



PRESS RELEASE

PRODUCTION INDEX AND NET SALES INDEX (Monthly Integrated Survey of Selected Industries) November 2020

Date of Release: 05 January 2021

Reference No. 2021-004

Table A. Year-on-Year Growth Rates of Production Index, Net Sales Index, and Producer Price Index for Total Manufacturing (2000=100): November 2020^p, October 2020^r, and October 2019 (in Percent)

TOTAL MANUFACTURING	NOVEMBER 2020 ^p	OCTOBER 2020 ^r	NOVEMBER 2019
Production Index (2000=100)			
Value (VaPI)	-13.8	-12.3	-7.2
Volume (VoPI)	-10.8	-9.3	-7.6
Net Sales Index (2000=100)			
Value (VaNSI)	-10.8	-12.6	-5.6
Volume (VoNSI)	-7.6	-9.6	-6.0
Producer Price Index (2000=100)	-3.4	-3.3	0.4

p – preliminary, r- revised

Source: Philippine Statistics Authority

PRODUCTION

Value of Production Index remained at a downward trend

The Value of Production Index (VaPI) for manufacturing posted a downturn with an annual rate of -13.8 percent in November 2020. This contraction in VaPI was faster than the reported decrease in the previous month of -12.3 percent and the annual decline in November 2019 of -7.2 percent. The November 2020 figure was the ninth consecutive month that VaPI had a negative growth rate. (*Table A*)

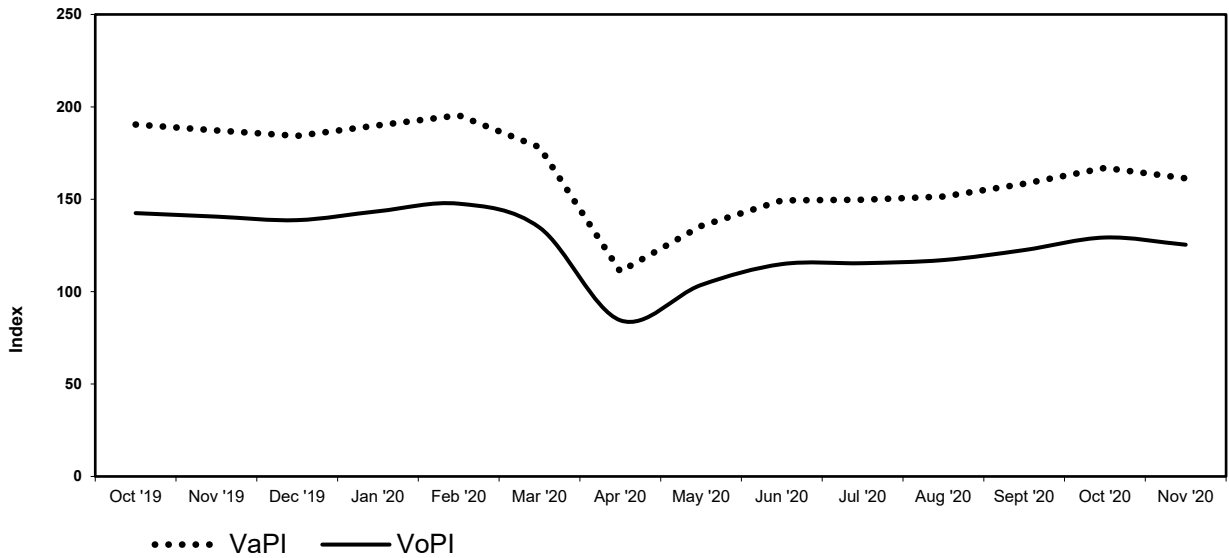
Contributory to the faster annual decline of VaPI for the manufacturing sector in November 2020 were the decreases in the indices of 17 industry groups. Among these industry groups, the top three were **petroleum products** (-66.0%), **tobacco products** (-56.9%) and **printing** (-50.8%). (*Tables 1-A, and 1*)

Volume of Production Index also declined further

The Volume of Production Index (VoPI) likewise dropped further at an annual rate of -10.8 percent in November 2020, from -9.3 percent in the previous month. In November 2019, VoPI decreased at a slower rate of -7.6 percent. (*Table A*)

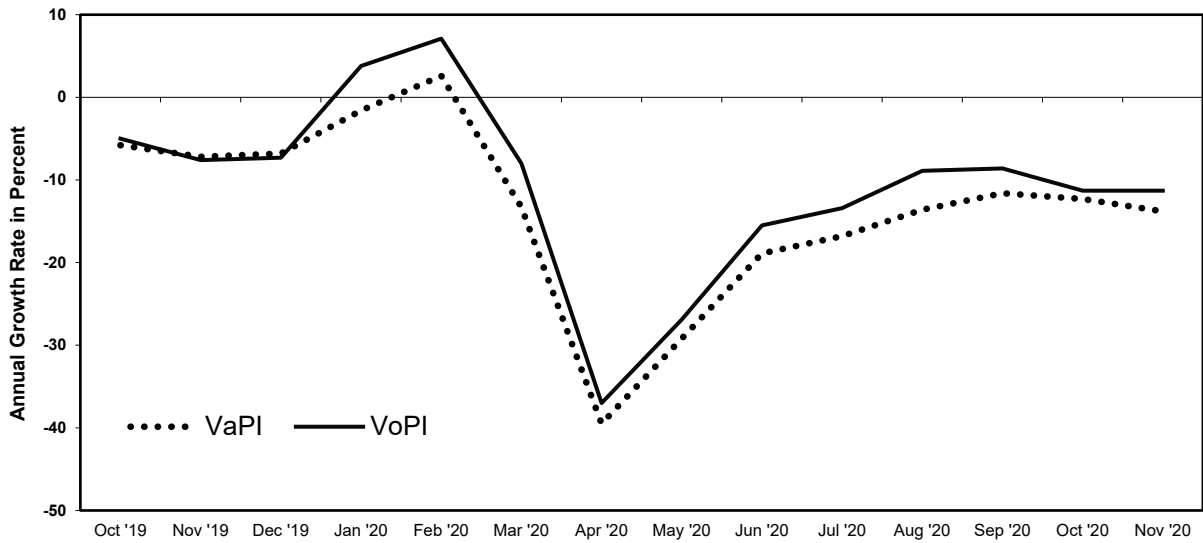
The downtrend in the VoPI for the sector was influenced by the two-digit decrements in the indices of 16 industry groups led by **petroleum products** (-61.9%), **tobacco products** (-58.6%) and **printing** (-51.5%). (*Tables 1-B, and 2*)

Figure 1. Value and Volume of Production Index for Total Manufacturing October 2019 - November 2020^p (2000 = 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 2019 - November 2020^p (2000 = 100)



p - preliminary
 Source: Philippine Statistics Authority

NET SALES

Value of Net Sales Index posted a slower negative growth rate

The Value of Net Sales Index (VaNSI) continued to drop at an annual rate of -10.8 percent in November 2020. This decline, however, was slower than the reported annual decrease of -12.6 percent in the previous month. The decline in November 2020 was the ninth consecutive month of contraction for VaNSI. In November 2019, the annual growth rate of VaNSI was recorded at -5.6 percent. *(Table A)*

Of the 20 industry groups, positive growths were observed in five (5) industry groups, namely, **tobacco products** (27.4%), **food manufacturing** (18.3%), **basic metals** (6.4%), **miscellaneous manufactures** (4.6%) and **wood and wood products** (3.7%) in November 2020.

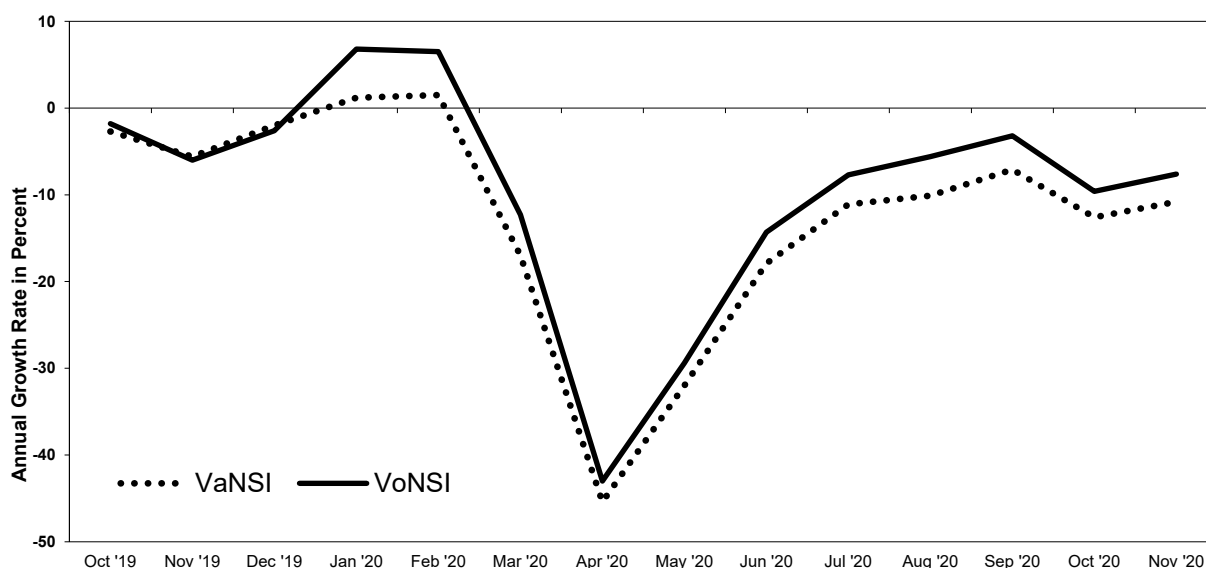
Contributing further to the narrower decline in VaNSI for the manufacturing sector in November 2020 were the slower annual decreases in the indices of nine (9) industry groups. Among these, three (3) were heavily weighted industry groups such as **electrical machinery**, **petroleum products** and **transport equipment**. *(Tables 2-A and 3)*

Volume of Net Sales Index also contracted

The Volume of Net Sales Index (VoNSI) also recorded a year-on-year decrement of -7.6 percent in November 2020 compared with the faster drop of -9.6 percent in the previous month. In November 2019, the annual decrease was observed at -6.0 percent.

The slower decline in VoNSI for the manufacturing sector in November 2020 could be attributed to the two-digit increases observed in **tobacco products** (22.5%), **food manufacturing** (17.2%) and **basic metals** (10.8%). Likewise, the slower decrease in the indices of seven (7) industry groups tapered off the rate of decline in the index for the sector. *(Tables 2-B and 4)*

Figure 3. Year-on-Year Changes in Net Sales:
October 2019 - November 2020^p (2000 = 100)



p - preliminary

Source: Philippine Statistics Authority

CAPACITY UTILIZATION

Average capacity utilization rate for manufacturing dropped

Based on responding establishments, the average capacity utilization rate for the manufacturing sector in November 2020 was posted at 70.9 percent from 71.8 percent in the previous month.

Six of the 20 industry groups had at least 80 percent average capacity utilization rate which was led by **machinery except electrical** (91.7%), followed by **electrical machinery** (85.4%), and **furniture and fixtures** (84.4%). (*Table 6*)

One-fifth of responding establishments operated at full capacity

The proportion of establishments that operated at full capacity (90% to 100%) was 20.1 percent of the total number of responding establishments. More than forty percent (45.6%) operated at 70 to 89 percent capacity, while less than forty percent (34.3%) operated below 70 percent capacity. (*Table B*)

**Table B. Distribution of Responding Establishments
by Capacity Utilization for Total Manufacturing: November 2020^p**

Capacity Utilization	Number of Responding Establishments	Percent Share to Responding Establishments
TOTAL	274	100.0
Below 50%	30	10.9
50% - 59%	29	10.6
60% - 69%	35	12.8
70% - 79%	65	23.7
80% - 89%	60	21.9
90% - 100%	55	20.1

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 20 establishments which responded but were not included in the tabulation as they temporarily or permanently ceased their business operations.

Source: Philippine Statistics Authority



DENNIS S. MAPA, Ph.D.

Undersecretary

National Statistician and Civil Registrar General

Attachments:

1. *Table 1. Value of Production Index (2000=100) Year-on-Year Growth Rates for Manufacturing Sector, January 2019 – November 2020*
2. *Table 2. Volume of Production Index (2000=100) Year-on-Year Growth Rates for Manufacturing Sector, January 2019 – November 2020*
3. *Table 3. Value of Net Sales Index (2000=100) Year-on-Year Growth Rates for Manufacturing Sector, January 2019 – November 2020*
4. *Table 4. Volume of Net Sales Index (2000=100) Year-on-Year Growth Rates for Manufacturing Sector, January 2019 – November 2020*
5. *Table 5. Producer Price Index (2000=100) Year-on-Year and Month-on-Month Growth Rates for Manufacturing Sector, January 2019 – November 2020*
6. *Table 6. Average Capacity Utilization Rate by Major Industry Group: MISSI, November 2019 - November 2020*
7. *Table 7. Distribution of Samples and Responding Establishments by Major Industry Group: MISSI, October 2020 and November 2020*
8. *Table 8. Distribution of Samples and Responding Establishments by Major Industry Group: PPS, October 2020 and November 2020*
9. *Technical Notes*

TABLE 1-A. Year-on-Year Growth Rate (%) of Value of Production Index
by Industry Group: October and November 2020
(2000 =100)

INDUSTRY GROUP	November 2020 ^p	October 2020 ^r
Gainers		
Basic metals	7.7	14.7
Miscellaneous manufactures	11.7	9.9
Chemical products	1.6	5.5
Losers		
Petroleum products	-66.0	-73.8
Machinery except electrical	-34.0	-40.9
Tobacco products	-56.9	-45.1
Footwear and wearing apparel	-33.9	-44.9
Transport equipment	-23.2	-30.8
Non-metallic mineral products	-30.4	-27.0
Beverages	-16.6	-4.8
Electrical machinery	-3.3	0.7
Printing	-50.8	-47.9
Fabricated metal products	-29.2	-21.5
Rubber and plastic products	-15.0	-15.0
Textiles	-20.8	-26.8
Furniture and fixtures	-30.4	-7.7
Paper and paper products	-10.4	-17.3
Leather products	-43.4	-40.9
Wood and wood products	-1.7	-8.7
Food manufacturing	-0.3	1.7

p - preliminary, r - revised

Source: Philippine Statistics Authority

TABLE 1-B. Year-on-Year Growth Rate (%) of Volume of Production Index by Industry Group: October and November 2020
(2000 = 100)

INDUSTRY GROUP	November 2020 ^p	October 2020 ^r
Gainers		
Basic metals	12.1	19.4
Chemical products	5.1	10.0
Miscellaneous manufactures	14.7	13.1
Wood and wood products	2.9	-2.1
Losers		
Petroleum products	-61.9	-71.0
Machinery except electrical	-30.0	-37.2
Tobacco products	-58.6	-47.1
Footwear and wearing apparel	-32.9	-43.5
Beverages	-20.7	-9.5
Non-metallic mineral products	-29.1	-25.3
Transport equipment	-17.7	-26.5
Printing	-51.5	-48.6
Fabricated metal products	-30.0	-22.9
Textiles	-20.8	-26.4
Rubber and plastic products	-11.9	-11.7
Furniture and fixtures	-41.1	-21.9
Food manufacturing	-1.3	0.3
Electrical machinery	-0.7	4.2
Leather products	-43.5	-40.7
Paper and paper products	-0.3	-8.0

p - preliminary, r - revised

Source: Philippine Statistics Authority

TABLE 2-A. Year-on-Year Growth Rate (%) of Value of Net Sales Index
by Industry Group: October and November 2020
(2000 =100)

INDUSTRY GROUP	November 2020 ^p	October 2020 ^r
Gainers		
Food manufacturing	18.3	12.5
Tobacco products	27.4	15.7
Basic metals	6.4	0.8
Miscellaneous manufactures	4.6	-5.7
Wood and wood products	3.7	-5.1
Losers		
Petroleum products	-43.5	-49.9
Machinery except electrical	-30.2	-28.9
Electrical machinery	-7.8	-8.3
Non-metallic mineral products	-35.9	-38.6
Transport equipment	-20.2	-22.9
Beverages	-12.1	-6.7
Footwear and wearing apparel	-15.3	-37.4
Fabricated metal products	-26.6	-13.9
Rubber and plastic products	-29.3	-33.4
Chemical products	-3.7	1.9
Textiles	-16.8	-17.2
Printing	-21.9	-24.4
Paper and paper products	-11.3	-12.1
Furniture and fixtures	-23.2	-6.2
Leather products	-24.6	-17.6

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

TABLE 2-B. Year-on-Year Growth Rate (%) of Volume of Net Sales Index by Industry Group: October and November 2020
(2000 = 100)

INDUSTRY GROUP	November 2020 ^p	October 2020 ^r
Gainers		
Food manufacturing	17.2	10.9
Basic metals	10.8	4.9
Tobacco products	22.5	11.4
Miscellaneous manufactures	7.4	-2.9
Wood and wood products	8.6	1.7
Losers		
Petroleum products	-36.7	-44.6
Machinery except electrical	-26.1	-24.5
Non-metallic mineral products	-34.7	-37.1
Electrical machinery	-5.3	-5.1
Beverages	-16.4	-11.3
Transport equipment	-14.5	-18.2
Footwear and wearing apparel	-14.1	-35.8
Fabricated metal products	-27.4	-15.5
Rubber and plastic products	-26.7	-30.8
Textiles	-16.8	-16.7
Furniture and fixtures	-35.0	-20.7
Printing	-22.9	-25.4
Leather products	-24.7	-17.8
Chemical products	-0.4	6.3
Paper and paper products	-1.2	-2.2

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

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 2020 MISSI at the 3/4-digit 2009 Philippine Standard Industrial Classification (PSIC) level are Value of Production Index (VaPI), Volume of Production Index (VoPI), Value of Net Sales Index (VaNSI), Volume of Net Sales Index (VoNSI) and capacity utilization of industries. The VoPI and VoNSI, however, are derived indicators using the 2020 Producer Price Index (PPI) as deflator.

II. Method of Index Computation

The MISSI utilizes the Laspeyres-type method of index computation where the weights are based on the value of production from the Census of Philippine Business and Industry (CPBI).

For the 2020 MISSI index series with base year of 2000, the weights of the major industries and sub-industries are based on the results of the 2000 CPBI for manufacturing establishments with average total employment of 20 and over. The weights are computed from the value of products sold plus change in inventories.

The formula in the computation of indices and growth rates are as follows:

1. Value of Production Index (VaPI)

a. Computation of Index for Industry Class Level

i. Initial Index

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

where:

- $VaPI_{ijm}$ = VaPI for the i^{th} industry class of the j^{th} industry group at the current month m
- V_{ijm} = total value of production for all sample establishments in the i^{th} industry class of the j^{th} industry group at the current month m
- V_{ij0} = average monthly value of production at base year 0

ii. Monthly Index

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

where:

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

b. Computation of Index for Industry Group Level

$$VaPI_{jm} = \sum_{i=1}^n W_{ij} \times VaPI_{ijm}$$

where:

- $VaPI_{jm}$ = VaPI for j^{th} industry group at current month m
- $VaPI_{ijm}$ = VaPI for the i^{th} industry class of the j^{th} industry group at the current month m
- W_{ij} = Weight for the i^{th} industry class of the j^{th} industry group
- n = Number of industry class in the j^{th} industry group

Same formula for industry groups without industry class

c. Computation of Index for Total Manufacturing

$$VaPI_m = \sum_{j=1}^p W_j \times VaPI_{jm}$$

where:

- $VaPI_m$ = VaPI for the current month m
- $VaPI_{jm}$ = VaPI for j^{th} industry group (2/3-digit) at current month m
- W_j = Weight for the j^{th} industry group
- p = Number of industry groups = 20

2. Value of Net Sales Index (VaNSI)

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

3. Volume of Production Index (VoPI)

a. Computation of Index for Industry Class Level

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

where:

VoPI_{ijm} = VoPI for the i^{th} industry class of the j^{th} industry group at the current month m

VaPI_{ijm} = VaPI for the i^{th} industry class of the j^{th} industry group at the current month m

PPI_{ijm} = PPI for the i^{th} industry class of the j^{th} industry group at the current month m

b. Computation of Index for Industry Group Level

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

where:

VoPI_{jm} = VoPI for the j^{th} industry group at the current month m

VaPI_{jm} = VaPI for the j^{th} industry group at the current month m

PPI_{jm} = PPI for the j^{th} industry group at the current month m

c. Computation of Index for Total Manufacturing (1-digit PSIC)

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

where:

VoPI_m = VoPI for total manufacturing at the current month m

VaPI_m = VaPI for total manufacturing at the current month m

PPI_m = PPI for total manufacturing at the current month m

4. Volume of Net Sales Index (VoNSI)

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

5. Capacity Utilization Rate

Capacity Utilization Rate is the ratio of total output to the maximum rated capacity of the establishment. Rated Capacity refers to the largest volume of output possible at which the factory can operate with an acceptable degree of efficiency taking into consideration unavoidable losses of productive time (i.e., vacation, holiday, and repair of equipment) and availability of raw materials.

The formulas in obtaining the Average Capacity Utilization Rate are the following:

a. Computation of Index for Industry Class Level

$$\text{AveCU}_m = \sum_{k=1}^n \left(\text{CU}_{ikjm} \times \frac{\text{Prod}_{kijm}}{\text{Prod}_{ijm}} \right)$$

where:

AveCU_{ijm} = Average capacity utilization rate for the i^{th} industry class in the j^{th} industry group at the current month m

CU_{kijm} = Midpoint of the capacity utilization range reported by the k^{th} sample establishment in the i^{th} industry class of the j^{th} industry group at the current month m

Prod_{kijm} = Value of production for the k^{th} sample establishment in the i^{th} industry class for the j^{th} industry group at the current month m

Prod_{ijm} = Total value of production for the i^{th} industry class of the j^{th} industry group at the current month m

b. Computation of Index for Industry Group Level

- **With Industry Classes**

$$\text{AveCU}_{jm} = \sum_{j=1}^{20} (\text{Ave CU}_{ijm} \times W_{ij})$$

where:

- AveCU_{jm} = Average capacity utilization rate of the j^{th} industry group at the current month m
- AveCU_{ijm} = Average capacity utilization rate of the i^{th} industry class of the j^{th} industry group at the current month m
- W_{ij} = Weight of the i^{th} industry class of the j^{th} industry group

- **Without Industry Classes**

$$\text{AveCU}_m = \sum_{k=1}^n \left(\text{CU}_{kjm} \times \frac{\text{Prod}_{kjm}}{\text{Prod}_{jm}} \right)$$

where:

- AveCU_{jm} = Average capacity utilization rate of the j^{th} industry group at the current month m
- CU_{kjm} = Midpoint of the capacity utilization range reported by the k^{th} sample establishment in the j^{th} industry group at the current month m
- Prod_{kjm} = Value of production for the k^{th} sample establishment in the j^{th} industry group at the current month m
- Prod_{jm} = Value of production for the j^{th} industry group at the current month m

c. Computation of Index for Total Manufacturing

$$\text{AveCU}_m = \sum_{j=1}^{20} (\text{Ave CU}_{jm} \times W_j)$$

where:

AveCU_m = Average capacity utilization rate for total manufacturing at the current month m

CU_{jm} = Average capacity utilization rate of the j^{th} industry group at the current month m

W_j = Weight of the j^{th} industry group at the current 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 2020 MISSI utilizes the 2009 PSIC to classify major industries and sub-industries. Twenty major industries of the 2009 PSIC were formed to comprise the industry coverage of the 2020 MISSI.

The table below presents the industry coverage of 2020 MISSI by 2009 PSIC code.

2009 PSIC CODE	INDUSTRY DESCRIPTION
C10	Food manufacturing *
C11	Beverages
C12	Tobacco products
C13	Textiles*
C14, C152	Footwear and wearing apparel
C151	Leather products
C16	Wood and wood products*
C17	Paper and paper products
C18	Printing
C19	Petroleum products*
C20,C21	Chemical products*
C22	Rubber and plastic products*
C23	Non-metallic mineral products*
C24	Basic metals*
C25,C3311	Fabricated metal products
C262,C275,C28, C263,C268,C3312,C332	Machinery except electrical*
C261,C264,C27, C29301,C3314,C332	Electrical machinery*
C29 except C29301, C30,C3315	Transport equipment
C31	Furniture and fixtures
C265,C266,C267,C32, C3313,C3319	Miscellaneous manufactures

* Industry groups categorized into industry classes