



PRESS RELEASE

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

Date of Release: 06 January 2022, 9:00AM
Reference No. 2023-010

Table A. Year-on-Year Growth Rates (%) of Production Index, Net Sales Index, and Producer Price Index for Total Manufacturing (2018=100): November 2021, October 2022^r, and November 2022^p (in Percent)

TOTAL MANUFACTURING	NOVEMBER 2021	OCTOBER 2022^r	NOVEMBER 2022^p
Production Index (2018=100)			
Value (VaPI)	30.0	13.0	12.7
Volume (VoPI)	28.6	5.3	5.9
Net Sales Index (2018=100)			
Value (VaNSI)	29.6	29.4	19.7
Volume (VoNSI)	28.2	20.6	12.5
Producer Price Index (2018=100)	1.1	7.3	6.4

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



PRODUCTION

Value of Production Index increased at a slower pace

The Value of Production Index (VaPI) continued to register a two-digit year-on-year increment of 12.7 percent in November 2022, slower than the October 2022 annual growth of 13.0 percent. In November 2021, the VaPI accelerated annually at a rate of 30.0 percent. (Tables A and 1)

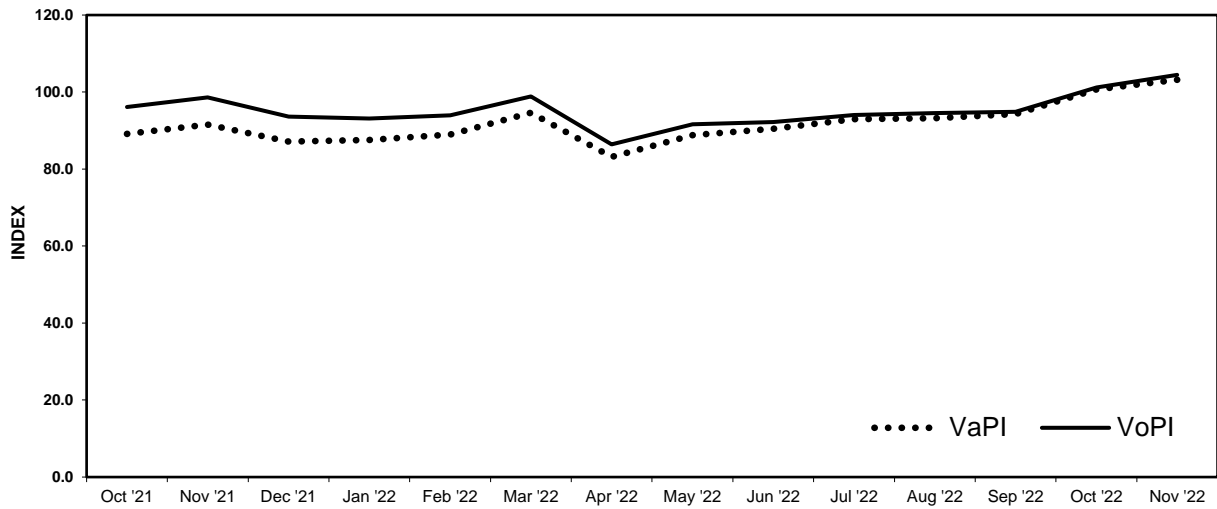
Contributory to the annual increase of VaPI were the positive growth rates exhibited by 17 of the 22 industry divisions. Among these, **manufacture of machinery and equipment except electrical** posted the highest annual growth rate of 67.9 percent in November 2022. On the other hand, the remaining five industry divisions posted decrements in their production with **manufacture of electrical equipment** registering the fastest annual decline of -53.6 percent. (Tables B.1 and 1)

Volume of Production Index continued to expand

The Volume of Production Index (VoPI) recorded a year-on-year increase of 5.9 percent in November 2022. This rate was faster than the annual increase of 5.3 percent in the previous month. In November 2021, VoPI expanded at an annual growth rate of 28.6 percent. (Tables A and 2)

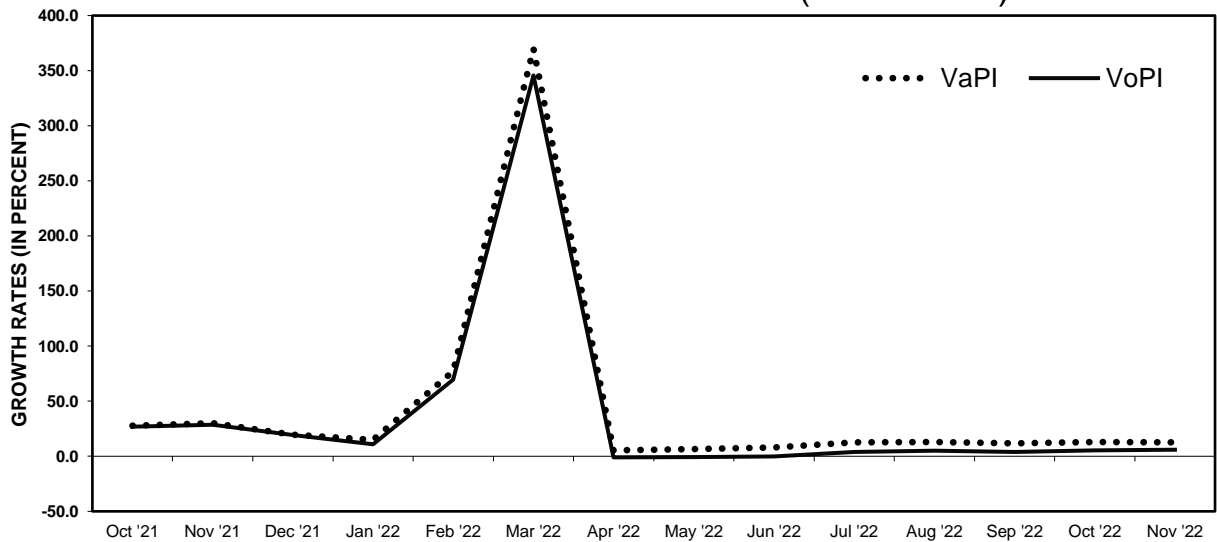
Out of the 22 industry divisions, 15 reported positive annual growth rates, which was led by **manufacture of machinery and equipment except electrical** with 68.5 percent annual growth rate. On the contrary, seven industry divisions posted annual decreases with **manufacture of electrical equipment** exhibiting the fastest annual drop of -54.5 percent. (Tables B.2 and 2)

Figure 1. Value and Volume of Production Index for Total Manufacturing
October 2021 - November 2022^p (2018 = 100)



p - preliminary
Source: Philippine Statistics Authority

Figure 2. Year-on-Year Growth Rates (%) of Value and Volume of Production Index for Total Manufacturing
October 2021 - November 2022^p (2018 = 100)



p - preliminary
Source: Philippine Statistics Authority

Table B.1. Year-on-Year Growth Rate (%) of Value of Production Index
by Industry Division: October 2022^r and November 2022^p
(2018 =100)

INDUSTRY DIVISION	October 2022 ^r	November 2022 ^p
Gainers		
Manufacture of computer, electronic, and optical products	13.7	33.7
Manufacture of fabricated metal products, except machinery and equipment	51.2	53.3
Manufacture of transport equipment	28.3	21.1
Manufacture of coke and refined petroleum products	19.0	21.8
Manufacture of chemical and chemical products	52.0	40.0
Manufacture of food products	3.5	7.6
Manufacture of beverages	69.8	16.1
Manufacture of machinery and equipment except electrical	74.9	67.9
Other manufacturing and repair and installation of machinery and equipment	20.2	28.1
Manufacture of rubber and plastic products	10.7	10.4
Manufacture of paper and paper products	18.9	13.1
Manufacture of other non-metallic mineral products	4.8	3.7
Manufacture of wood, bamboo, cane, rattan articles and related products	31.5	10.4
Manufacture of textiles	2.4	13.8
Manufacture of leather and related products, including footwear	12.0	9.7
Manufacture of basic pharmaceutical products and pharmaceutical preparations	-1.8	2.4
Manufacture of wearing apparel	-3.1	0.7
Losers		
Manufacture of basic metals	-21.7	-23.0
Manufacture of electrical equipment	-55.7	-53.6
Printing and reproduction of recorded media	-15.9	-14.5
Manufacture of furniture	-25.4	-18.0
Manufacture of tobacco products	4.0	-5.7

p - preliminary, r - revised

Table B.2. Year-on-Year Growth Rate (%) of Volume of Production Index
by Industry Division: October 2022^r and November 2022^p
(2018 = 100)

INDUSTRY DIVISION	October 2022 ^r	November 2022 ^p
Gainers		
Manufacture of computer, electronic, and optical products	5.4	26.8
Manufacture of fabricated metal products, except machinery and equipment	45.9	46.2
Manufacture of transport equipment	21.8	15.0
Manufacture of chemical and chemical products	39.9	29.4
Manufacture of machinery and equipment except electrical	79.1	68.5
Manufacture of beverages	61.7	10.6
Manufacture of coke and refined petroleum products	3.8	7.1
Other manufacturing and repair and installation of machinery and equipment	17.3	25.1
Manufacture of rubber and plastic products	4.8	4.8
Manufacture of paper and paper products	12.4	7.1
Manufacture of textiles	-1.1	10.6
Manufacture of wood, bamboo, cane, rattan articles and related products	27.3	5.9
Manufacture of leather and related products, including footwear	8.3	5.9
Manufacture of other non-metallic mineral products	-1.8	0.4
Manufacture of basic pharmaceutical products and pharmaceutical preparations	-2.5	2.0
Losers		
Manufacture of basic metals	-23.7	-25.1
Manufacture of electrical equipment	-56.8	-54.5
Printing and reproduction of recorded media	-15.9	-14.3
Manufacture of furniture	-26.9	-19.2
Manufacture of tobacco products	0.7	-8.0
Manufacture of food products	-5.6	-0.4
Manufacture of wearing apparel	-6.2	-2.6

p - preliminary, r - revised

Source: Philippine Statistics Authority

NET SALES

Value of Net Sales Index posted slower increment

The Value of Net Sales Index (VaNSI) maintained a double-digit annual growth rate in November 2022, however, at a slower rate of 19.7 percent compared with the annual increase in October 2022 of 29.4 percent. In November 2021, VaNSI also recorded an annual growth of 29.6 percent. (Tables A and 3)

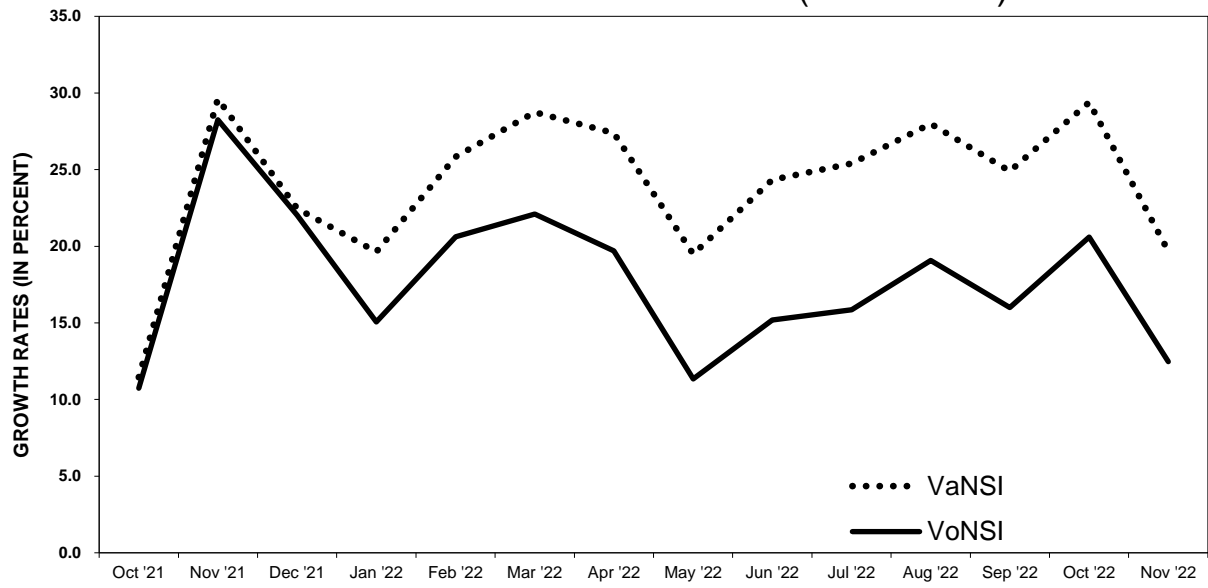
The increase in VaNSI for November 2022 was contributed by the expansion in the sales of 13 out of the 22 industry divisions. Among these, the fastest annual growth was exhibited by **manufacture of beverages** registering a two-digit annual increment of 93.4 percent. In contrast, nine industry divisions showed downturns during the period with **manufacture of furniture** recording the fastest annual drop of -40.2 percent. (Tables C.1 and 3)

Volume of Net Sales Index also slowed down in growth

The Volume of Net Sales Index (VoNSI) likewise posted an annual growth but a slower rate of 12.5 percent in November 2022 compared with its 20.6 percent annual upturn in October 2022. In November 2021, VoNSI recorded an annual increase of 28.2 percent. (Tables A and 4)

The annual increment in VoNSI for November 2022 was attributed to the annual growths in sales of half of the 22 industry divisions. Among these, the fastest annual increase was observed in **manufacture of beverages** with 84.2 percent annual growth rate. Meanwhile, the remaining half of the 22 industry divisions registered annual decreases in their sales with **manufacture of furniture** registering the fastest annual decline of -41.1 percent. (Tables C.2 and 4)

Figure 3. Year-on-Year Changes (%) in Net Sales:
October 2021 - November 2022^p (2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

Table C.1. Year-on-Year Growth Rate (%) of Value of Net Sales Index
by Industry Division: October 2022^r and November 2022^p
(2018 =100)

INDUSTRY DIVISION	October 2022 ^r	November 2022 ^p
Gainers		
Manufacture of beverages	132.5	93.4
Manufacture of coke and refined petroleum products	64.8	56.1
Manufacture of computer, electronic, and optical products	61.0	33.2
Manufacture of transport equipment	60.7	49.0
Manufacture of machinery and equipment except electrical	52.2	47.5
Manufacture of paper and paper products	15.8	15.5
Printing and reproduction of recorded media	9.9	18.7
Other manufacturing and repair and installation of machinery and equipment	29.0	15.0
Manufacture of tobacco products	9.7	9.0
Manufacture of rubber and plastic products	9.3	3.0
Manufacture of chemical and chemical products	0.9	2.1
Manufacture of leather and related products, including footwear	36.2	19.5
Manufacture of textiles	-5.6	6.2
Losers		
Manufacture of basic metals	-21.7	-17.3
Manufacture of electrical equipment	-38.5	-38.2
Manufacture of food products	3.1	-2.1
Manufacture of furniture	-47.0	-40.2
Manufacture of fabricated metal products, except machinery and equipment	-13.7	-2.1
Manufacture of other non-metallic mineral products	0.7	-1.4
Manufacture of wood, bamboo, cane, rattan articles and related products	4.0	-2.8
Manufacture of wearing apparel	1.5	-1.4
Manufacture of basic pharmaceutical products and pharmaceutical preparations	-2.7	-1.5

p - preliminary, r - revised

Source: Philippine Statistics Authority

Table C.2. Year-on-Year Growth Rate (%) of Volume of Net Sales Index by Industry Division: October 2022^r and November 2022^p (2018 = 100)

INDUSTRY DIVISION	October 2022 ^r	November 2022 ^p
Gainers		
Manufacture of beverages	121.3	84.2
Manufacture of transport equipment	52.5	41.4
Manufacture of computer, electronic, and optical products	49.2	26.4
Manufacture of coke and refined petroleum products	43.8	37.2
Manufacture of machinery and equipment except electrical	55.9	48.0
Printing and reproduction of recorded media	10.0	18.9
Other manufacturing and repair and installation of machinery and equipment	25.9	12.3
Manufacture of paper and paper products	9.5	9.4
Manufacture of tobacco products	6.2	6.4
Manufacture of leather and related products, including footwear	31.6	15.3
Manufacture of textiles	-8.9	3.2
Losers		
Manufacture of food products	-5.9	-9.4
Manufacture of basic metals	-23.7	-19.6
Manufacture of electrical equipment	-40.1	-39.4
Manufacture of furniture	-48.1	-41.1
Manufacture of fabricated metal products, except machinery and equipment	-16.7	-6.7
Manufacture of chemical and chemical products	-7.1	-5.7
Manufacture of other non-metallic mineral products	-5.7	-4.5
Manufacture of rubber and plastic products	3.5	-2.2
Manufacture of wood, bamboo, cane, rattan articles and related products	0.6	-6.7
Manufacture of wearing apparel	-1.7	-4.7
Manufacture of basic pharmaceutical products and pharmaceutical preparations	-3.4	-1.9

p - preliminary, r - revised

Source: Philippine Statistics Authority

MANUFACTURE OF FOOD PRODUCTS

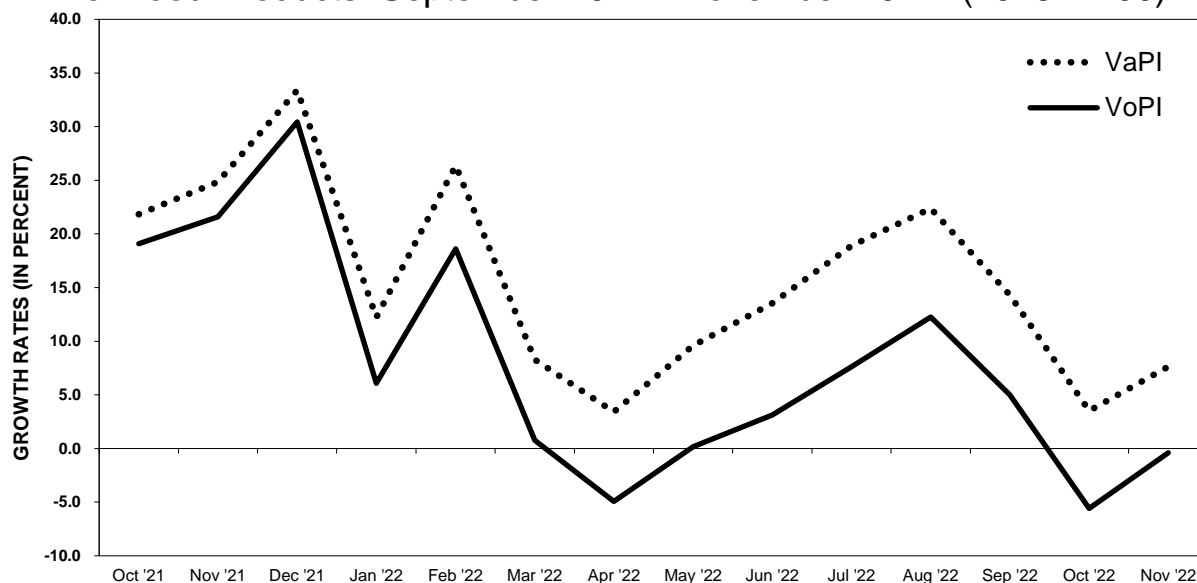
Value of production for manufacture of food products sustained growth but exhibited decline in terms of volume

In November 2022, the VaPI for manufacture of food products registered an annual increment of 7.6 percent, however, its VoPI posted an annual downturn of -0.4 percent. (Tables 1 and 2)

All industry groups under the manufacture of food products recorded annual increments in their VaPI in November 2022, except for **manufacture of prepared animal feeds** which posted an annual rate of -16.5 percent. Four of the seven industry groups that exhibited upturns during this period posted double-digit annual increases led by **manufacture of grain mill products, starches and starch products** with an annual growth rate of 59.4 percent. (Table 1a)

Meanwhile, the decrease in the November 2022 VoPI for the manufacture of food products was attributed by the annual declines in the following: **manufacture of prepared animal feeds** (-27.7%), **processing and preserving of fish, crustaceans and mollusks** (-11.9%), and **manufacture of other food products** (e.g., bakery products, sugar, candies, etc.) (-4.0%). (Table 2a)

Figure 4. Year-on-Year Changes (%) in the Production for Manufacture of Food Products: September 2021 - November 2022^p (2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

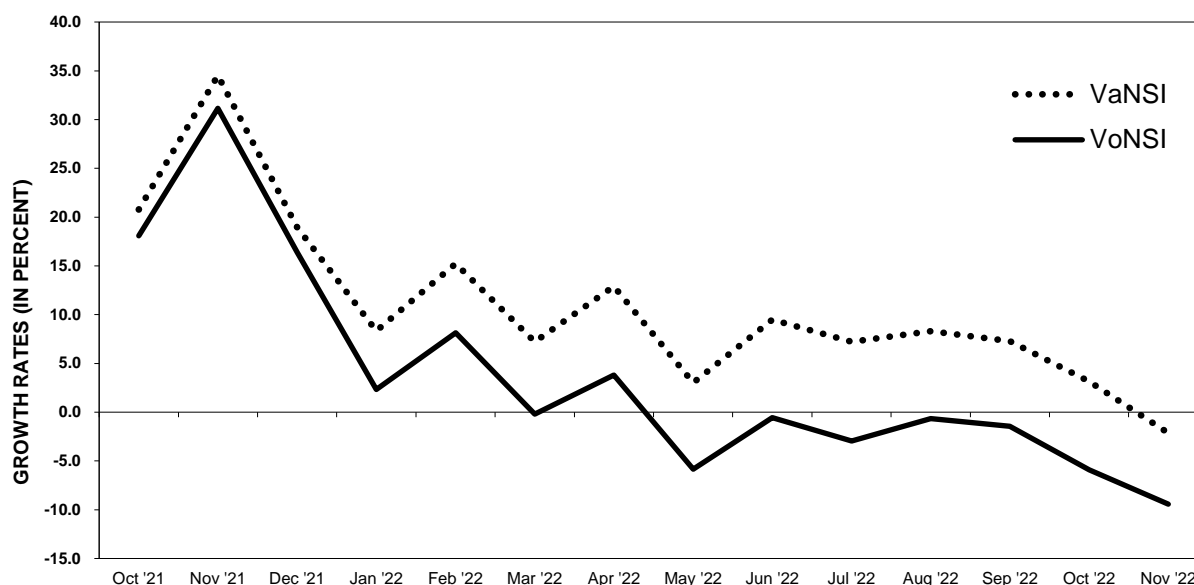
The value and volume of net sales for manufacture of food products dropped

The VaNSI and VoNSI for manufacture of food products both exhibited annual decreases of -2.1 percent and -9.4 percent, respectively, in November 2022. (Tables 3 and 4)

The reduction in November 2022 VaNSI was attributed by the annual decrements in the following: **manufacture of dairy products** (-8.6%), **manufacture of other food products** (e.g., bakery products, sugar, candies, etc.) (-3.4%), and **manufacture of vegetable and animal oils and fats** (-3.0%). (Table 3a)

Contributory to the downturn of the November 2022 VoNSI for the manufacture of food products were the annual drops recorded by five industry groups. Of these five industry groups, three posted double-digit annual declines led by **manufacture of dairy products** with an annual decrease of -12.9 percent. (Table 4a)

Figure 5. Year-on-Year Changes (%) in the Net Sales Manufacture of Food Products: October 2021 - November 2022^p (2018 = 100)



p - preliminary

Source: Philippine Statistics Authority

CAPACITY UTILIZATION

Average capacity utilization rate for manufacturing slightly increased

Based on responding establishments, the average capacity utilization rate for manufacturing sector in November 2022 was reported at 72.5 percent, from 72.4 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** (56.8%). The top three industry divisions in terms of reported capacity utilization rate were **manufacture of computer, electronic, and optical products** (80.6%), **manufacture of machinery and equipment except electrical** (80.0%), and **manufacture of furniture** (79.0%). (Table 6)

Almost one-fifth of responding establishments operated at full capacity

The proportion of establishments that operated at full capacity (90% to 100%) was 18.7 percent of the total number of responding

establishments. Meanwhile, 44.6 percent operated at 70 to 89 percent capacity, while 36.7 percent operated below 70 percent capacity. (Table D)

Table D. Distribution of Responding Establishments by Capacity Utilization for Total Manufacturing: November 2022^p

Capacity Utilization	Number of Responding Establishments	Percent Share to Responding Establishments
TOTAL	563	100.0
Below 50%	72	12.8
50% - 59%	68	12.0
60% - 69%	67	11.9
70% - 79%	98	17.4
80% - 89%	153	27.2
90% - 100%	105	18.7

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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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.

Another 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

$$\text{VaPI}_{ijm} = \frac{V_{ijm}}{V_{ij(m-1)}} \times \text{VaPI}_{ij(m-1)}$$

where:

- VaPI_{ijm} = VaPI for industry group j in industry division i at current month m
- $\text{VaPI}_{ij(m-1)}$ = 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

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

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

$VaPI_{ijm}$ = VaPI for industry group j in industry division i at current month m

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

b. Computation of Index for Industry Division Level

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

where:

$VoPI_{im}$ = VoPI for industry division i at current month m

$VaPI_{im}$ = VaPI for industry division i at current month m

PPI_{im} = PPI for industry division i at current month m

c. Computation of Index for Total Manufacturing

$$VoPI_m = \frac{VaPI_m}{PPI_m}$$

where:

$VoPI_m$ = VoPI for total manufacturing at current month m

$VaPI_m$ = VaPI for total manufacturing at current month m

PPI_m = PPI for total manufacturing at current month m

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

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

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 during the release date. Results are revised accordingly when the actual data are received and 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*
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*