-on-year decrease in December 2022 at -0.8 percent. (Tables D and 1)

Figure 1. Value and Volume of Production Index for Total Manufacturing November 2021 - December 2022<sup>p</sup> (2018 = 100)

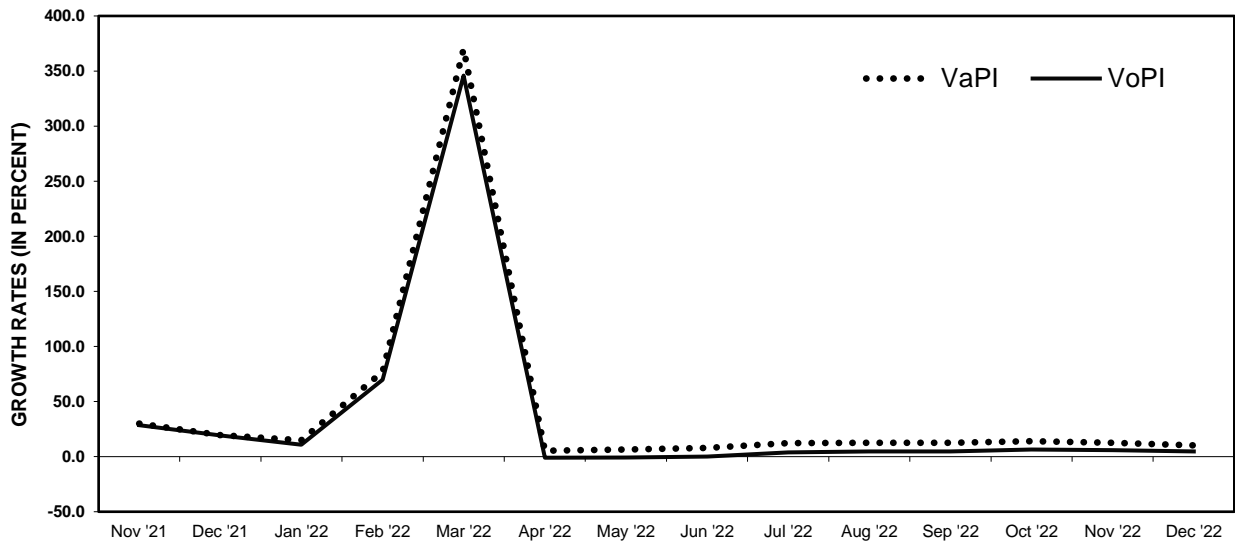


p - preliminary

Source: Philippine Statistics Authority

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

Figure 2. Year-on-Year Growth Rates (%) of Value and Volume of Production Index for Total Manufacturing  
November 2021 - December 2022<sup>p</sup> (2018 = 100)

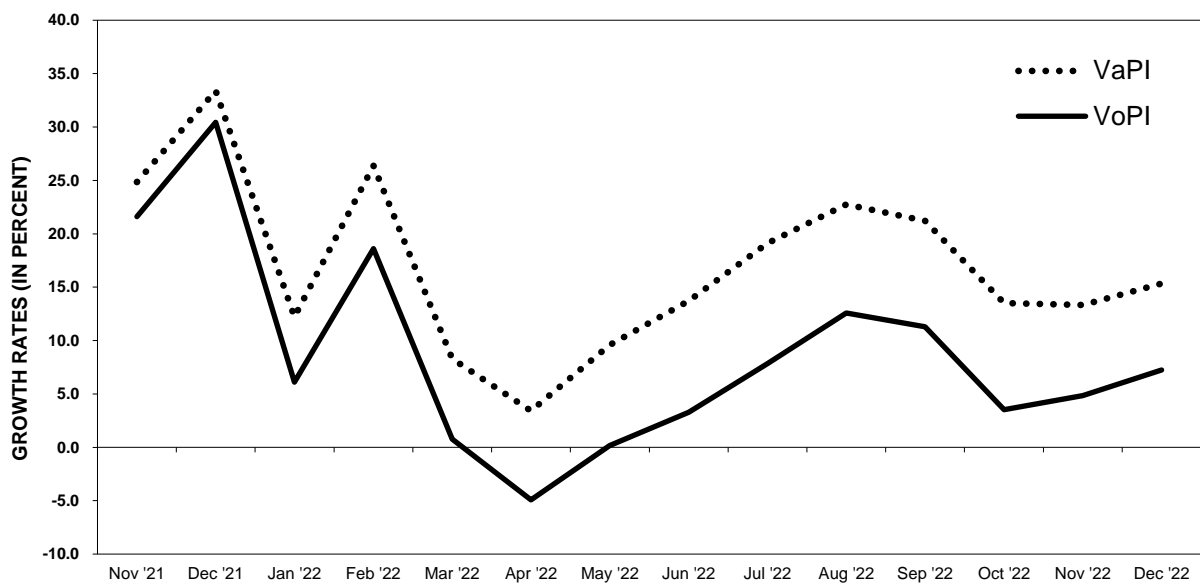


p - preliminary

Source: Philippine Statistics Authority

In December 2022, the VaPI for **manufacture of food products** registered an annual increment of 15.3 percent. This was higher compared with the November 2022 annual growth rate of 13.3 percent, but slower relative to December 2021 annual increase of 33.4 percent. (Figure 3, and Tables 1 and 1a)

Figure 3. Year-on-Year Changes (%) in the Production for Manufacture of Food Products  
November 2021 - December 2022<sup>p</sup> (2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

The expansion in the annual growth of the VaPI for manufacture of food products in December 2022 was primarily attributed by the higher annual increase in the index of manufacture of other food products industry group with 40.1 percent annual increment in December 2022, from 20.6 percent in the previous month. The manufacture of other food products includes bakery products, sugar, condiments, among others.

Other primary contributors to the higher year-on-year growth of VaPI for manufacture of food products were manufacture of dairy products with 20.8 percent annual increase during the month, from 10.1 percent in November 2022; and processing and preserving of fish, crustaceans and mollusks with 12.7 percent annual upturn in December 2022, from 2.8 percent in the previous month. (Tables 1 and 1a)

## 2. Volume of Production Index

The Volume of Production Index (VoPI) for manufacturing recorded a year-on-year increase of 4.8 percent in December 2022, faster than the annual increase of 5.9 percent in the previous month. In December 2021, VoPI expanded at an annual growth rate of 19.2 percent. (Figure 3, Tables A and 2)

The slower annual growth of VoPI in December 2022 than its annual growth in November 2022 were mainly attributed by the slower annual increments in the indices of the same top three industry divisions that contributed to the slowdown of VaPI in December 2022. These were the following:

- a) Manufacture of transport equipment, -1.0 percent from 14.3 percent;
- b) Manufacture of computer, electronic and optical products, 21.3 percent from 25.8 percent in the previous month; and
- c) Manufacture of basic metals, -37.5 percent from -29.2 percent in November 2022.

In addition to these three, slowdowns were also observed in the annual growth rates of the indices of eight industry divisions.

In contrast, there were eight industry divisions that registered higher annual growth rates in December 2022 than in November 2022, which include the manufacture of food products. Among these industry divisions, manufacture of fabricated metal products, except machinery and equipment posted the highest annual growth rate of 52.9 percent in December 2022.

Furthermore, the VoPI of the three remaining industry divisions exhibited negative annual rates during the period, namely, manufacture of electrical equipment (-54.7%), manufacture of tobacco products (-3.2%), and manufacture of furniture (-0.3%). (Tables E and 2)

The VoPI for **manufacture of food products**, on the other hand, registered an annual increment of 7.2 percent in December 2022. This was higher compared with the November 2022 annual growth rate of 4.8 percent, but slower relative to

December 2021 annual increase of 30.4 percent. (Figure 3, and Tables 2 and 2a)

The increase in the annual growth of the VoPI for manufacture of food products in December 2022 was predominantly contributed by the higher annual upturns in the index of manufacture of grain mill products, starches and starch products industry group with 42.1 percent annual increment in December 2022, from 37.1 percent in the previous month. Other primary contributors to the higher year-on-year growth of VoPI for manufacture of food products were manufacture of other food products with 28.0 percent annual increase during the month, from 10.3 percent in November 2022; and manufacture of dairy products with 14.4 percent annual upturn in December 2022, from 4.9 percent in the previous month. (Tables 2 and 2a)

### **3. Value of Net Sales Index**

The Value of Net Sales Index (VaNSI) for manufacturing continued to increase but at a slower rate of 17.6 percent in December 2022, compared with the annual growth of 17.8 percent in the previous month. In December 2021, VaNSI recorded a faster annual increase of 21.9 percent. (Figure 4, Tables A and 3)

The slower year-on-year growth of VaNSI in December 2022 was mainly brought about by the slower annual increment in the index of manufacture of transport equipment industry division with 24.7 percent annual increase, from 51.3 percent in November 2022. The manufacture of transport equipment contributed 55.8 percent to the slower annual growth of the VaNSI of the manufacturing sector in December 2022.

Other main contributors to the slower annual growth rate of VaNSI in December 2022 were manufacture of coke and refined petroleum products with 48.5 percent annual growth rate during the period, from 56.0 percent in the previous month; and manufacture of computer, electronic and optical products with an annual growth of 29.5 percent in December 2022, from 32.6 percent in the previous month. In addition to these, slowdowns were observed in the annual growth rates of the indices of seven industry divisions.

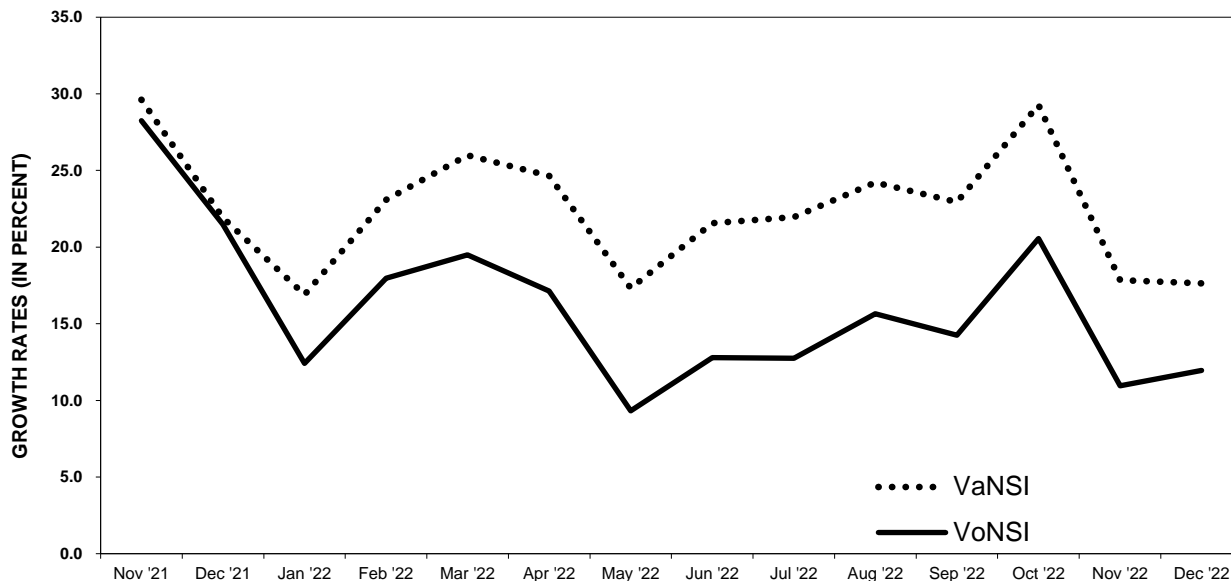
On the contrary, there were four industry divisions that registered higher annual growth rates in December 2022 than in November 2022, which include the manufacture of food products. Among these, manufacture of beverages posted the highest annual growth rate of 79.2 percent in December 2022.

In addition, the indices of the following industry divisions posted positive annual growth rates in December 2022, from annual drops in the previous month:

1. Manufacture of chemical and chemical products, 21.3 percent;
2. Manufacture of wood, bamboo, cane, rattan articles and related products, 10.8 percent; and
3. Manufacture of other non-metallic mineral products, 10.2 percent.

Meanwhile, the remaining five industry divisions exhibited negative annual rates, led by manufacture of electrical equipment with -33.8 percent year-on-year decrease in December 2022. (Tables F and 3)

Figure 4. Year-on-Year Changes (%) in Net Sales Index for Total Manufacturing  
November 2021 - December 2022<sup>p</sup> (2018 = 100)



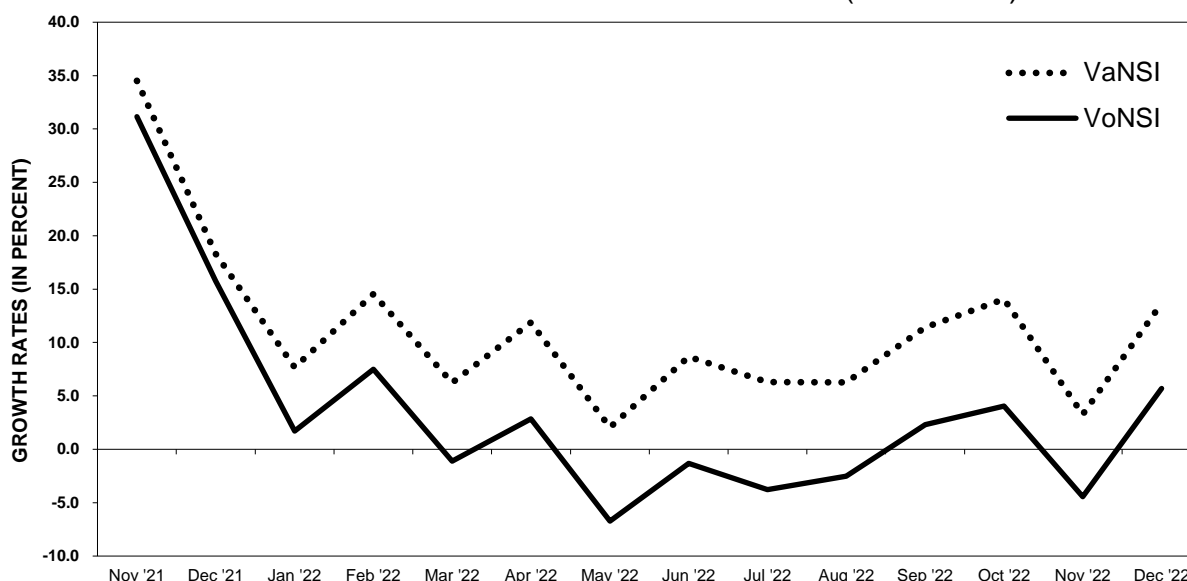
p - preliminary

Source: Philippine Statistics Authority

The VaNSI for **manufacture of food products** registered an annual increment of 13.7 percent in December 2022. This was higher compared with the November 2022 annual growth rate of 3.3 percent, but slower relative to the December 2021 annual increase of 18.3 percent. (Figure 5, Tables 3 and 3a)

The expansion in the annual growth of the VaNSI for manufacture of food products in December 2022 was mainly attributed by the higher annual increase in the index of manufacture of vegetable and animal oils and fats industry group with 25.4 percent annual increment in December 2022, from -5.0 percent in the previous month. Other primary contributors to the higher year-on-year growth of VaNSI for manufacture of food products were manufacture of other food products with 38.0 percent annual increase during the month, from 15.1 percent in November 2022; and manufacture of grain mill products, starches and starch products with 61.8 percent annual upturn in December 2022, from 49.2 percent in the previous month. (Tables 3 and 3a)

Figure 5. Year-on-Year Changes (%) in the Net Sales Manufacture of Food Products: November 2021 - December 2022<sup>p</sup> (2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

#### 4. Volume of Net Sales Index

The Volume of Net Sales Index (VoNSI) for manufacturing showed an expansion of 12.0 percent in December 2022 compared with its 10.9 percent annual growth in November 2022. In December 2021, VoNSI recorded an annual increase of 21.5 percent. (Figure 4, Tables A and 4)

The expansion in the annual growth of VoNSI in December 2022 was mainly contributed by the annual upturn in the index of manufacture of food products with 5.7 percent annual increase in December 2022, from -4.4 percent in November 2022. The manufacture of food products shared 41.0 percent to the acceleration in the annual growth of the VoNSI of the manufacturing sector in December 2022. Out of the 22 industry divisions for the manufacturing sector, this is the industry division with the highest weight in the computation of VoNSI.

Other main contributors to the annual growth rate of VoNSI in December 2022 were manufacture of chemical and chemical products with 13.5 percent annual growth rate during the period, from -8.5 percent in the previous month; and manufacture of other non-metallic mineral products with an annual growth of 6.7 percent in December 2022, from -4.5 percent in the previous month. In addition to these, annual accelerations were observed in the annual growth rates of the indices of 10 industry divisions.

In contrast, slowdowns were noted in the annual growth rates of the indices of four industry groups, led by manufacture of coke and refined petroleum products with 36.0 percent annual upturn in December 2022, from 39.8 percent in November 2022.

Moreover, there were three industry divisions that registered negative annual growth rates in December 2022 from positive annual growth rates in

November 2022. This was led by manufacture of leather and related products, including footwear with -16.9 percent annual drop in December 2022, from 12.6 percent annual increase in the previous month.

Finally, two industry divisions exhibited faster annual drops during the period, namely: manufacture of wearing apparel (-19.7%); and manufacture of basic pharmaceutical products and pharmaceutical preparations (-18.6%). (Tables G and 4)

The VoNSI for **manufacture of food products** registered an annual increment of 5.7 percent in December 2022, from the annual drop of -4.4 percent in November 2022. In December 2021, VoNSI for manufacture of food products posted an annual increase of 15.8 percent. (Figure 5, Tables 4 and 4a)

The higher year-on-year growth of the VoNSI for manufacture of food products in December 2022 was primarily contributed by the higher annual increase in the indices of the same top three industry groups that brought about the increase in the VaNSI of food manufacturing. These were as follows:

- a) Manufacture of vegetable and animal oils and fats industry group with 25.2 percent annual increment in December 2022, from -7.3 percent in the previous month;
- b) Manufacture of other food products with 26.1 percent annual increase during the month, from 5.2 percent in November 2022; and
- c) Manufacture of grain mill products, starches and starch products with 42.7 percent annual upturn in December 2022, from 29.1 percent in the previous month. (Table 4 and 4a)



## B. Year-on-Year Growth for 2022

Table B. Year-on-Year Growth Rates of Annual Average Production Index and Net Sales Index for Total Manufacturing (2018=100)  
January to December, 2020 – 2022<sup>P</sup>

(in Percent)

INDICATOR	2020	2021 <sup>r</sup>	2022 <sup>P</sup>
<b>Production Index (2018=100)</b>			
Value of Production Index ( <i>VaPI</i> )	<b>-43.0</b>	<b>49.2</b>	<b>22.5</b>
Volume of Production Index ( <i>VoPI</i> )	<b>-40.5</b>	<b>52.6</b>	<b>15.2</b>
<b>Net Sales Index (2018=100)</b>			
Value of Net Sales Index ( <i>VaNSI</i> )	<b>-23.7</b>	<b>15.6</b>	<b>21.9</b>
Volume of Net Sales Index ( <i>VoNSI</i> )	<b>-20.1</b>	<b>17.7</b>	<b>14.5</b>

p - preliminary, r - revised

Source: Philippine Statistics Authority

### 1. Value of Production Index

The annual average growth rate of VaPI for manufacturing in 2022 exhibited an expansion of 22.5 percent. However, this rate is slower than the annual average increment of 49.2 percent in 2021. In 2020, there was an annual average decline recorded for VaPI at -43.0 percent. (Tables B and 1)

The slower increase in the annual average year-on-year growth of VaPI for manufacturing in 2022 than its annual average growth in 2021 was mainly contributed by the annual decrements in the indices of manufacture of basic metals (-16.3%) and manufacture of electrical equipment (-48.4%) industry divisions. These industry divisions exhibited annual average increases in 2021. Third place was the manufacture of other non-metallic mineral products with an annual average growth of 6.9 percent in 2022, from 37.2 percent in 2021. (Table 1)

Slower annual average growth rate in VaPI was observed for **manufacture of food products** at 14.6 percent in 2022, from 17.0 percent in 2021. This was primarily brought about by the annual average decline noted in the manufacture of prepared animal feeds index at -3.1 percent in 2022, from 56.6 percent annual average uptick in 2021. Also contributory to the downtrend were the slower annual average increments in the indices of processing and preserving of fruits and vegetables at 4.6 percent in 2022, from 31.1 percent in 2021; and processing and preserving of meat, 9.2 percent in 2022, from 13.8 percent in 2021. (Table 1a)

## 2. Volume of Production Index

The annual average growth rate of VoPI for manufacturing in 2022 was 15.2 percent, indicating a slowdown from the 52.6 percent annual average growth rate recorded in 2021. In 2020, the annual average decline of VoPI was -40.5 percent. (Tables B and 2)

The slower increase in the annual average year-on-year growth of VoPI in 2022 relative to its annual growth in 2021 was primarily brought about by the annual average deceleration in the index of manufacture of computer, electronic and optical products at 15.1 percent, from 36.2 percent in 2021. Came second was manufacture of basic metals with an annual average growth of -22.0 percent in 2022, from 15.4 percent in the previous year. On third place was the manufacture of food products with decelerated annual average growth of 5.6 percent in 2022 from 15.9 percent in 2021. (Table 2)

Meanwhile, the slower annual average rate in VoPI for **manufacture of food products** in 2022 was mainly contributed by the annual deceleration noted in the manufacture of prepared animal feeds at -14.1 percent in 2022. Moreover, slowdowns were noted in the annual average growth rates in the indices of processing and preserving of fruits and vegetables at 5.0 percent; and processing and preserving of meat, 3.6 percent. (Table 2a)

## 3. Value of Net Sales Index

The annual average growth rate of VaNSI for manufacturing showed an improvement in 2022 as it registered a 21.9 percent annual growth, from 15.6 percent annual average growth rate in 2021. In 2020, an annual average decline of VaNSI was observed at -23.7 percent. (Tables B and 3)

The expansion in the annual average year-on-year growth of VaNSI in 2022 was mainly attributed by the recovery in the annual average growth rate in the index of manufacture of beverages at 87.2 percent, from -6.3 percent in 2021. Came second was manufacture of coke and refined petroleum products with faster annual average rate of 79.7 percent in 2022, from 20.1 percent in the previous year. On third place was the manufacture of computer, electronic and optical products index with accelerated annual average growth of 28.0 percent in 2022, from 7.8 percent in 2021. (Table 3)

Meanwhile, the slower annual average growth rate in VaNSI for **manufacture of food products** at 8.7 percent in 2022 from 18.3 percent 2021 was mainly contributed by the annual deceleration noted in the manufacture of vegetable and animal oils and fats at 36.4 percent in 2022; manufacture of prepared animal feeds, 17.3 percent; and processing and preserving of meat, 4.1 percent. (Table 3a)

#### 4. Volume of Net Sales Index

The annual average growth rate of VoNSI for manufacturing in 2022 was 14.5 percent, indicating a slowdown from the 17.7 percent annual average growth rate in 2021. In 2020, VoNSI exhibited an annual average decline of -20.1 percent. (Tables B and 4)

The slower increase in the annual average year-on-year growth of VoNSI in 2022 was primarily brought about by the slower annual average upturn in the index of manufacture of food products, with 0.2 percent in 2022, from 17.2 percent in 2021. This was seconded by the manufacture of basic metals which registered an annual average decrease of -22.3 percent in 2022. On third place was the manufacture of fabricated metal products except machinery and equipment with decelerated annual average growth of -30.8 percent in 2022 from 25.6 percent in 2021. (Table 4)

Meanwhile, the slower annual average growth in VoNSI for **manufacture of food products** in 2022 was mainly contributed by the annual average deceleration noted in the index of processing and preserving of meat at -1.3 percent in 2022. This was followed by the indices of manufacture of prepared animal feeds with slower annual average increase of 4.0 percent in 2022; and processing and preserving of fish, crustaceans and mollusks which posted an annual average decline of -10.4 percent. (Table 4a)

#### C. Average Capacity Utilization Rate

Based on responding establishments, the average capacity utilization rate for manufacturing sector in December 2022 was reported at 71.6 percent, from 72.6 percent in the previous month. (Table 6)

There were 19 out of 22 industry divisions with more than 60 percent average capacity utilization rate, led by manufacture of wearing apparel (79.7%), manufacture of machinery and equipment except electrical (79.0%), and manufacture of other non-metallic mineral products (76.3%). (Table 6)

The proportion of establishments that operated at full capacity (90% to 100%) was 24.3 percent of the total number of responding establishments. Meanwhile, 40.7 percent operated at 70 to 89 percent capacity, while 35.0 percent operated below 70 percent capacity. (Table C)

Table C. Distribution of Responding Establishments by Capacity Utilization for Total Manufacturing: December 2022<sup>p</sup>

<b>Capacity Utilization</b>	<b>Number of Responding Establishments</b>	<b>Percent Share to Responding Establishments</b>
TOTAL	577	100.0
Below 50%	74	12.8
50% - 59%	65	11.3
60% - 69%	63	10.9
70% - 79%	111	19.2
80% - 89%	124	21.5
90% - 100%	140	24.3

p - preliminary

Notes:

- 1) Details may not sum to totals due to rounding.
- 2) Results are based on the responses of establishments which were in operation during the reference month.
- 3) There were thirteen (13) establishments which responded but were not included in the tabulation as they temporarily or permanently ceased their business operations.

Source: Philippine Statistics Authority

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Undersecretary

National Statistician and Civil Registrar General

*DGLDP/RCL/JBE*

Table D. Year-on-Year Growth Rates (%) of VaPI 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 Slower Annual Growth Rates</b>		
1. Manufacture of transport equipment	20.5	3.2
2. Manufacture of computer, electronic and optical products	32.3	24.1
3. Manufacture of basic metals	-27.2	-36.0
4. Manufacture of machinery and equipment except electrical	67.9	52.7
5. Manufacture of wearing apparel	-1.7	-18.3
6. Manufacture of paper and paper products	18.7	11.3
7. Other manufacturing and repair and installation of machinery and equipment	28.1	22.6
8. Manufacture of textiles	15.8	2.6
9. Manufacture of rubber and plastic products	10.5	8.2
10. Manufacture of basic pharmaceutical products and pharmaceutical preparations	2.4	-6.1
11. Printing and reproduction of recorded media	-12.7	-13.5
12. Manufacture of electrical equipment	-54.2	-54.4
<b>With Higher Annual Growth Rates</b>		
13. Manufacture of fabricated metal products, except machinery and equipment	40.4	58.2
14. Manufacture of chemical and chemical products	35.0	52.6
15. Manufacture of coke and refined petroleum products	21.8	25.9
16. Manufacture of leather and related products, including footwear	9.0	21.6
17. Manufacture of beverages	14.3	16.6
18. Manufacture of other non-metallic mineral products	5.0	16.2
19. Manufacture of food products	13.3	15.3
20. Manufacture of wood, bamboo, cane, rattan articles and related products	10.5	14.8
<b>With Positive Annual Growth Rate from Negative Annual Growth Rate in November 2022</b>		
21. Manufacture of furniture	-12.3	1.6
<b>With Negative Annual Growth Rate</b>		
22. Manufacture of tobacco products	-5.7	-0.8

p - preliminary, r - revised

Table E. Year-on-Year Growth Rates (%) of VoPI 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 Slower Annual Growth Rates</b>		
1. Manufacture of transport equipment	14.3	-1.0
2. Manufacture of computer, electronic and optical products	25.8	21.3
3. Manufacture of basic metals	-29.2	-37.5
4. Manufacture of machinery and equipment except electrical	68.3	50.0
5. Manufacture of wearing apparel	-5.2	-20.3
6. Manufacture of paper and paper products	12.5	5.6
7. Other manufacturing and repair and installation of machinery and equipment	25.2	18.8
8. Manufacture of textiles	12.6	-0.3
9. Manufacture of rubber and plastic products	4.9	2.5
10. Manufacture of basic pharmaceutical products and pharmaceutical preparations	2.0	-7.3
11. Printing and reproduction of recorded media	-13.7	-14.2
<b>With Higher Annual Growth Rates</b>		
12. Manufacture of fabricated metal products, except machinery and equipment	33.9	52.9
13. Manufacture of chemical and chemical products	25.0	42.7
14. Manufacture of leather and related products, including footwear	3.8	16.2
15. Manufacture of coke and refined petroleum products	9.2	15.3
16. Manufacture of other non-metallic mineral products	1.5	12.5
17. Manufacture of wood, bamboo, cane, rattan articles and related products	6.0	12.2
18. Manufacture of beverages	8.9	11.4
19. Manufacture of food products	4.8	7.2
<b>With Negative Annual Growth Rate</b>		
20. Manufacture of electrical equipment	-55.2	-54.7
21. Manufacture of tobacco products	-8.0	-3.2
22. Manufacture of furniture	-13.5	-0.3

p - preliminary, r - revised

Table F. Year-on-Year Growth Rates (%) of VaNSI 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 Slower Annual Growth Rates</b>		
1. Manufacture of transport equipment	51.3	24.7
2. Manufacture of coke and refined petroleum products	56.0	48.5
3. Manufacture of computer, electronic and optical products	32.6	29.5
4. Printing and reproduction of recorded media	9.3	-11.3
5. Manufacture of wearing apparel	-1.7	-17.7
6. Manufacture of paper and paper products	17.7	11.8
7. Manufacture of textiles	8.1	-7.0
8. Other manufacturing and repair and installation of machinery and equipment	15.0	9.2
9. Manufacture of basic pharmaceutical products and pharmaceutical preparations	-1.6	-17.6
10. Manufacture of leather and related products, including footwear	18.2	-13.1
<b>With Higher Annual Growth Rates</b>		
11. Manufacture of beverages	75.7	79.2
12. Manufacture of machinery and equipment except electrical	47.0	55.9
13. Manufacture of food products	3.3	13.7
14. Manufacture of rubber and plastic products	5.0	8.5
<b>With Positive Annual Growth Rates from Negative Annual Growth Rates in November 2022</b>		
15. Manufacture of chemical and chemical products	-1.2	21.3
16. Manufacture of wood, bamboo, cane, rattan articles and related products	-3.8	10.8
17. Manufacture of other non-metallic mineral products	-1.2	10.2
<b>With Negative Annual Growth Rate</b>		
18. Manufacture of electrical equipment	-38.4	-33.8
19. Manufacture of furniture	-35.3	-30.3
20. Manufacture of fabricated metal products, except machinery and equipment	-27.6	-23.8
21. Manufacture of basic metals	-23.9	-20.1
22. Manufacture of tobacco products	-5.2	-1.5

p - preliminary, r - revised

Table G. Year-on-Year Growth Rates (%) of VoNSI 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 Higher Annual Growth Rates</b>		
1. Manufacture of food products	-4.4	5.7
2. Manufacture of chemical and chemical products	-8.5	13.5
3. Manufacture of other non-metallic mineral products	-4.5	6.7
4. Manufacture of beverages	67.4	71.1
5. Manufacture of basic metals	-26.0	-22.0
6. Manufacture of fabricated metal products, except machinery and equipment	-30.9	-26.3
7. Manufacture of wood, bamboo, cane, rattan articles and related products	-7.7	8.3
8. Manufacture of rubber and plastic products	-0.3	2.8
9. Manufacture of machinery and equipment except electrical	47.3	53.2
10. Manufacture of electrical equipment	-39.7	-34.3
11. Manufacture of computer, electronic and optical products	26.1	26.6
12. Manufacture of tobacco products	-7.5	-3.9
13. Manufacture of furniture	-36.2	-31.6
<b>With Slower Annual Growth Rates</b>		
14. Manufacture of coke and refined petroleum products	39.8	36.0
15. Manufacture of transport equipment	43.6	19.7
16. Manufacture of paper and paper products	11.6	6.0
17. Other manufacturing and repair and installation of machinery and equipment	12.4	5.8
<b>With Negative Annual Growth Rate from Positive Annual Growth Rate in November 2022</b>		
18. Manufacture of leather and related products, including footwear	12.6	-16.9
19. Printing and reproduction of recorded media	8.2	-12.0
20. Manufacture of textiles	5.0	-9.6
<b>With Negative Annual Growth Rate</b>		
21. Manufacture of wearing apparel	-5.2	-19.7
22. Manufacture of basic pharmaceutical products and pharmaceutical preparations	-2.0	-18.6

p - preliminary, r - revised



## TECHNICAL NOTES

### I. Introduction

The Monthly Integrated Survey of Selected Industries (MISSI) is one of the designated statistical activities undertaken by the Philippine Statistics Authority with the objective of providing flash indicators on the performance of growth-oriented industries in the manufacturing sector. The survey gathers monthly data on employment, compensation, production, net sales, inventories, and capacity utilization from manufacturing establishments.

The indicators generated from the MISSI are Value of Production Index (VaPI), Volume of Production Index (VoPI), Value of Net Sales Index (VaNSI), Volume of Net Sales Index (VoNSI) and Average Capacity Utilization Rate of the manufacturing sector.

#### Rebasing

Starting with the January 2021 reference month, production and sales indices from the MISSI are rebased to 2018, from 2000 base period.

The major changes in the rebasing are (1) the industry structure or classification and (2) the weights which measure the relevance of the industries. The industry classification for the 2018-based series follows the 2009 Philippine Standard Industry Classification (PSIC), while the 2000-based series adopted the 1994 PSIC. For the rebased series, the weights at the base year were computed based on the final results of the 2018 Census of Philippine Business and Industry (CPBI). The results of the Annual Survey of Philippine Business and Industry (ASPBI) will be used to update the weights annually until the next rebasing.

Other changes are on the methodology of index computation and on the estimation of average capacity utilization rate which are discussed in the next section.

### II. Method of Index Computation

The VaPI and VaNSI utilize the Paasche-type method of index computation where the basic data of weight computation are the value of production and sales, respectively. The sources of these data are the CPBI for the base year and the ASPBI for the succeeding years until the next rebasing.

#### 1. Weights Computation

The weight of the industry group is the percent share of the industry to the total value of production for the industry division. The sum of the weights of all industry groups within an industry division is equal to 1.

The weight of the industry division is the percent share of the industry to the total value of production for the manufacturing sector. The sum of the weights of all

industry divisions is equal to 1.

The same methodology is used in the computation of the weights for sales, but instead of value of production, data on sales is used.

## 2. Index Computation

The formula in the computation of indices are as follows:

### 1. Value of Production Index (VaPI)

#### a. Computation of Index for Industry Group Level

##### i. Monthly Index at the base year

$$VaPI_{ijm} = \frac{V_{ijm}}{V_{ij0}} \times 100$$

where:

- $VaPI_{ijm}$  = VaPI for industry group j in industry division i at current month m
- $V_{ijm}$  = total value of production for all sample establishments of industry group j in industry division i at current month m of the base year
- $V_{ij0}$  = average monthly value of production at the base year

##### ii. Monthly Index after the base year

$$VaPI_{ijm} = \frac{V_{ijm}}{V_{ij(m-1)}} \times VaPI_{ij(m-1)}$$

where:

- $VaPI_{ijm}$  = VaPI for industry group j in industry division i at current month m
- $VaPI_{ij(m-1)}$  = VaPI for industry group j in industry division i for the previous month m-1
- $V_{ijm}$  = total value of production for all sample establishments of industry group j in industry division i at current month m
- $V_{ij(m-1)}$  = total value of production for all sample establishments of industry group j in industry division i for the previous month m-1

## b. Computation of Index for Industry Division Level

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

where:

- $VaPI_{im}$  = VaPI for industry division i at current month m
- $VaPI_{ijm}$  = VaPI 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 uses the same computation of index as that for industry group level.

## c. Computation of Index for Total Manufacturing

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

where:

- $VaPI_m$  = VaPI for the current month m
- $VaPI_{im}$  = VaPI for industry division i at current month m
- $W_i$  = weight for industry division i

## 2. Value of Net Sales Index (VaNSI)

The same methodology as the VaPI is used to compute the Value of Net Sales Index (VaNSI).

## 3. Volume of Production Index (VoPI)

### a. Computation for Index for Industry Group Level

$$VoPI_{ijm} = \frac{VaPI_{ijm}}{PPI_{ijm}}$$

where:

- $VoPI_{ijm}$  = VoPI for industry group j in industry division i at current month m

$$\begin{aligned} \text{VaPI}_{ijm} &= \text{VaPI for industry group } j \text{ in industry division } i \text{ at current month } m \\ \text{PPI}_{ijm} &= \text{PPI for industry group } j \text{ in industry division } i \text{ at current month } m \end{aligned}$$

**b. Computation of Index for Industry Division Level**

$$\text{VoPI}_{im} = \frac{\text{VaPI}_{im}}{\text{PPI}_{im}}$$

where:

$$\begin{aligned} \text{VoPI}_{im} &= \text{VoPI for industry division } i \text{ at current month } m \\ \text{VaPI}_{im} &= \text{VaPI for industry division } i \text{ at current month } m \\ \text{PPI}_{im} &= \text{PPI for industry division } i \text{ at current month } m \end{aligned}$$

**c. Computation of Index for Total Manufacturing**

$$\text{VoPI}_m = \frac{\text{VaPI}_m}{\text{PPI}_m}$$

where:

$$\begin{aligned} \text{VoPI}_m &= \text{VoPI for total manufacturing at current month } m \\ \text{VaPI}_m &= \text{VaPI for total manufacturing at current month } m \\ \text{PPI}_m &= \text{PPI for total manufacturing at current month } m \end{aligned}$$

**4. Volume of Net Sales Index (VoNSI)**

The same methodology as VoPI is used to compute the Volume of Net Sales Index (VoNSI).

**5. Average Capacity Utilization Rate**

Capacity Utilization Rate is the ratio of total output to the maximum rated capacity of the establishment. The formulas in obtaining the Average Capacity Utilization Rate (AveCU) are the following:

**a. Computation of AveCU for Industry Group Level**

$$AveCU_{ijm} = \frac{\sum_{c=1}^k (X_c \times f_{cijm})}{n_{rijm} + n_{tijm}}$$

where:

- AveCU<sub>ijm</sub> = average capacity utilization rate for industry group j in industry division i at current month m
- X<sub>c</sub> = midpoint of capacity utilization rate at interval c
- f<sub>cijm</sub> = frequency of responding samples at interval c for industry group j in industry division i at current month m
- n<sub>rijm</sub> = total number of responding (good) establishments for industry group j in industry division i at current month m
- n<sub>tijm</sub> = total number of temporarily closed/closed establishments for industry group j in industry division i at current month m
- k = total number of capacity utilization intervals

**b. Computation of AveCU for Industry Division Level**

$$AveCU_{im} = \sum_{i=1}^{p_i} (W_{ij} \times AveCU_{ijm})$$

where:

- AveCU<sub>im</sub> = average capacity utilization rate for industry division i at current month m
- W<sub>ij</sub> = weight for industry group j in industry division i
- AveCU<sub>ijm</sub> = average capacity utilization rate for industry group j in industry division i at current month m
- p<sub>i</sub> = number of industry groups in industry division i

**c. Computation of AveCU for Total Manufacturing**

$$AveCU_m = \sum_{i=1}^{22} (W_i \times AveCU_{im})$$

where:

- AveCU<sub>m</sub> = average capacity utilization rate for total manufacturing at current month m
- W<sub>i</sub> = weight for industry division i
- AveCU<sub>im</sub> = average capacity utilization rate for industry division i at current month m

**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.

### III. Computation of Growth Rates

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

### IV. Imputation and Revision

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

### V. Industry Coverage

The MISSI utilizes the 2009 PSIC to classify industry divisions and industry groups. Twenty-two industry divisions of the 2009 PSIC were formed to comprise the industry coverage of the MISSI.

The table below presents the industry coverage of MISSI by 2009 PSIC code.

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*
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*

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

*\*Industry divisions categorized further into industry groups*