



PRESS RELEASE

**PRODUCTION INDEX AND NET SALES INDEX
(Monthly Integrated Survey of Selected Industries)
January 2023
(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) January 2022, December 2022^r, and January 2023^p (in Percent)

INDICATOR	JANUARY 2022	DECEMBER 2022 ^r	JANUARY 2023 ^p
Production Index (2018=100)			
Value of Production Index (<i>VaPI</i>)	15.1 ^r	9.5	15.4
Volume of Production Index (<i>VoPI</i>)	10.9 ^r	4.2	10.6
Net Sales Index (2018=100)			
Value of Net Sales Index (<i>VaNSI</i>)	16.9	16.4	19.9
Volume of Net Sales Index (<i>VoNSI</i>)	12.4	10.8	15.1
Producer Price Index (2018=100)	4.0	5.1	4.2

p - preliminary, r - revised

Source: Philippine Statistics Authority

A. Year-on-year Growth for January 2023

1. Value of Production Index

The Value of Production Index (*VaPI*) for manufacturing posted a double-digit year-on-year increment of 15.4 percent in January 2023, faster than the December 2022 annual growth of 9.5 percent. In January 2022, the *VaPI* registered a slightly slower annual growth rate of 15.1 percent. (Figure 2, and Tables A and 1)

The expansion in the annual growth of the *VaPI* in January 2023 was mainly attributed by the higher annual increase in the index of manufacture of food



products industry division with 25.1 percent annual increment in January 2023 from 11.2 percent in the previous month. The manufacture of food products contributed 29.0 percent to the upward trend of the VaPI of the manufacturing sector in January 2023. Out of the 22 industry divisions for the manufacturing sector, manufacture of food products had the highest weight¹ in the computation of VaPI.

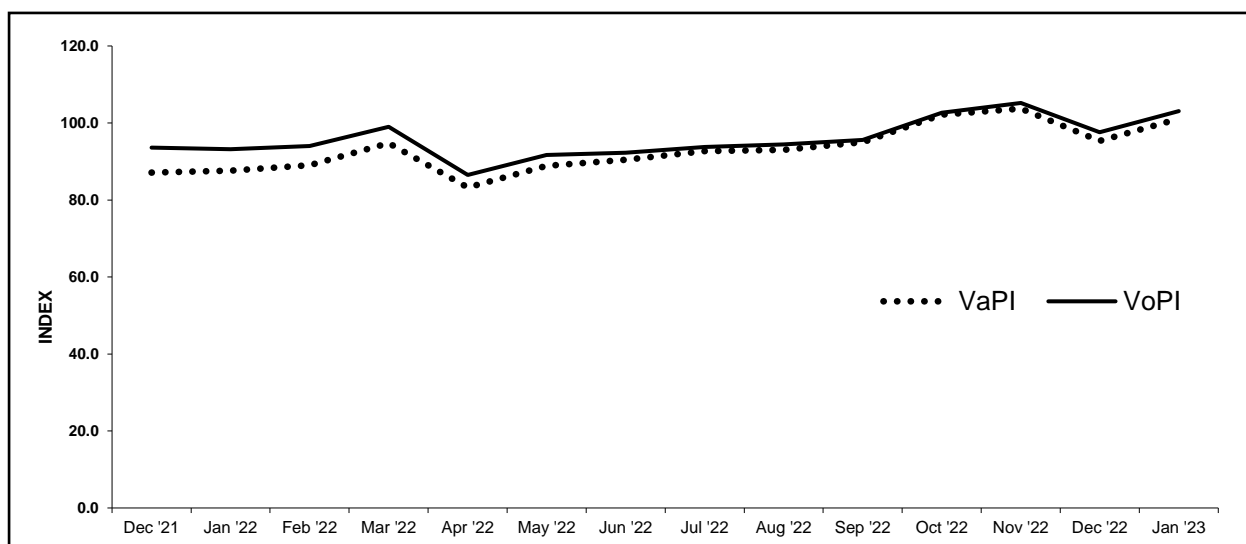
Other main contributors to the higher annual growth rate of VaPI in January 2023 were manufacture of transport equipment with 24.1 percent annual increase during the period from 4.0 percent in the previous month, and manufacture of electrical equipment with an annual rate of 55.3 percent in January 2023 from an annual decline of -54.5 percent in the previous month. In addition to these, uptrends were observed in the annual growth rates of the indices of three industry divisions: manufacture of beverages; manufacture of other non-metallic mineral products; and other manufacturing and repair and installation of machinery and equipment.

Furthermore, the indices of six industry divisions recorded positive year-on-year growth rates in January 2023 after posting annual decreases in December 2022.

In contrast, slowdowns were noted in the annual growth rates of the indices of six industry divisions during the period. The manufacture of fabricated metal products, except machinery and equipment registered the slowest annual growth rate of 3.3 percent in January 2023 from 55.8 percent in December 2022.

Meanwhile, the remaining four industry divisions recorded negative annual rates in January 2023 from positive growths in the previous month. The manufacture of furniture industry division recorded the fastest annual drop of -16.9 percent during the period from 1.7 percent in December 2023. (Tables C and 1)

Figure 1. Value and Volume of Production Index for Total Manufacturing December 2021 - January 2023^p (2018 = 100)

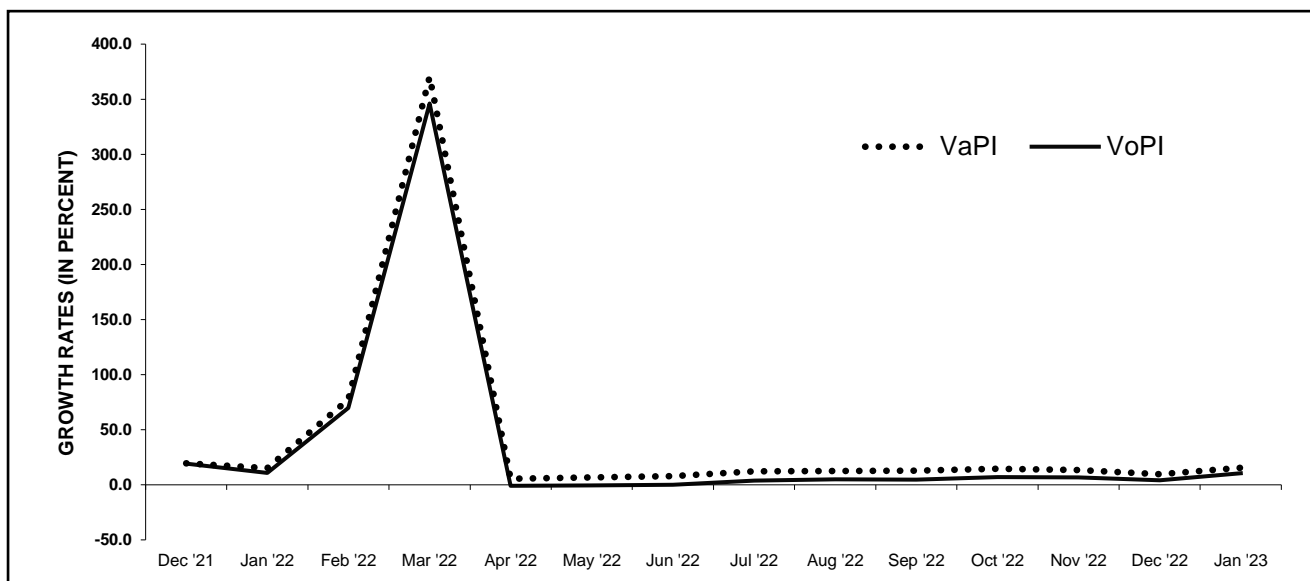


p - preliminary

Source: Philippine Statistics Authority

¹ Refer to Method of Computation in the Technical Notes.

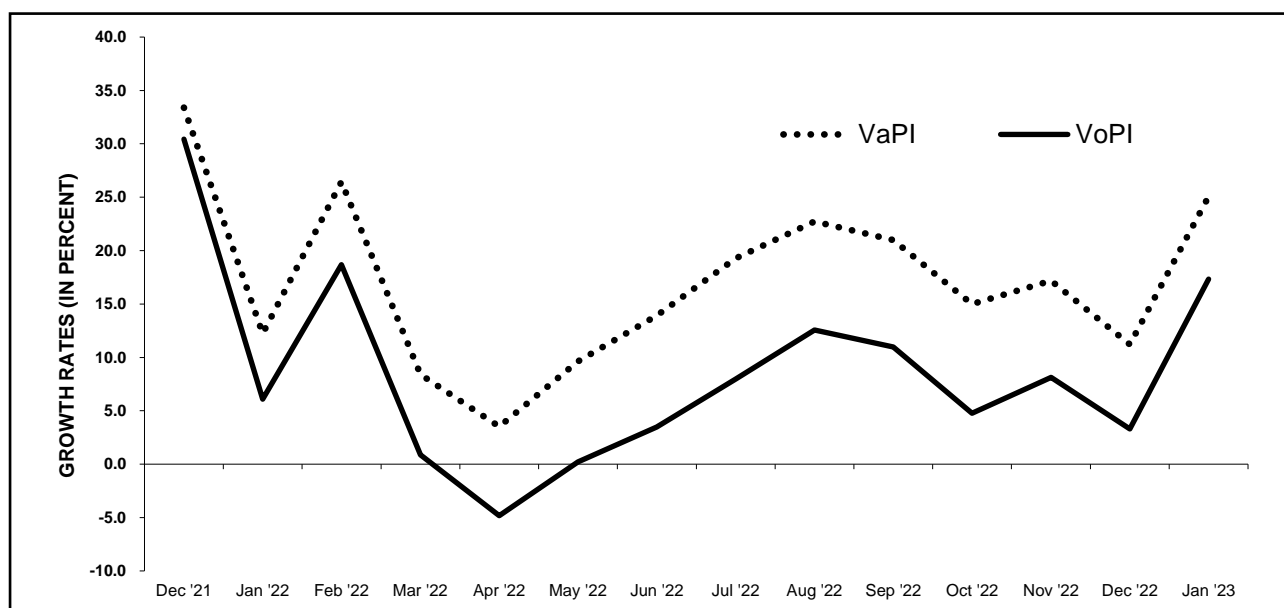
Figure 2. Year-on-Year Growth Rates (%) of Value and Volume of Production Index for Total Manufacturing
December 2021 - January 2023^p (2018 = 100)



p - preliminary
Source: Philippine Statistics Authority

In January 2023, the VaPI for **manufacture of food products** registered an annual increment of 25.1 percent. This was higher compared with the December 2022 annual growth rate of 11.2 percent and with the January 2022 annual increase of 12.2 percent. (Figure 3, and Tables 1 and 1a)

Figure 3. Year-on-Year Changes (%) in the Production for Manufacture of Food Products
December 2021 - January 2023^p (2018 = 100)



p - preliminary
Source: Philippine Statistics Authority

The increase in the annual growth of the VaPI for manufacture of food products in January 2023 was primarily attributed by the higher annual increase in the index of manufacture of dairy products industry group with 45.1 percent annual increment in January 2023 from 12.4 percent in the previous month. Other primary contributors to the higher year-on-year growth of VaPI for manufacture of food products were manufacture of prepared animal feeds with an annual upturn of 4.4 percent during the month from an annual decline of -21.8 percent in December 2022, and processing and preserving of meat with 22.8 percent annual increase in January 2023 from 11.0 percent in the previous month. (Tables 1 and 1a)

2. Volume of Production Index

The Volume of Production Index (VoPI) for manufacturing recorded a double-digit year-on-year increase of 10.6 percent in January 2023, faster than the annual growth rate of 4.2 percent in the previous month. In January 2022, VoPI recorded a faster annual increment of 10.9 percent. (Figure 3, and Tables A and 2)

The upturn of VoPI in January 2023 than its annual growth in December 2022 was mainly brought about by the annual increases in the indices of the same top three industry divisions that contributed to the growth of VaPI in January 2023. These were the following:

- a) Manufacture of food products, 17.3 percent from 3.3 percent in the past month;
- b) Manufacture of transport equipment, 24.3 percent from -0.2 percent in the previous month; and
- c) Manufacture of electrical equipment, 53.6 percent from -54.8 percent in December 2022.

In addition to these three, three industry divisions exhibited higher year-on-year increments in their indices during the month, while six industry divisions recorded annual increments during the month from annual declines in December 2022.

Meanwhile, slowdowns were observed in the annual growth rates of the indices of five industry divisions. The manufacture of paper and paper products posted the slowest annual growth rate of 0.8 percent from 4.1 percent annual rate in December 2022.

Furthermore, the VoPI of four industry divisions registered negative annual rates during the period after posting positive growth rates in the previous month. The manufacture of fabricated metal products, except machinery and equipment recorded the fastest annual drop of -3.0 percent in January 2023 from the 50.6 percent annual increase in the previous month.

Lastly, the index of manufacture of furniture declined further in January 2023, recording an annual decrease of -18.9 percent from -0.1 percent in the previous

month. (Tables D and 2)

The VoPI for **manufacture of food products** registered an annual increment of 17.3 percent in January 2023. This was higher compared with the December 2022 annual growth rate of 3.3 percent and with the January 2022 annual increase of 6.1 percent. (Figure 3, and Tables 2 and 2a)

The increase in the annual growth of the VoPI for manufacture of food products in January 2023 was predominantly contributed by the higher annual upturns in the index of manufacture of dairy products industry group with 35.2 percent annual increment in January 2023 from 5.3 percent in the previous month. Other primary contributors to the higher year-on-year growth of VoPI for manufacture of food products were processing and preserving of meat with 16.3 percent annual increase during the month from 5.0 percent in December 2022, and processing and preserving of fish, crustaceans and mollusks with 4.8 percent annual upturn in January 2023 from 0.1 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 at an annual rate of 19.9 percent in January 2023, compared with the annual growth of 16.4 percent in the previous month. In January 2022, VaNSI recorded a slower annual increase of 16.9 percent. (Figure 4, and Tables A and 3)

The year-on-year increment of VaNSI in January 2023 was mainly contributed by the annual upturn in the index of manufacture of basic metals industry division with 31.7 percent annual increase from a negative growth of -24.5 percent in December 2022. The manufacture of basic metals contributed 28.1 percent to the upward trend of the annual growth of VaNSI of the manufacturing sector in January 2023.

Other main contributors to the higher annual growth rate of VaNSI in January 2023 were manufacture of food products with 22.2 percent annual growth rate during the period from 13.1 percent in the previous month; and manufacture of fabricated metal products, except machinery and equipment with an annual growth of 37.5 percent in January 2023 from an annual drop of -30.1 percent in the previous month. In addition to these, positive year-on-year upturns during the month were recorded in four industry divisions after posting annual decreases in December 2022.

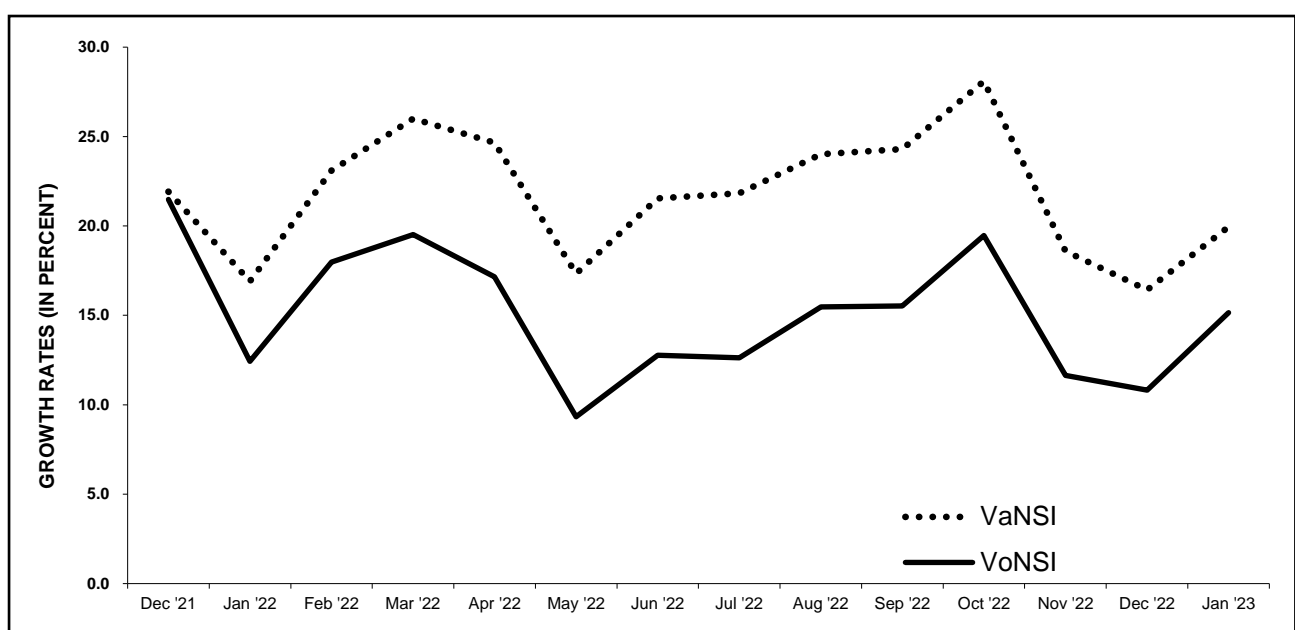
Furthermore, other manufacturing and repair and installation of machinery and equipment; and manufacture of other non-metallic mineral products posted higher annual growth rates in January 2023 with 22.3 percent and 15.6 percent, respectively.

On the contrary, there were six industry divisions that registered slower annual growth rates in January 2023 than in December 2022. The manufacture of chemical and chemical products posted the slowest annual growth rate of 1.3 percent during the month from 18.7 percent in December 2022.

Meanwhile, four industry divisions posted negative annual rates in January 2023 from positive annual growth rates in the previous month. The manufacture of rubber and plastic products registered the fastest annual drop of -1.1 percent during the period from an annual increment of 10.0 percent in the previous month.

Completing the 22 industry divisions were manufacture of textiles, manufacture of furniture, and printing and reproduction of recorded media which continued to post annual decreases in January 2023. (Tables E and 3)

Figure 4. Year-on-Year Changes (%) in Net Sales Index for Total Manufacturing December 2021 - January 2023^p (2018 = 100)



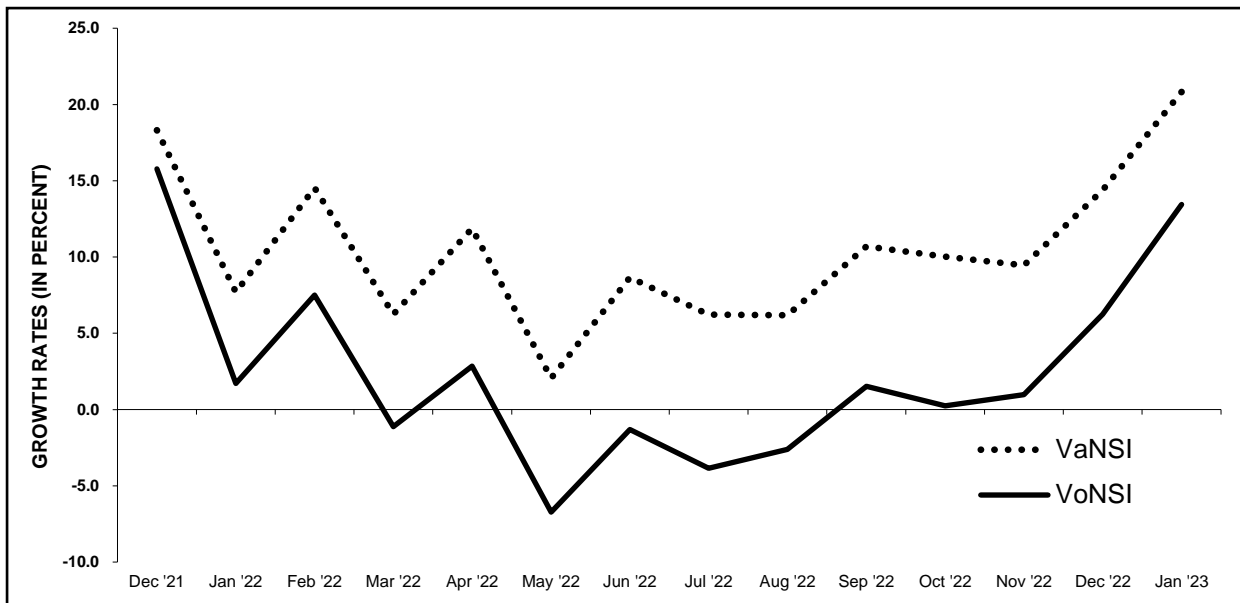
p - preliminary

Source: Philippine Statistics Authority

The VaNSI for **manufacture of food products** registered an annual increment of 22.2 percent in January 2023. This was higher compared with the December 2022 annual growth rate of 13.1 percent and with the January 2022 annual increase of 7.7 percent. (Figure 5, and Tables 3 and 3a)

The expansion in the annual growth of the VaNSI for manufacture of food products in January 2023 was mainly attributed by the higher annual increase in the index of processing and preserving of meat industry group with 51.4 percent annual increment in January 2023 from an annual drop of -3.3 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 prepared animal feeds with an annual increase of 28.9 percent during the month from 0.4 percent in December 2022; and processing and preserving of fish, crustaceans and mollusks with 12.6 percent annual upturn in January 2023 from 0.4 percent in the previous month. (Table 3a)

Figure 5. Year-on-Year Changes (%) in the Net Sales Manufacture of Food Products: December 2021 - January 2023^p (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 15.1 percent in January 2023 compared with its 10.8 percent annual growth in December 2022. In January 2022, VoNSI recorded a slower annual increase of 12.4 percent. (Figure 4, and Tables A and 4)

The expansion in the annual growth of VoNSI in January 2023 was mainly contributed by the annual upturn in the index of manufacture of basic metals with 30.1 percent annual increase in January 2023 from -26.2 percent in December 2022. The manufacture of basic metals shared 28.0 percent to the acceleration in the annual growth of VoNSI of the manufacturing sector in January 2023.

Other main contributors to the annual growth rate of VoNSI in January 2023 were manufacture of food products with an annual growth rate of 14.7 percent during the period from 5.1 percent in the previous month; and manufacture of fabricated metal products, except machinery and equipment with an annual growth of 29.1 percent in January 2023 from -32.4 percent in the past month.

In addition to these three, manufacture of electrical equipment and manufacture of wearing apparel recorded annual increments of 29.3 percent and 24.6 percent, respectively, during the month from their annual declines in December 2022. Furthermore, three industry divisions exhibited higher year-on-year increments in their indices during the month.

On the contrary, slowdowns were noted in the annual growth rates of the indices of four industry divisions, namely:

- a) Manufacture of beverages, 37.7 percent from 71.3 percent in the previous month;
- b) Manufacture of coke and refined petroleum products, 31.7 percent from 37.1 percent in December 2022;
- c) Manufacture of machinery and equipment except electrical, 24.8 percent from 48.7 percent in the past month; and
- d) Manufacture of paper and paper products, 1.0 percent from 2.2 percent in the previous month.

Meanwhile, annual declines during the period were noted in the indices of five industry divisions from positive annual growth rates in the previous month. The manufacture of chemical and chemical products posted the fastest annual decrease of -1.2 percent in January 2023 from 11.1 percent annual increase in the previous month.

Lastly, the remaining five industry divisions continued to record annual drops in January 2023, but these rates were slower compared with their December 2022 figures. (Tables F and 4)

The VoNSI for **manufacture of food products** registered an annual increment of 14.7 percent in January 2023 from an annual growth of 5.1 percent in December 2022. In January 2022, the VoNSI for manufacture of food products posted an annual increase of 1.7 percent. (Figure 5, and Tables 4 and 4a)

The higher year-on-year growth of the VoNSI for manufacture of food products in January 2023 was primarily contributed by the higher annual increases 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) Processing and preserving of meat industry group with 43.4 percent annual increment in January 2023 from -8.6 percent in the previous month;
- b) Manufacture of prepared animal feeds with an annual increase of 13.6 percent during the month from -10.2 percent in December 2022; and
- c) Processing and preserving of fish, crustaceans and mollusks with 5.3 percent annual upturn in January 2023 from an annual drop of -10.0 percent in the previous month. (Table 4a)

B. Average Capacity Utilization Rate

Based on responding establishments, the average capacity utilization rate for manufacturing sector in January 2023 was reported at 72.6 percent from 71.5 percent in the previous month.

Almost all the industry divisions reported capacity utilization rates of more than 60 percent except for manufacture of paper and paper products (56.1%). The top three industry divisions in terms of reported capacity utilization rate were

manufacture of wearing apparel (78.3%), manufacture of machinery and equipment except electrical (77.8%), and manufacture of transport equipment (77.3%). (Table 6)

The proportion of establishments that operated at full capacity (90% to 100%) was 21.1 percent of the total number of responding establishments. Meanwhile, 39.6 percent operated at 70 to 89 percent capacity, while 39.3 percent operated below 70 percent capacity. (Table B)

Table B. Distribution of Responding Establishments by Capacity Utilization for Total Manufacturing: January 2023^p

Capacity Utilization	Number of Responding Establishments	Percent Share to Responding Establishments
TOTAL	450	100.0
Below 50%	51	11.3
50% - 59%	60	13.3
60% - 69%	66	14.7
70% - 79%	88	19.6
80% - 89%	90	20.0
90% - 100%	95	21.1

p - preliminary

Notes:

- 1) Details may not sum up to totals due to rounding.
- 2) Results are based on the responses of establishments which were in operation during the reference month.

Source: Philippine Statistics Authority

DENNIS S. MAPA, Ph.D.

Undersecretary

National Statistician and Civil Registrar General

DGLDP/RCL/JBE

Table C. Year-on-Year Growth Rates (%) of VaPI by Industry Division
December 2022^r and January 2023^p
(2018 =100)

INDUSTRY DIVISION	December 2022 ^r	January 2023 ^p
With Higher Annual Growth Rates		
1. Manufacture of food products	11.2	25.1
2. Manufacture of transport equipment	4.0	24.1
3. Manufacture of beverages	16.2	36.6
4. Manufacture of other non-metallic mineral products	14.6	27.8
5. Other manufacturing and repair and installation of machinery and equipment	21.9	32.3
With Positive Annual Growth Rates from Negative Growth Rates in December 2022		
6. Manufacture of electrical equipment	-54.5	55.3
7. Manufacture of wearing apparel	-18.1	16.2
8. Printing and reproduction of recorded media	-12.6	14.3
9. Manufacture of textiles	-8.8	14.0
10. Manufacture of basic pharmaceutical products and pharmaceutical preparations	-6.1	12.6
11. Manufacture of tobacco products	-0.8	5.1
12. Manufacture of basic metals	-35.6	2.6
With Slower Annual Growth Rates		
13. Manufacture of leather and related products, including footwear	20.5	20.2
14. Manufacture of machinery and equipment except electrical	50.4	12.4
15. Manufacture of wood, bamboo, cane, rattan articles and related products	14.8	11.8
16. Manufacture of chemical and chemical products	55.8	9.6
17. Manufacture of paper and paper products	11.3	8.2
18. Manufacture of fabricated metal products, except machinery and equipment	55.8	3.3
With Negative Annual Growth Rates from Positive Annual Growth Rates in December 2022		
19. Manufacture of furniture	1.7	-16.9
20. Manufacture of coke and refined petroleum products	25.9	-4.8
21. Manufacture of computer, electronic and optical products	23.4	-3.2
22. Manufacture of rubber and plastic products	6.7	-2.2

p - preliminary, r - revised

Table D. Year-on-Year Growth Rates (%) of VoPI by Industry Division
December 2022^r and January 2023^p
(2018 =100)

INDUSTRY DIVISION	December 2022 ^r	January 2023 ^p
With Higher Annual Growth Rates		
1. Manufacture of food products	3.3	17.3
2. Manufacture of beverages	11.0	31.1
3. Manufacture of other non-metallic mineral products	10.9	22.6
4. Other manufacturing and repair and installation of machinery and equipment	18.2	30.5
With Positive Annual Growth Rates from Negative Growth Rates in December 2022		
5. Manufacture of electrical equipment	-54.8	53.6
6. Manufacture of transport equipment	-0.2	24.3
7. Manufacture of wearing apparel	-20.2	13.7
8. Printing and reproduction of recorded media	-13.3	13.0
9. Manufacture of basic pharmaceutical products and pharmaceutical preparations	-7.3	11.2
10. Manufacture of textiles	-11.4	11.1
11. Manufacture of tobacco products	-3.2	1.6
12. Manufacture of basic metals	-37.0	0.8
With Slower Annual Growth Rates		
13. Manufacture of leather and related products, including footwear	15.2	14.9
14. Manufacture of wood, bamboo, cane, rattan articles and related products	12.2	11.0
15. Manufacture of machinery and equipment except electrical	47.8	8.4
16. Manufacture of chemical and chemical products	45.8	6.9
17. Manufacture of paper and paper products	4.1	0.8
With Negative Annual Growth Rates from Positive Annual Growth Rates in December 2022		
18. Manufacture of coke and refined petroleum products	16.3	-11.6
19. Manufacture of computer, electronic and optical products	20.5	-7.3
20. Manufacture of rubber and plastic products	1.4	-5.7
21. Manufacture of fabricated metal products, except machinery and equipment	50.6	-3.0
With Faster Negative Annual Growth Rate		
22. Manufacture of furniture	-0.1	-18.9

p - preliminary, r - revised

Table E. Year-on-Year Growth Rates (%) of VaNSI by Industry Division
December 2022^r and January 2023^p
(2018 =100)

INDUSTRY DIVISION	December 2022 ^r	January 2023 ^p
With Positive Annual Growth Rates from Negative Growth Rates in December 2022		
1. Manufacture of basic metals	-24.5	31.7
2. Manufacture of fabricated metal products, except machinery and equipment	-30.1	37.5
3. Manufacture of electrical equipment	-33.4	30.7
4. Manufacture of wearing apparel	-19.2	27.3
5. Manufacture of basic pharmaceutical products and pharmaceutical preparations	-18.1	0.9
6. Manufacture of leather and related products, including footwear	-13.8	2.5
With Higher Annual Growth Rates		
7. Manufacture of food products	13.1	22.2
8. Other manufacturing and repair and installation of machinery and equipment	11.5	22.3
9. Manufacture of other non-metallic mineral products	14.2	15.6
With Slower Annual Growth Rates		
10. Manufacture of beverages	79.4	43.5
11. Manufacture of coke and refined petroleum products	48.5	41.8
12. Manufacture of machinery and equipment except electrical	51.4	29.2
13. Manufacture of transport equipment	24.1	22.2
14. Manufacture of paper and paper products	9.2	8.2
15. Manufacture of chemical and chemical products	18.7	1.3
With Negative Annual Growth Rates from Positive Annual Growth Rates in December 2022		
16. Manufacture of tobacco products	11.2	-3.1
17. Manufacture of wood, bamboo, cane, rattan articles and related products	11.1	-2.3
18. Manufacture of computer, electronic and optical products	29.2	-1.2
19. Manufacture of rubber and plastic products	10.0	-1.1
With Slower Negative Annual Growth Rates		
20. Manufacture of textiles	-17.0	-15.5
21. Manufacture of furniture	-28.6	-14.4
22. Printing and reproduction of recorded media	-11.2	-2.0

p - preliminary, r - revised

Table F. Year-on-Year Growth Rates (%) of VoNSI by Industry Division
December 2022^r and January 2023^p
(2018 =100)

INDUSTRY DIVISION	December 2022 ^r	January 2023 ^p
With Positive Annual Growth Rates from Negative Growth Rates in December 2022		
1. Manufacture of basic metals	-26.2	30.1
2. Manufacture of fabricated metal products, except machinery and equipment	-32.4	29.1
3. Manufacture of electrical equipment	-33.9	29.3
4. Manufacture of wearing apparel	-21.2	24.6
With Higher Annual Growth Rates		
5. Manufacture of food products	5.1	14.7
6. Manufacture of transport equipment	19.1	23.2
7. Other manufacturing and repair and installation of machinery and equipment	8.2	20.7
8. Manufacture of other non-metallic mineral products	10.5	10.9
With Slower Annual Growth Rates		
9. Manufacture of beverages	71.3	37.7
10. Manufacture of coke and refined petroleum products	37.1	31.7
11. Manufacture of machinery and equipment except electrical	48.7	24.8
12. Manufacture of paper and paper products	2.2	1.0
With Negative Annual Growth Rates from Positive Annual Growth Rates in December 2022		
13. Manufacture of tobacco products	8.5	-6.4
14. Manufacture of computer, electronic and optical products	26.1	-5.1
15. Manufacture of rubber and plastic products	4.6	-4.7
16. Manufacture of wood, bamboo, cane, rattan articles and related products	8.7	-2.9
17. Manufacture of chemical and chemical products	11.1	-1.2
With Slower Negative Annual Growth Rates		
18. Manufacture of textiles	-19.4	-17.6
19. Manufacture of furniture	-29.9	-16.5
20. Printing and reproduction of recorded media	-11.9	-3.1
21. Manufacture of basic pharmaceutical products and pharmaceutical preparations	-19.1	-0.3
22. Manufacture of leather and related products, including footwear	-17.6	-0.8

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_{ijm} = average capacity utilization rate for industry group j in industry division i at current month m
X_c = midpoint of capacity utilization rate at interval c
f_{cijm} = frequency of responding samples at interval c for industry group j in industry division i at current month m
n_{rijm} = total number of responding (good) establishments for industry group j in industry division i at current month m
n_{tijm} = 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_{im} = average capacity utilization rate for industry division i at current month m
W_{ij} = weight for industry group j in industry division i
AveCU_{ijm} = average capacity utilization rate for industry group j in industry division i at current month m
p_i = 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_m = average capacity utilization rate for total manufacturing at current month m
W_i = weight for industry division i
AveCU_{im} = 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*