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PHILIPPINE STATISTICS AUTHORITY

PRESS RELEASE

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

INDICATOR	FEBRUARY 2022	JANUARY 2023 ^r	FEBRUARY 2023 ^p
Production Index (2018=100)			
Value of Production Index (<i>VaPI</i>)	77.2	16.0	11.1
Volume of Production Index (<i>VoPI</i>)	69.8	11.2	7.2
Net Sales Index (2018=100)			
Value of Net Sales Index (<i>VaNSI</i>)	23.0^r	19.5	8.7
Volume of Net Sales Index (<i>VoNSI</i>)	17.9^r	14.5	4.9
Producer Price Index (2018=100)	4.4^r	4.4	3.6

p - preliminary, r - revised

Source: Philippine Statistics Authority

A. Year-on-year Growth for February 2023

1. Value of Production Index (VaPI)

The VaPI for manufacturing continued to register a two-digit year-on-year increment at 11.1 percent in February 2023, but slower than the January 2023 annual growth of 16.0 percent. In February 2022, the VaPI accelerated annually at a rate of 77.2 percent. (Figure 2, and Tables A and 1)

The slower annual growth of the VaPI in February 2023 was mainly contributed by the slower annual increase in the index of manufacture of food products industry division with 13.0 percent annual increment in February 2023 from 21.4 percent in the previous month. The manufacture of food products contributed 29.9 percent to



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the downtrend of VaPI for the manufacturing sector in February 2023. Out of the 22 industry divisions for the manufacturing sector, manufacture of food products had the highest weight¹ in the computation of VaPI.

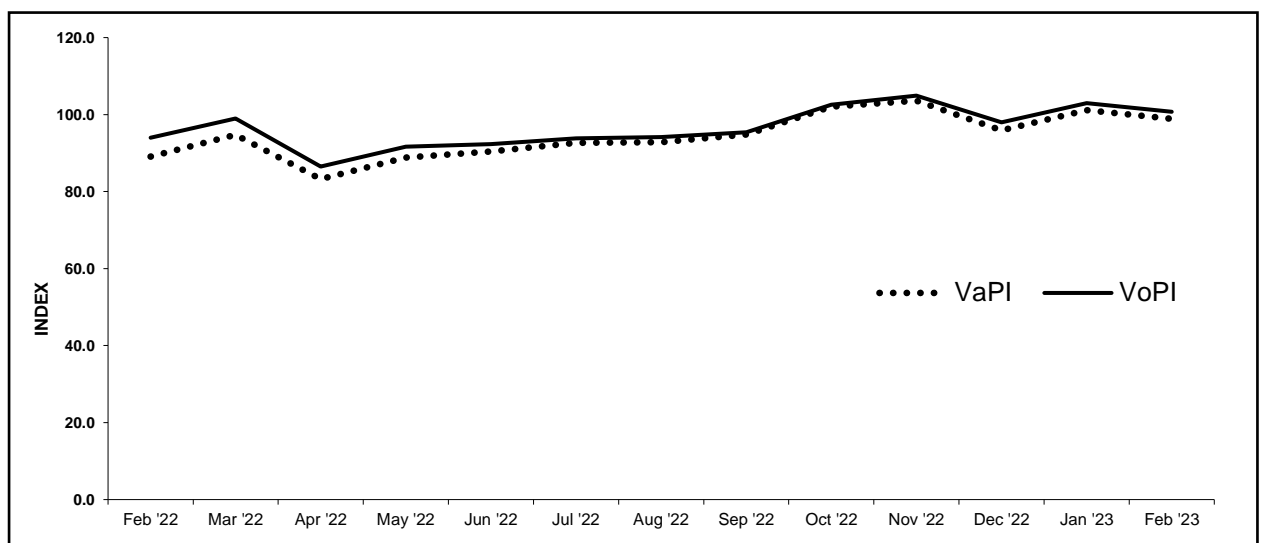
Other main contributors to the slower annual growth rate of VaPI in February 2023 were manufacture of computer, electronic and optical products posting a faster annual decline of -10.9 percent during the period from -3.1 percent annual drop in the previous month; and manufacture of other non-metallic mineral products registering a slower annual increment of 2.6 percent during the period from 27.2 percent annual increase in the previous month. In addition, slowdowns were observed in the annual growth rates of the indices of six industry divisions.

Furthermore, the indices of five industry divisions recorded negative year-on-year growth rates in February 2023 after posting annual increases in the previous month. The highest negative growth rate was led by manufacturing of wearing apparel posting an annual drop of -22.7 percent from 1.3 percent in the previous month. Also, faster negative annual growth rates were noted during the period in the indices of manufacture of furniture (-19.8%) and manufacture of rubber and plastic products (-7.8%).

On the contrary, four industry divisions registered higher annual positive growth rates in February 2023 than in the previous month, the highest annual growth was noted in manufacture of basic metals with an annual upturn of 30.7 percent during the period from 16.6 percent in the previous month.

Lastly, manufacture of coke and refined petroleum products (6.7%) and manufacture of fabricated metal products, except machinery and equipment (3.3%) exhibited positive annual growth rates during the period after posting annual declines in the past month. (Tables C and 1)

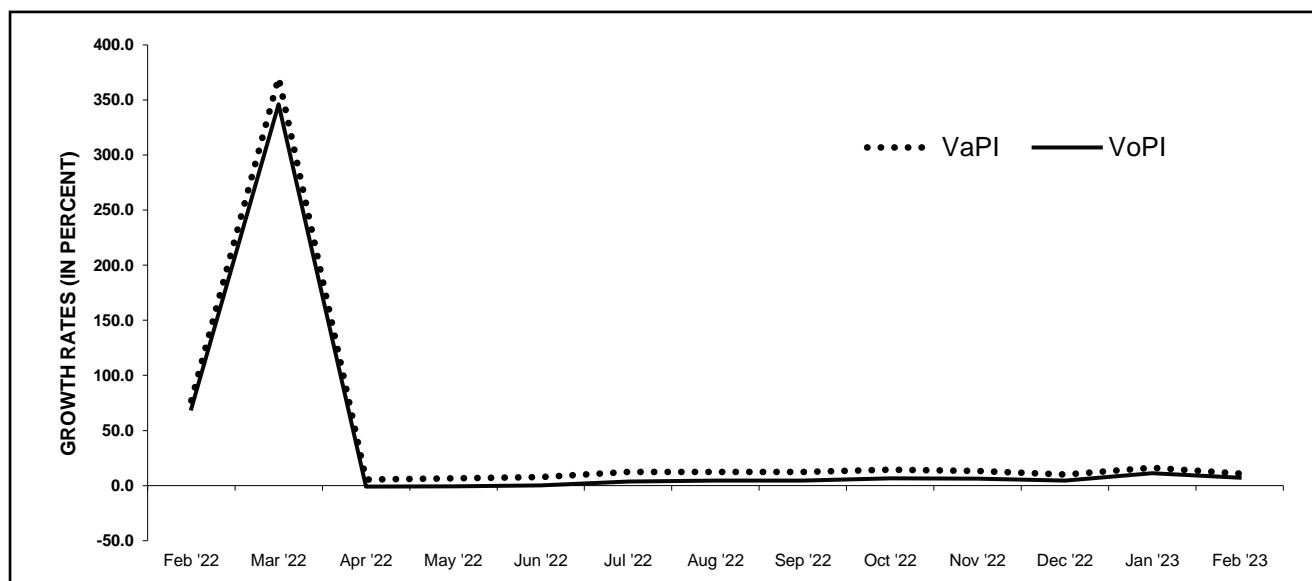
Figure 1. Value and Volume of Production Index for Total Manufacturing February 2022 - February 2023^p (2018 = 100)



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
February 2022 - February 2023^p (2018 = 100)



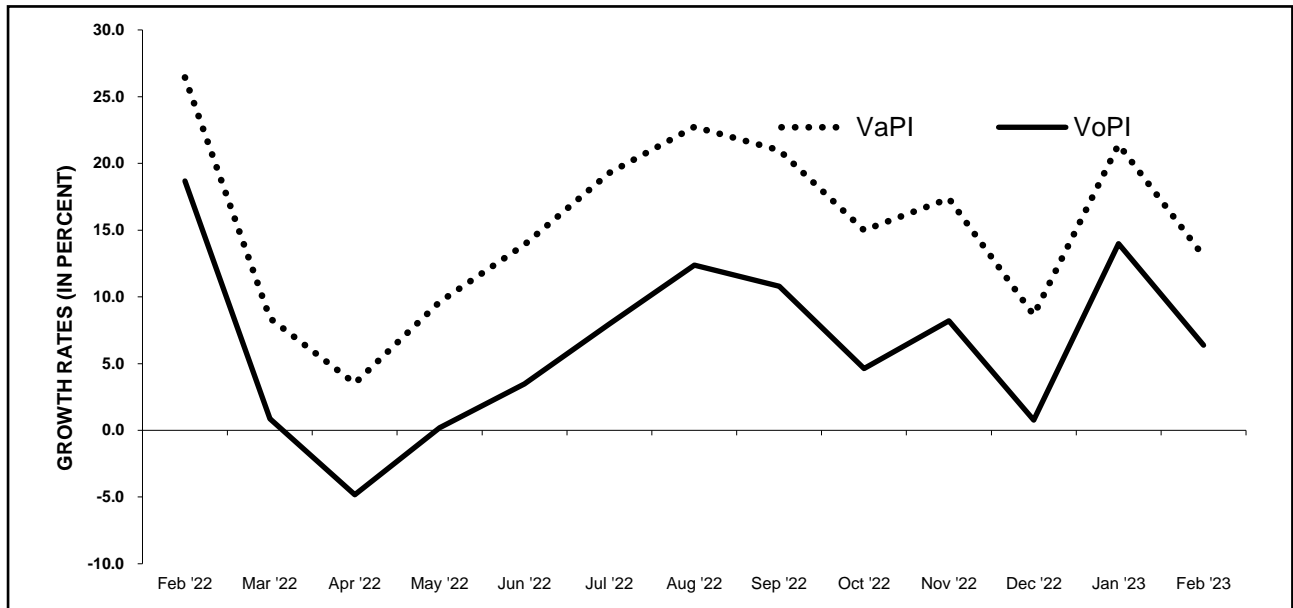
p - preliminary

Source: Philippine Statistics Authority

In February 2023, the VaPI for **manufacture of food products** registered an annual increment of 13.0 percent. This was slower compared with the January 2023 annual growth rate of 21.4 percent and with the February 2022 annual increase of 26.8 percent. (Figure 3, and Tables 1 and 1a)

The slower increase in the annual growth of the VaPI for manufacture of food products in February 2023 was primarily driven by the slower annual increase in the index of manufacture of grain mill products, starches and starch products industry group with 12.3 percent annual increment in February 2023 from 42.1 percent annual rate in the previous month. Other primary contributors to the slower year-on-year growth of VaPI for manufacture of food products were manufacture of dairy products with an annual upturn of 23.3 percent during the month from an annual growth rate of 35.4 percent in January 2023, and manufacture of prepared animal feeds with -6.6 percent annual decrease in February 2023 from 4.6 percent annual increment in the previous month. (Tables 1 and 1a)

Figure 3. Year-on-Year Changes (%) in the Production for Manufacture of Food Products February 2022 - February 2023^p (2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

2. Volume of Production Index (VoPI)

The VoPI for manufacturing recorded a year-on-year increase of 7.2 percent in February 2023, slower than the double-digit annual growth rate of 11.2 percent in the previous month. In February 2022, VoPI recorded a faster annual increment of 69.8 percent. (Figure 3, and Tables A and 2)

Similar to VaPI, the slower annual growth of VoPI in February 2023 was mainly due to the slower annual rate in the index of manufacture of food products at 6.4 percent from 14.0 percent in the previous month. The manufacture of food products contributed 29.7 percent to the downtrend of VoPI of the manufacturing sector in February 2023. Other main drivers to the decline of VoPI for the manufacturing sector were manufacture of computer, electronic and optical products, -14.2 percent from -6.9 percent; and manufacture of other non-metallic mineral products, -2.7 percent from 17.8 percent.

Other than these main contributors, the decline of the VoPI for the manufacturing sector in February 2023 was brought about by the following:

- a) Five industry divisions recorded slowdowns in the annual growth rates of their indices as compared to their annual growth rates in the previous month;
- b) Four industry divisions exhibited negative year-on-year annual rates after recording annual upturns in the previous month; and
- c) Three industry divisions recorded faster annual drops during the month than in January 2023.

In contrast, there were five industry divisions that posted higher annual growth rates in February 2023 than in the previous month, the highest annual rate was recorded in other manufacturing and repair and installation of machinery and equipment with an annual increment of 34.0 percent during the month from 33.4 percent in the previous month.

Meanwhile, manufacture of coke and refined petroleum products index registered an annual increase of 2.4 percent during the period from an annual drop of -11.7 percent in the previous month.

Lastly, manufacture of fabricated metal products, except machinery and equipment index exhibited a slower negative annual growth rate in February 2023 at -2.1 percent from -5.7 percent annual decline in the previous month. (Tables D and 2)

The VoPI for **manufacture of food products** registered an annual increment of 6.4 percent in February 2023. This was slower compared with the double-digit annual growth rates in January 2023 at 14.0 percent and February 2022 at 18.8 percent. (Figure 3, and Tables 2 and 2a)

The slower increase in the annual growth of VoPI for manufacture of food products in February 2023 was primarily attributed by the slower annual increase in the index of manufacture of grain mill products, starches and starch products industry group with 6.8 percent annual increment in February 2023 from 30.9 percent in the previous month. Other primary contributors to the slowdown in the year-on-year growth of VaPI for manufacture of food products were manufacture of dairy products with a slower annual upturn of 15.1 percent during the month from 27.2 percent in January 2023, and manufacture of prepared animal feeds with a faster annual decrease of -18.2 percent in February 2023 from -7.6 percent annual drop in the previous month. (Tables 2 and 2a)

3. Value of Net Sales Index (VaNSI)

The VaNSI for manufacturing continued to increase in February 2023 but at a slower annual rate of 8.7 percent, compared with its annual growth of 19.5 percent in the previous month. In February 2022, VaNSI also recorded a higher annual increase of 23.0 percent. (Figure 4, and Tables A and 3)

The slower year-on-year growth of VaNSI in February 2023 was mainly brought about by the slower annual increment in the index of manufacture of food products industry division with 9.6 percent annual increase during the month from an annual upturn of 21.9 percent in January 2023. The manufacture of food products contributed 29.9 percent to the slower annual growth of VaNSI of the manufacturing sector in February 2023.

Other main contributors to the slower annual growth rate of VaNSI in February 2023 were manufacture of computer, electronic and optical products with an annual decline of -17.1 percent during the period from an annual drop of -2.7 percent in the previous month; and manufacture of beverages with an annual growth of 17.5 percent in

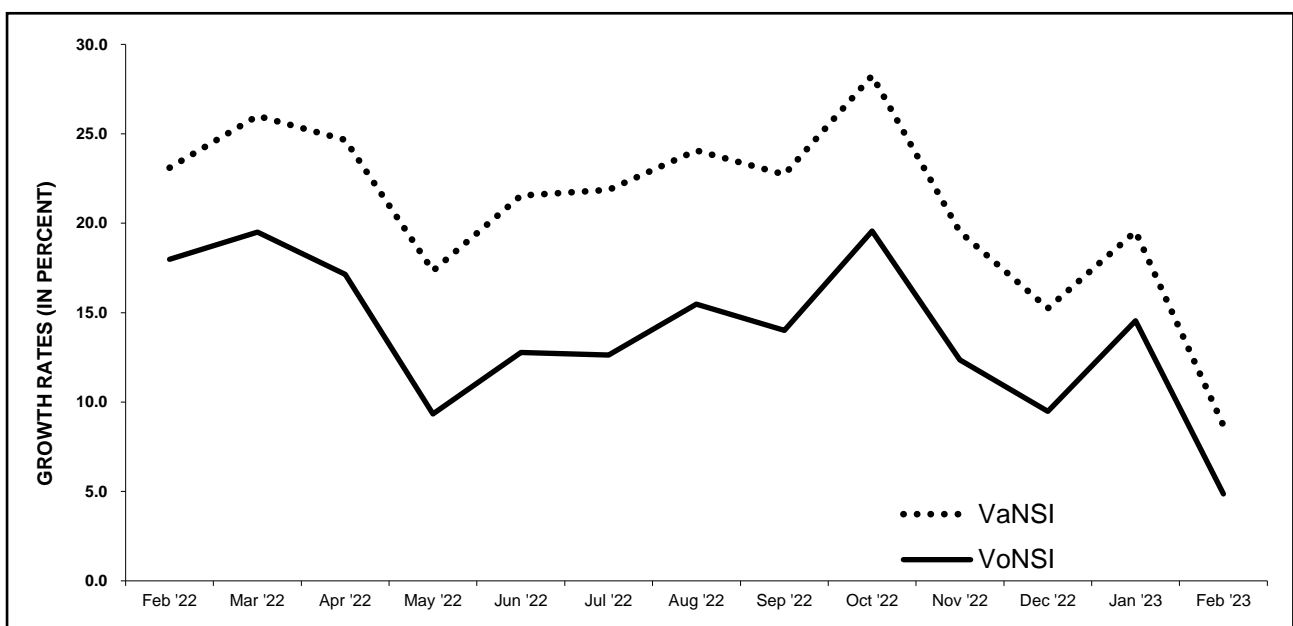
February 2023 from 39.2 percent in the previous month. In addition to these, slowdowns were observed in the annual growth rates of the indices of seven industry divisions during the month.

Furthermore, there were four industry divisions that posted annual drops in February 2023, after posting annual upturns in the previous month. This was led by manufacture of wearing apparel, which posted an annual decrease of -12.4 percent in February 2023 from 22.4 percent increase in the previous month. Faster annual decline was registered in manufacture of furniture at -15.9 percent during the month from an annual drop of -9.8 percent in January 2023.

In contrast, four industry divisions recorded higher annual growth rates in February 2023 than in January 2023. This was led by other manufacturing and repair and installation of machinery and equipment, which posted the highest annual growth rate of 63.6 percent during the month from a 22.6 percent growth in January 2023.

Completing the 22 industry divisions, three industry divisions exhibited positive annual growth rates in February 2023 after recording annual drops in the past month. (Tables E and 3)

Figure 4. Year-on-Year Changes (%) in Net Sales Index for Total Manufacturing February 2022 - February 2023^p (2018 = 100)

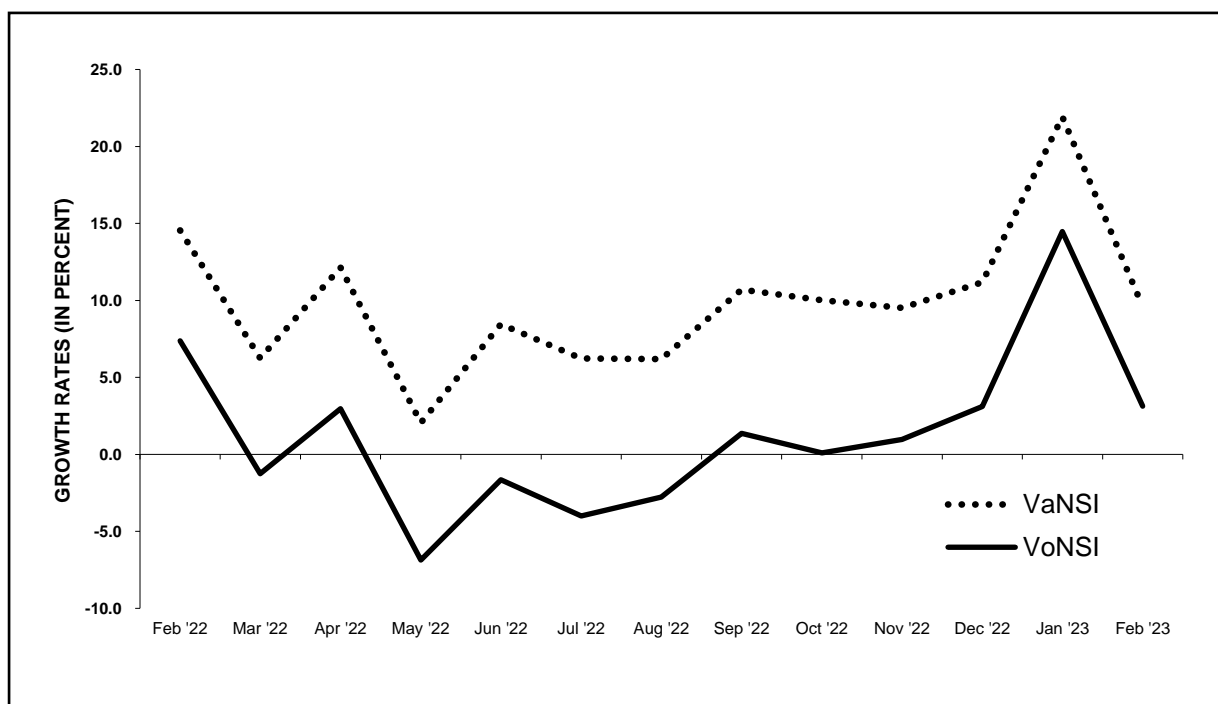


p - preliminary
Source: Philippine Statistics Authority

The VaNSI for **manufacture of food products** registered an annual increment of 9.6 percent in February 2023. This was lower compared with the January 2023 annual growth rate of 21.9 percent and with the February 2022 annual increase of 14.5 percent. (Figure 5, and Tables 3 and 3a)

The slowdown in the annual growth of VaNSI for manufacture of food products in February 2023 was mainly contributed by the slower annual increase in the index of manufacture of grain mill products, starches and starch products industry group with 16.8 percent annual increment in February 2023 from an annual growth rate of 58.2 percent in the previous month. Other primary contributors to the slower year-on-year growth of VaNSI for manufacture of food products were the annual declines noted in processing and preserving of fruits and vegetables index at -16.3 percent in February 2023 from 9.8 percent annual increment in the previous month, and manufacture of vegetable and animal oils and fats with a faster annual decrease of -20.3 percent during the month from -1.8 percent annual drop in January 2023. (Table 3a)

Figure 5. Year-on-Year Changes (%) in the Net Sales Manufacture of Food Products: February 2022 - February 2023^p (2018 = 100)



p - preliminary
 Source: Philippine Statistics Authority

4. Volume of Net Sales Index (VoNSI)

The VoNSI for manufacturing continued to register a year-on-year increment in February 2023, however, at a slower pace of 4.9 percent relative to the double-digit annual growth of 14.5 percent in January 2023. In February 2022, VoNSI recorded a higher annual increase of 17.9 percent. (Figure 4, and Tables A and 4)

The slower year-on-year growth of VoNSI in February 2023 was primarily brought about by the slower annual increase in the index of manufacture of food products industry division at 3.1 percent in February 2023 from 14.5 percent annual rate in January 2023. The manufacture of food products contributed 31.2 percent to the downtrend of VoNSI of the manufacturing sector in February 2023.

Other main contributors to the slower annual growth rate of VoNSI in February 2023 were manufacture of computer, electronic and optical products with -20.2 percent annual decline during the period from -6.5 percent in the previous month; and manufacture of beverages with an annual growth of 11.8 percent in February 2023 from 32.7 percent in the previous month.

Also contributed to the lower annual growth rate of VoNSI for manufacturing sector in February 2023 were the following:

- a) Five industry divisions had lower annual growth rates than in the previous month;
- b) Five industry divisions recorded annual drops, after posting annual increments in the previous month; and
- c) Two industry divisions registered faster downturns than in the previous month.

On the contrary, higher annual growth rates were noted during the month in the indices of four industry divisions, the highest increase was noted in other manufacturing and repair and installation of machinery and equipment at 63.3 percent from 21.0 percent;

The remaining three industry divisions exhibited annual increments in February 2023, after registering annual declines in January 2023. (Tables F and 4)

The VoNSI for **manufacture of food products** registered an annual increment of 3.1 percent in February 2023 from a double-digit annual growth of 14.5 percent in January 2023. In February 2022, the VoNSI for manufacture of food products posted an annual increase of 7.4 percent. (Figure 5 and and Tables 4 and 4a)

The slowdown in the year-on-year growth of VoNSI for manufacture of food products in February 2023 was primarily contributed by the slower annual growth rates in the indices of these three industry groups:

- a) Manufacture of grain mill products, starches and starch products, 10.9 percent from 45.8 percent in January 2023;
- b) Processing and preserving of fruits and vegetables, -15.3 percent from 11.0 percent in the previous month; and
- c) Manufacture of vegetable and animal oils and fats, -18.3 percent from -0.5 percent in the past month. (Table 4a)

B. Average Capacity Utilization Rate

Based on responding establishments, the average capacity utilization rate for manufacturing sector in February 2023 was reported at 72.6 percent from 72.8 percent in the previous month.

Almost all of the industry divisions reported capacity utilization rates of more than 50 percent. The top three industry divisions in terms of reported capacity utilization

rate were manufacture of machinery and equipment except electrical (81.6%), manufacture of transport equipment (78.9%), and manufacture of coke and refined petroleum products (77.8%). (Table 6)

The proportion of establishments that operated at full capacity (90% to 100%) was 22.1 percent of the total number of responding establishments. Meanwhile, 35.0 percent operated at 70 to 89 percent capacity, while 42.9 percent operated below 70 percent capacity. (Table B)

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

Capacity Utilization	Number of Responding Establishments	Percent Share to Responding Establishments
TOTAL	587	100.0
Below 50%	90	15.3
50% - 59%	96	16.4
60% - 69%	66	11.2
70% - 79%	92	15.7
80% - 89%	113	19.3
90% - 100%	130	22.1

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.
- 3) There were two (2) 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

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

INDUSTRY DIVISION	January 2023 ^r	February 2023 ^p
With Slower Annual Growth Rates		
1. Manufacture of food products	21.4	13.0
2. Manufacture of other non-metallic mineral products	27.2	2.6
3. Manufacture of transport equipment	32.6	25.1
4. Manufacture of electrical equipment	60.1	23.0
5. Manufacture of beverages	32.9	28.3
6. Manufacture of basic pharmaceutical products and pharmaceutical preparations	12.6	3.3
7. Manufacture of paper and paper products	11.4	7.2
8. Other manufacturing and repair and installation of machinery and equipment	35.1	34.3
With Negative Annual Growth Rates from Positive Annual Growth Rates in January 2023		
9. Manufacture of wearing apparel	1.3	-22.7
10. Manufacture of tobacco products	5.2	-9.6
11. Manufacture of leather and related products, including footwear	18.3	-4.6
12. Manufacture of textiles	8.6	-3.1
13. Manufacture of wood, bamboo, cane, rattan articles and related products	11.3	-2.4
With Faster Negative Annual Growth Rates		
14. Manufacture of furniture	-9.4	-19.8
15. Manufacture of computer, electronic and optical products	-3.1	-10.9
16. Manufacture of rubber and plastic products	-1.1	-7.8
With Higher Annual Growth Rates		
17. Manufacture of basic metals	16.6	30.7
18. Printing and reproduction of recorded media	8.7	19.5
19. Manufacture of machinery and equipment except electrical	12.9	17.3
20. Manufacture of chemical and chemical products	5.3	6.1
With Positive Annual Growth Rates from Negative Growth Rates in January 2023		
21. Manufacture of coke and refined petroleum products	-4.8	6.7
22. Manufacture of fabricated metal products, except machinery and equipment	-0.5	3.3

p - preliminary, r - revised

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

INDUSTRY DIVISION	January 2023 ^r	February 2023 ^p
With Slower Annual Growth Rates		
1. Manufacture of food products	14.0	6.4
2. Manufacture of electrical equipment	58.9	22.3
3. Manufacture of transport equipment	33.6	27.3
4. Manufacture of beverages	26.7	22.0
5. Manufacture of basic pharmaceutical products and pharmaceutical preparations	11.8	3.2
6. Manufacture of paper and paper products	4.9	1.0
With Negative Annual Growth Rates from Positive Annual Growth Rates in January 2023		
7. Manufacture of tobacco products	1.2	-13.0
8. Manufacture of leather and related products, including footwear	13.3	-8.9
9. Manufacture of textiles	5.8	-5.8
10. Manufacture of wood, bamboo, cane, rattan articles and related products	10.4	-3.1
11. Manufacture of other non-metallic mineral products	17.8	-2.7
With Faster Negative Annual Growth Rates		
12. Manufacture of wearing apparel	-3.0	-25.6
13. Manufacture of furniture	-11.7	-21.7
14. Manufacture of computer, electronic and optical products	-6.9	-14.2
15. Manufacture of rubber and plastic products	-4.6	-10.9
With Higher Annual Growth Rates		
16. Other manufacturing and repair and installation of machinery and equipment	33.4	34.0
17. Manufacture of basic metals	15.2	30.8
18. Printing and reproduction of recorded media	6.0	17.4
19. Manufacture of machinery and equipment except electrical	8.9	14.6
20. Manufacture of chemical and chemical products	2.3	3.9
With Positive Annual Growth Rates from Negative Growth Rates in January 2023		
21. Manufacture of coke and refined petroleum products	-11.7	2.4
With Slower Negative Annual Growth Rates		
22. Manufacture of fabricated metal products, except machinery and equipment	-5.7	-2.1

p - preliminary, r - revised

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

INDUSTRY DIVISION	January 2023 ^r	February 2023 ^p
With Slower Annual Growth Rates		
1. Manufacture of food products	21.9	9.6
2. Manufacture of beverages	39.2	17.5
3. Manufacture of coke and refined petroleum products	42.0	30.9
4. Manufacture of basic metals	25.0	14.4
5. Manufacture of other non-metallic mineral products	13.2	1.5
6. Manufacture of transport equipment	27.0	23.9
7. Manufacture of chemical and chemical products	7.0	1.0
8. Manufacture of machinery and equipment except electrical	23.3	17.0
9. Manufacture of electrical equipment	25.7	22.6
With Negative Annual Growth Rates from Positive Annual Growth Rates in January 2023		
10. Manufacture of wearing apparel	22.4	-12.4
11. Manufacture of textiles	5.9	-8.4
12. Manufacture of rubber and plastic products	1.9	-5.9
13. Manufacture of paper and paper products	13.0	-0.2
With Faster Negative Annual Growth Rates		
14. Manufacture of computer, electronic and optical products	-2.7	-17.1
15. Manufacture of furniture	-9.8	-15.9
With Higher Annual Growth Rates		
16. Other manufacturing and repair and installation of machinery and equipment	22.6	63.6
17. Manufacture of fabricated metal products, except machinery and equipment	29.6	31.4
18. Printing and reproduction of recorded media	10.9	18.8
19. Manufacture of basic pharmaceutical products and pharmaceutical preparations	0.8	2.6
With Positive Annual Growth Rates from Negative Growth Rates in January 2023		
20. Manufacture of wood, bamboo, cane, rattan articles and related products	-2.0	12.2
21. Manufacture of tobacco products	-3.2	9.9
22. Manufacture of leather and related products, including footwear	-1.1	5.2

p - preliminary, r - revised

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

INDUSTRY DIVISION	January 2023 ^r	February 2023 ^p
With Slower Annual Growth Rates		
1. Manufacture of food products	14.5	3.1
2. Manufacture of beverages	32.7	11.8
3. Manufacture of coke and refined petroleum products	31.7	25.6
4. Manufacture of basic metals	23.5	14.5
5. Manufacture of transport equipment	28.0	26.1
6. Manufacture of machinery and equipment except electrical	19.0	14.3
7. Manufacture of electrical equipment	24.8	21.9
With Negative Annual Growth Rates from Positive Annual Growth Rates in January 2023		
8. Manufacture of wearing apparel	17.1	-15.6
9. Manufacture of textiles	3.2	-11.0
10. Manufacture of paper and paper products	6.4	-5.9
11. Manufacture of other non-metallic mineral products	4.9	-3.8
12. Manufacture of chemical and chemical products	4.0	-1.2
With Faster Negative Annual Growth Rates		
13. Manufacture of computer, electronic and optical products	-6.5	-20.2
14. Manufacture of furniture	-12.1	-17.9
15. Manufacture of rubber and plastic products	-1.8	-9.1
With Higher Annual Growth Rates		
16. Other manufacturing and repair and installation of machinery and equipment	21.0	63.3
17. Manufacture of fabricated metal products, except machinery and equipment	22.8	24.5
18. Printing and reproduction of recorded media	8.1	16.6
19. Manufacture of basic pharmaceutical products and pharmaceutical preparations	0.1	2.5
With Positive Annual Growth Rates from Negative Growth Rates in January 2023		
20. Manufacture of wood, bamboo, cane, rattan articles and related products	-2.8	11.4
21. Manufacture of tobacco products	-6.8	5.8
22. Manufacture of leather and related products, including footwear	-5.3	0.5

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

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

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*