



PRESS RELEASE

**PRODUCTION INDEX AND NET SALES INDEX
(Monthly Integrated Survey of Selected Industries)
April 2021
(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): April 2020, March 2021^r, and April 2021^p (in Percent)

TOTAL MANUFACTURING	APRIL 2020	MARCH 2021	APRIL 2021^p
Production Index (2018=100)			
Value (VaPI)	-66.6	-74.2	154.3
Volume (VoPI)	-64.8	-73.3^r	162.1
Net Sales Index (2018=100)			
Value (VaNSI)	-70.3	17.1^r	196.4
Volume (VoNSI)	-68.8	21.2^r	205.4
Producer Price Index (2018=100)	-5.0	-3.4^r	-3.0

p – preliminary, r- revised

Source: Philippine Statistics Authority



PRODUCTION

Value of Production bounced back

The Value of Production Index (VaPI) for manufacturing rebounded in April 2021 as it posted an annual increase of 154.3 percent, from a -74.2 percent annual drop in the previous month. The year-on-year growth rate in April 2021 was the first positive growth since April 2019 and the highest annual increase in the 2018-based data series. In April 2020, VaPI dropped at an annual rate of -66.6 percent. (*Tables A and 1*)

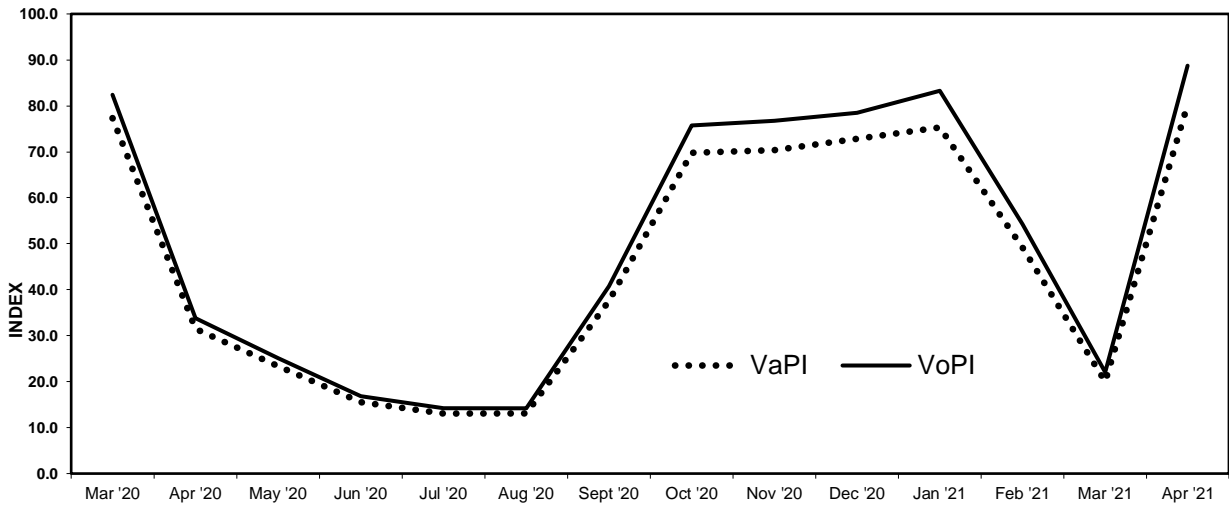
The increment in VaPI was brought about by the positive growth rates of 20 industry divisions, 14 of which posted three-digit annual growth rates with **manufacture of basic metals** as the highest at 729.1 percent. On the other hand, the remaining two industry divisions, namely, **manufacture of coke and refined petroleum products** and **manufacture of basic pharmaceutical products and pharmaceutical preparations** recorded double-digit decrements of -24.5 percent and -19.4 percent, respectively. (*Tables 1-A and 1*)

Volume of Production likewise expanded

The Volume of Production Index (VoPI) went up by 162.1 percent in April 2021, recovering from a negative -73.3 percent annual decline in the previous month. In April 2020, the annual decrease of VoPI was recorded at -64.8 percent. (*Tables A and 2*)

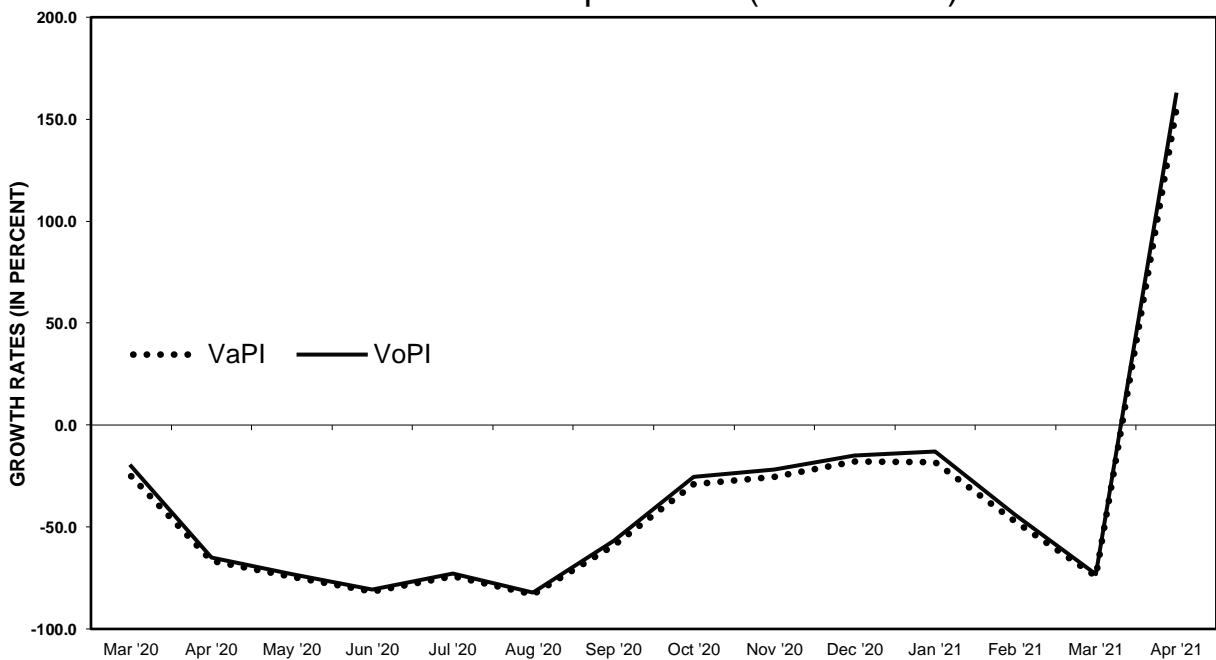
Of the 22 industry divisions, 20 exhibited positive growths, 15 of which recorded 3-digit annual increases. The fastest growth rate was registered in **manufacture of basic metals** at 687.5 percent. Meanwhile, only two industry divisions showed decreases during the period, which were **manufacture of coke and refined petroleum products** (-32.3%) and **manufacture of basic pharmaceutical products and pharmaceutical preparations** (-18.9%). (*Tables 1-B and 2*)

Figure 1. Value and Volume of Production Index for Total Manufacturing
March 2020 - April 2021^p (2018 = 100)



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

Figure 2. Year-on-Year Growth Rates of Value and Volume of Production Index for Total Manufacturing (in percent)
March 2020 - April 2021^p (2018 = 100)



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

NET SALES

Value of Net Sales Index registered a three-digit growth

The Value of Net Sales Index (VaNSI) surged at an annual rate of 196.4 percent in April 2021. This was the highest annual growth rate in the 2018-based data series. In the previous month, year-on-year growth rate for net sales was slower at 17.1 percent. (Tables A and 3)

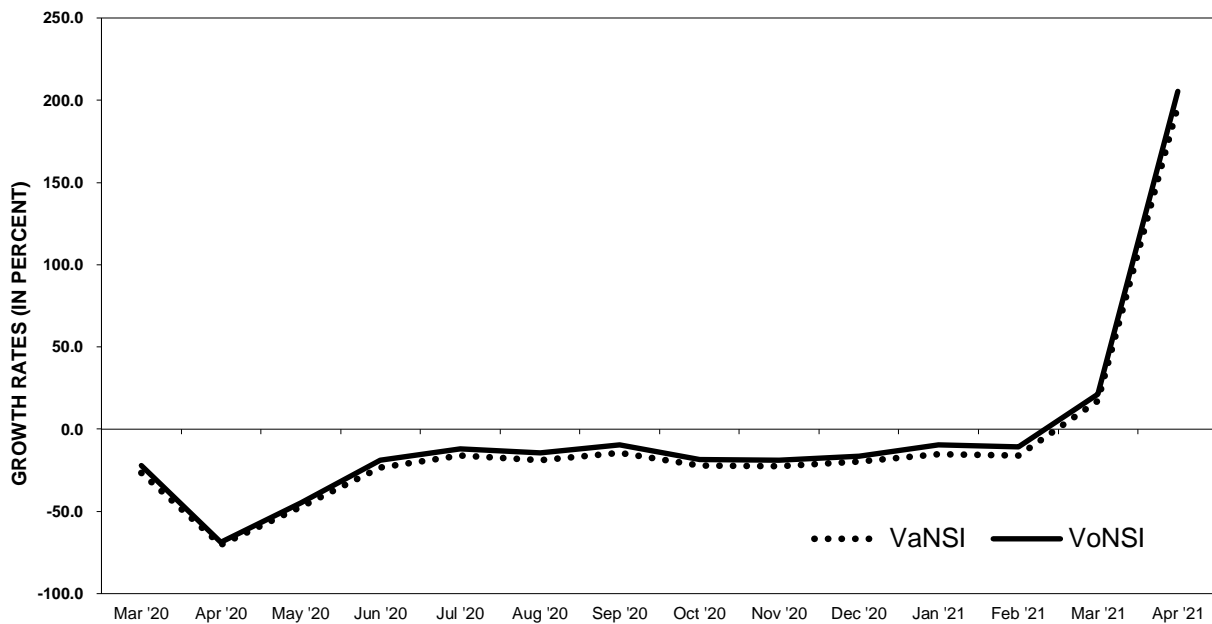
The upward trend in VaNSI for manufacturing sector in April 2021 was brought about by the sharp increases of the majority of the industry divisions. Among these, the top contributor was **manufacture of electrical equipment** with 838.8 percent annual growth. On the other hand, only two industry divisions recorded annual decreases, namely, **manufacture of basic pharmaceutical products and pharmaceutical preparations** (-8.5%) and **manufacture of coke and refined petroleum products** (-3.6%). (Tables 2-A and 3)

Volume of Net Sales Index grew further

The Volume of Net Sales Index (VoNSI) likewise picked up as it registered a three-digit annual growth rate of 205.4 percent in April 2021. This increment was faster than the 21.2 percent increase registered in the previous month. In contrast, the annual rate for VoNSI in April 2020 decreased by -68.8 percent. (Table A and 4)

Expansion in VaNSI for manufacturing sector in April 2021 were observed in 20 out of 22 industry divisions. The fastest growth was registered in **manufacture of electrical equipment** at 841.4 percent. On the contrary, two industry divisions exhibited downturn in VoNSI, and these were **manufacture of coke and refined petroleum products** (-13.6%) and **manufacture of basic pharmaceutical products and pharmaceutical preparations** (-7.9%). (Tables 2-B and 4)

Figure 3. Year-on-Year Changes in Net Sales (in percent):
March 2020 - April 2021^p (2018 = 100)



p – preliminary, r- revised

Source: Philippine Statistics Authority

CAPACITY UTILIZATION

Average capacity utilization rate for manufacturing increased

Based on responding establishments, the average capacity utilization rate for the manufacturing sector in April 2021 rose to 63.6 percent from 63.0 percent in the previous month.

Eighteen (18) of the 22 industry divisions had at least 50 percent average capacity utilization rate which was led by **manufacture of furniture** (81.3%), **manufacture of other non-metallic mineral products** (80.9%), and **manufacture of electrical equipment** (75.2%). (Table 6)

About one-fourth of the responding establishments operated at full capacity

The proportion of establishments that operated at full capacity (90% to 100%) was 22.2 percent of the total number of responding establishments. Meanwhile, 36.1 percent operated at 70 to 89 percent capacity, while 41.7 percent operated below 70 percent capacity. (Table B)

Table B. Distribution of Responding Establishments
by Capacity Utilization for Total Manufacturing: April 2021^P

Capacity Utilization	Number of Responding Establishments	Percent Share to Responding Establishments
TOTAL	481	100.0
Below 50%	106	22.0
50% - 59%	51	10.6
60% - 69%	44	9.1
70% - 79%	79	16.5
80% - 89%	94	19.6
90% - 100%	107	22.2

p – preliminary

Details may not sum to totals due to rounding

Notes:

- 1) Results are based on the responses of establishments which were in operation during the reference month.
- 2) There were 32 establishments which responded but were not included in the tabulation as they temporarily or permanently ceased their business operations.

Source: Philippine Statistics Authority

TABLE 1-A. Year-on-Year Growth Rate (%) of Value of Production Index
by Industry Division: March 2021^r and April 2021^p
(2018 =100)

INDUSTRY DIVISION	March 2021 ^r	April 2021 ^p
Gainers		
Manufacture of transport equipment	41.4	419.6
Manufacture of basic metals	18.3	729.1
Manufacture of fabricated metal products, except machinery and equipment	103.2	571.6
Manufacture of other non-metallic mineral products	47.9	294.4
Manufacture of computer, electronic, and optical products	16.3	68.3
Manufacture of beverages	9.0	166.8
Manufacture of electrical equipment	54.8	246.0
Manufacture of food products	10.1	39.2
Manufacture of rubber and plastic products	38.7	173.9
Manufacture of wearing apparel	-4.0	521.8
Other manufacturing and repair and installation of machinery and equipment	16.5	205.0
Manufacture of furniture	22.3	546.2
Printing and reproduction of recorded media	49.9	429.9
Manufacture of chemical and chemical products	-1.2	32.3
Manufacture of textiles	7.4	335.2
Manufacture of paper and paper products	33.8	61.8
Manufacture of wood, bamboo, cane, rattan articles and related products	24.3	133.3
Manufacture of leather and related products, including footwear	70.2	146.0
Manufacture of machinery and equipment except electrical	-24.3	28.2
Manufacture of tobacco products	-37.4	9.7
Losers		
Manufacture of coke and refined petroleum products	-97.4	-24.5
Manufacture of basic pharmaceutical products and pharmaceutical preparations	-29.2	-19.4

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

TABLE 1-B. Year-on-Year Growth Rate (%) of Volume of Production Index by Industry Division: March 2021^r and April 2021^p
(2018 = 100)

INDUSTRY DIVISION	March 2021 ^r	April 2021 ^p
Gainers		
Manufacture of transport equipment	41.2	436.7
Manufacture of basic metals	13.8	687.5
Manufacture of computer, electronic, and optical products	41.9	103.9
Manufacture of fabricated metal products, except machinery and equipment	109.7	610.1
Manufacture of other non-metallic mineral products	51.9	307.2
Manufacture of beverages	7.4	162.9
Manufacture of electrical equipment	55.6	246.9
Manufacture of food products	9.7	38.5
Manufacture of wearing apparel	1.5	555.5
Manufacture of rubber and plastic products	37.4	168.1
Other manufacturing and repair and installation of machinery and equipment	21.5	216.7
Manufacture of furniture	27.0	577.4
Manufacture of chemical and chemical products	2.4	35.9
Printing and reproduction of recorded media	49.9	429.9
Manufacture of textiles	7.5	329.9
Manufacture of paper and paper products	39.8	65.6
Manufacture of wood, bamboo, cane, rattan articles and related products	28.2	135.6
Manufacture of leather and related products, including footwear	71.8	148.8
Manufacture of machinery and equipment except electrical	-20.9	35.7
Manufacture of tobacco products	-36.4	10.3
Losers		
Manufacture of coke and refined petroleum products	-97.5	-32.3
Manufacture of basic pharmaceutical products and pharmaceutical preparations	-27.7	-18.9

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

TABLE 2-A. Year-on-Year Growth Rate (%) of Value of Net Sales Index
by Industry Division: March 2021^r and April 2021^p
(2018 =100)

INDUSTRY DIVISION	March 2021	April 2021 ^p
Gainers		
Manufacture of transport equipment	36.4 ^r	598.4
Manufacture of electrical equipment	17.1 ^r	838.8
Manufacture of computer, electronic, and optical products	8.7 ^r	122.8
Manufacture of basic metals	33.1 ^r	340.2
Manufacture of other non-metallic mineral products	53.4 ^r	331.5
Manufacture of beverages	22.6 ^r	151.8
Manufacture of rubber and plastic products	28.6 ^r	239.7
Manufacture of food products	14.3 ^r	39.6
Manufacture of chemical and chemical products	35.6 ^r	90.3
Manufacture of fabricated metal products, except machinery and equipment	79.2 ^r	254.5
Manufacture of furniture	25.7 ^r	545.8
Manufacture of wood, bamboo, cane, rattan articles and related products	92.4 ^r	256.5
Printing and reproduction of recorded media	44.9 ^r	433.4
Other manufacturing and repair and installation of machinery and equipment	14.5 ^r	137.2
Manufacture of machinery and equipment except electrical	1.6 ^r	67.1
Manufacture of paper and paper products	22.7 ^r	69.9
Manufacture of leather and related products, including footwear	19.7 ^r	177.6
Manufacture of wearing apparel	0.5 ^r	57.8
Manufacture of textiles	16.7 ^r	112.4
Manufacture of tobacco products	-6.6 ^r	10.1
Losers		
Manufacture of coke and refined petroleum products	-13.3	-3.6
Manufacture of basic pharmaceutical products and pharmaceutical preparations	-22.6 ^r	-8.5

p - preliminary, r- revised

Source: Philippine Statistics Authority

TABLE 2-B. Year-on-Year Growth Rate (%) of Volume of Net Sales
Index by Industry Division: March 2021^r and April 2021^p
(2018 = 100)

INDUSTRY DIVISION	March 2021 ^r	April 2021 ^p
Gainers		
Manufacture of transport equipment	36.2	621.3
Manufacture of computer, electronic, and optical products	32.6	169.9
Manufacture of electrical equipment	17.7	841.4
Manufacture of basic metals	28.0	318.1
Manufacture of other non-metallic mineral products	57.6	345.5
Manufacture of beverages	20.8	148.1
Manufacture of rubber and plastic products	27.3	232.5
Manufacture of food products	13.8	38.8
Manufacture of chemical and chemical products	40.5	95.5
Manufacture of fabricated metal products, except machinery and equipment	84.9	274.8
Manufacture of furniture	30.5	576.9
Manufacture of wood, bamboo, cane, rattan articles and related products	98.3	260.0
Other manufacturing and repair and installation of machinery and equipment	19.4	146.3
Printing and reproduction of recorded media	44.9	433.4
Manufacture of machinery and equipment except electrical	6.1	76.8
Manufacture of paper and paper products	28.2	73.9
Manufacture of leather and related products, including footwear	20.9	180.8
Manufacture of wearing apparel	6.2	66.3
Manufacture of textiles	16.8	109.8
Manufacture of tobacco products	-5.0	10.7
Losers		
Manufacture of coke and refined petroleum products	-18.0	-13.6
Manufacture of basic pharmaceutical products and pharmaceutical preparations	-21.0	-7.9

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

DENNIS S. MAPA, Ph.D.
Undersecretary
National Statistician and Civil Registrar General

Attachments:

1. *Table 1. Value of Production Index (2018=100), Year-on-Year Growth Rates for Manufacturing Sector, January 2020 – April 2021^P*
2. *Table 2. Volume of Production Index (2018=100), Year-on-Year Growth Rates for Manufacturing Sector, January 2020 – April 2021^P*
3. *Table 3. Value of Net Sales Index (2018=100), Year-on-Year Growth Rates for Manufacturing Sector, January 2020 – April 2021^P*
4. *Table 4. Volume of Net Sales Index (2018=100), Year-on-Year Growth Rates for Manufacturing Sector, January 2020 – April 2021^P*
5. *Table 5. Producer Price Index (2018=100), Year-on-Year Growth Rates for Manufacturing Sector, January 2020 – April 2021^P*
6. *Table 6. Average Capacity Utilization Rate by Industry Division: MISSI, April 2020 – April 2021^P*
7. *Table 7. Distribution of Samples and Responding Establishments by Industry Division: MISSI, March 2021^f and April 2021^P*
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9. *Technical Notes*

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 will be used to update the weights annually until the next rebasing.

Another changes is 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

Census of Philippine Business and Industry (CPBI) for the base year and the Annual Survey of Philippine Business and Industry (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

$VaPI_{ijm}$ = 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

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

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

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

2009 PSIC CODE	INDUSTRY DESCRIPTION
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