



PRESS RELEASE

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

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**Table A Year-on-Year Growth Rates for Production Index,
Net Sales Index and Producer Price Index
April 2020, March 2020 and April 2019
(In Percent)**

| TOTAL MANUFACTURING | APRIL 2020^p | MARCH 2020^r | APRIL 2019 |
|--|-----------------------------------|-----------------------------------|-----------------------|
| Production Index (2000=100) | | | |
| Value (VaPI) | -61.4 | -12.4 | -11.8 |
| Volume (VoPI) | -59.8 | -7.7 | -14.0 |
| Net Sales Index (2000=100) | | | |
| Value (VaNSI) | -68.5 | -15.8 | -4.2 |
| Volume (VoNSI) | -67.2 | -11.2 | -6.5 |
| Producer Price Index (2000=100) | -3.9 | -5.1 | 2.5 |

p - preliminary
r - revised



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PRODUCTION

Value of Production Index abruptly drops in April 2020

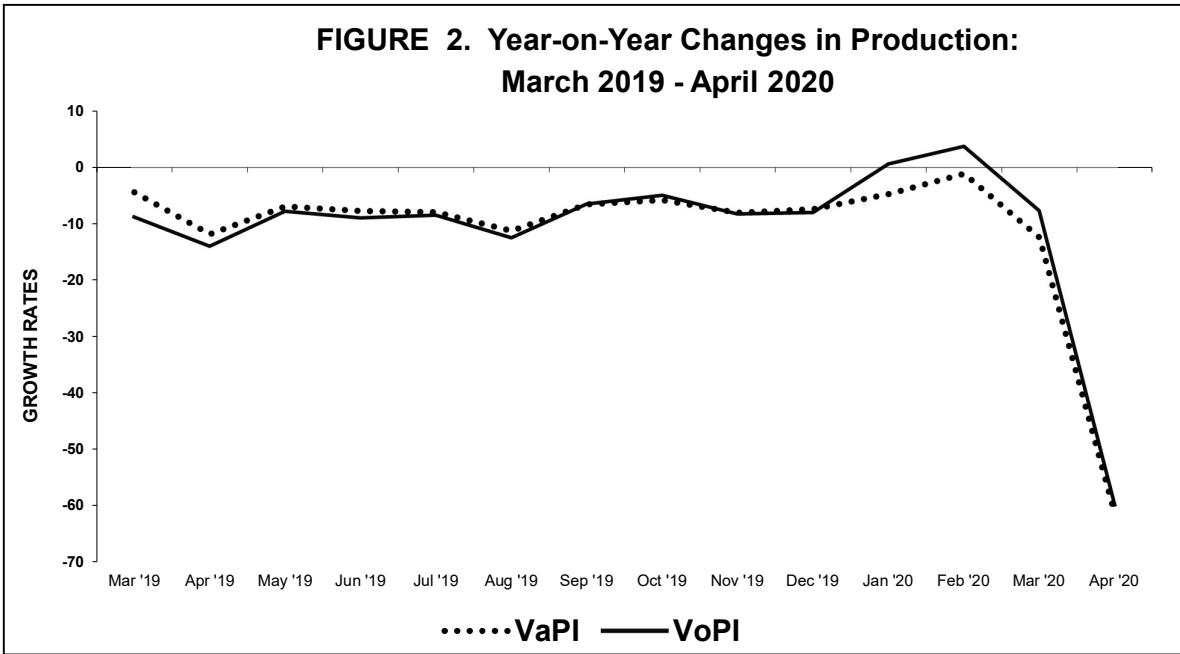
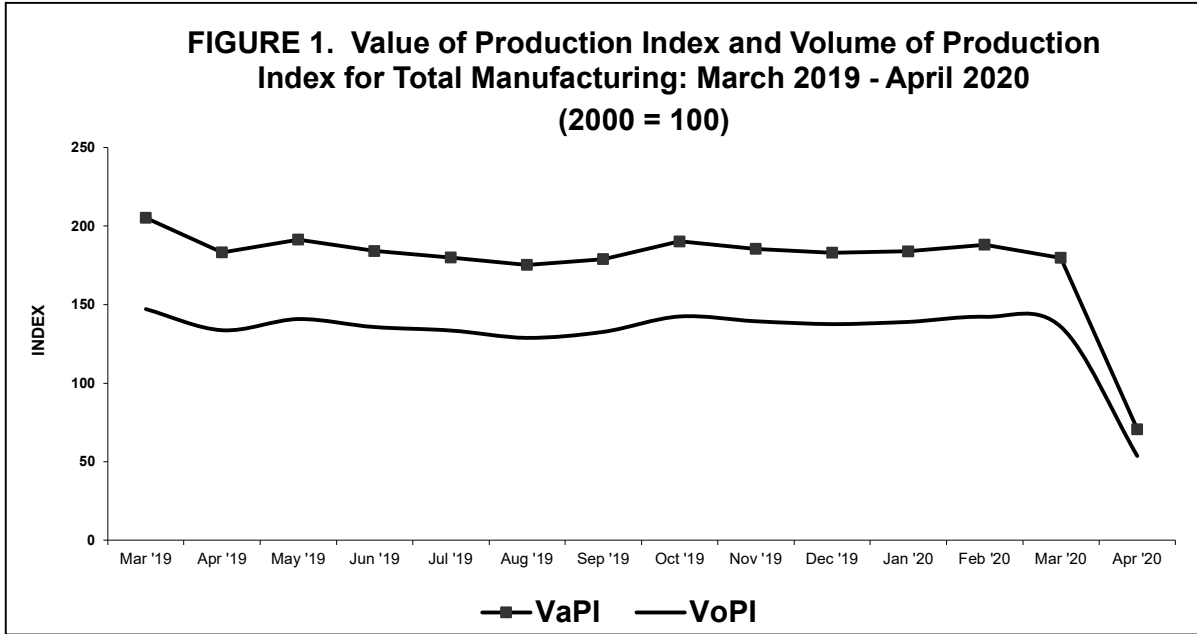
Based on the preliminary results of the Monthly Integrated Survey of Selected Industries (MISSI), Value of Production Index (VaPI) for Manufacturing sector plummeted at an annual rate of 61.4 percent in April 2020. This contraction was the highest recorded annual decrease in VaPI since 2001. *(Table A)*

The decline in VaPI in April 2020 was due to the downward movements noted in all the 20 industry groups, seven of which registered more than 85 percent decrements in VaPI. These were **leather products** (-98.6%), **footwear and wearing apparel** (-98.0%), **furniture and fixtures** (-90.0%), **fabricated metal products** (-89.9%), **non-metallic mineral products** (-87.7%), **rubber and plastic products** (-87.7%) and **tobacco products** (-86.8%). *(Tables 1 and 1-A)*

Volume of Production Index also plunges

The Volume of Production Index (VoPI) also plunged to an annual rate of 59.8 percent in April 2020. As for VoPI, this month's annual decline was the highest since 2001. *(Table A)*

The downturn in VoPI was driven by the significant decreases in indices of all industry groups, of which, three were in a very minimal business operations, namely: **leather products** (-99.0%), **footwear and wearing apparel** (-97.8%) and **furniture and fixtures** (-91.7%). *(Tables 1-B and 2)*



NET SALES

Value of Net Sales Index continues to decelerate

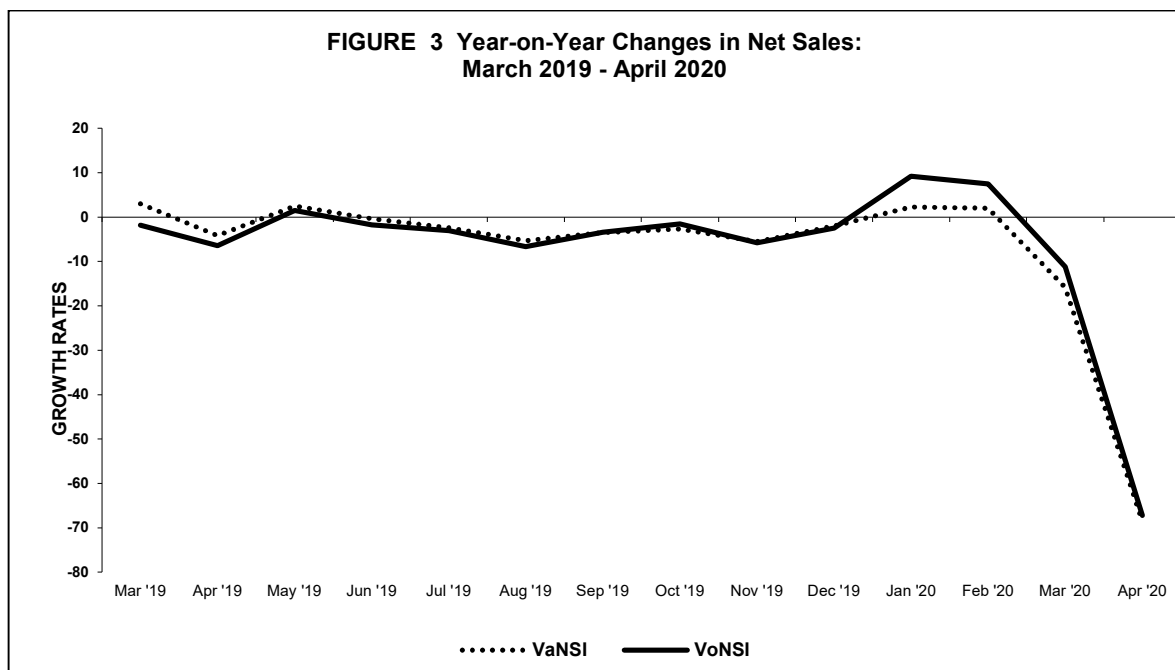
Value of Net Sales Index (VaNSI) likewise decelerated at a faster rate of 68.5 percent in April 2020 as compared to the annual decline of 15.8 percent in the previous month. In April 2019, VaNSI dropped at a slower rate of 4.2 percent than the rate in April 2020. (*Table A*)

The decrease was brought about by declines in the indices of all the industry groups, except tobacco products. Four of the industry groups exhibited a downturn of more than 90 percent, namely: **footwear and wearing apparel** (-98.0%), **leather products** (-96.3%), **wood and wood products** (-94.0%), and **transport equipment** (-90.2%). (*Tables 2-A and 3*)

Volume of Net Sales Index likewise drops

The Volume of Net Sales Index (VoNSI), on a year-on-year basis, registered an abrupt decrease in annual rate with 67.2 percent in April 2020. In the previous month, the annual decrease was slower at 11.2 percent. (*Table A*)

All of the industry groups pulled-down the VoNSI with the following industry groups exhibiting at least 90 percent decreases: **footwear and wearing apparel** (-97.8%), **leather products** (-95.6%), **wood and wood products** (-93.5%), and **furniture and fixtures** (-91.5%). (*Tables 2-B and 4*)



CAPACITY UTILIZATION

Average Capacity Utilization Rate for total manufacturing stands at 70.0 percent

Based on the responding establishments, average capacity utilization rate for total manufacturing in April 2020 was posted at 70.0 percent which was lower than the average capacity utilization rate of responding establishments in March 2020 at 77.9 percent.

Four of the 20 industry groups had at least 80 percent capacity utilization rate which was led by **footwear and wearing apparel** (87.4%), **textiles** (87.2%), **rubber and plastic products** (80.3%) and **electrical machinery** (80.1%). (Table 6)

More than one-fifth of total responding manufacturing establishments operate at full capacity

The proportion of establishments that operated at full capacity (90% to 100%) was almost one-fifth (23.9%) of the total number of responding establishments for manufacturing. More than two-fifths (43.1%) operated at 70 to 89 percent capacity while one-third (33.0%) operated below 70 percent capacity. (Table B)

**Table B Distribution of Responding Establishments
by Capacity Utilization for Total Manufacturing: April 2020**

| Capacity Utilization | Number of Responding Establishments | Percent Share to Responding Establishments |
|-----------------------------|--|---|
| TOTAL | 197 | 100.0 |
| Below 50% | 21 | 10.7 |
| 50% - 59% | 19 | 9.6 |
| 60% - 69% | 25 | 12.7 |
| 70% - 79% | 38 | 19.2 |
| 80% - 89% | 47 | 23.9 |
| 90% - 100% | 47 | 23.9 |

Notes:

- 1) *Based on the responses of establishments which were in operation during the reference month.*
- 2) *There were additional 198 establishments which responded but were not included in the tabulation as they temporarily ceased their business operations.*



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**TABLE 1-A Year-on-Year Growth Rate (%) of Value of Production Index
by Industry Group
March 2020 and April 2020
(2000 =100)**

| INDUSTRY GROUP | April 2020 ^p | March 2020 |
|-------------------------------|-------------------------|--------------------|
| Losers | | |
| Electrical machinery | -62.4 | -26.0 ^r |
| Food manufacturing | -46.0 | 0.5 ^r |
| Machinery except electrical | -75.4 | -17.6 ^r |
| Petroleum products | -62.9 | -40.5 |
| Beverages | -80.0 | -8.8 ^r |
| Transport equipment | -83.4 | -24.7 ^r |
| Chemical products | -43.8 | 2.9 ^r |
| Footwear and wearing apparel | -98.0 | -19.9 ^r |
| Non-metallic mineral products | -87.7 | -26.7 ^r |
| Rubber and plastic products | -87.7 | -15.2 ^r |
| Basic metals | -49.9 | -12.4 ^r |
| Tobacco products | -86.8 | -51.7 ^r |
| Miscellaneous manufactures | -78.5 | -25.7 ^r |
| Paper and paper products | -69.4 | -27.2 ^r |
| Fabricated metal products | -89.9 | -6.3 ^r |
| Textiles | -52.5 | -17.2 ^r |
| Furniture and fixtures | -90.0 | 7.8 ^r |
| Printing | -56.3 | 15.9 ^r |
| Wood and wood products | -73.5 | -6.9 ^r |
| Leather products | -98.6 | -27.6 |

p – preliminary

r- revised

Note: Industry groups are ranked according to their contribution to the overall annual growth rate.

**TABLE 1-B Year-on-Year Growth Rate (%) of Volume of Production Index
by Industry Group
March 2020 and April 2020
(2000 = 100)**

| INDUSTRY GROUP | April 2020 ^p | March 2020 |
|-------------------------------|-------------------------|--------------------|
| Losers | | |
| Electrical machinery | -61.3 | -22.8 ^r |
| Food manufacturing | -46.2 | 0.7 ^r |
| Machinery except electrical | -74.8 | -15.4 ^r |
| Petroleum products | -53.5 | -33.8 ^r |
| Beverages | -80.4 | -11.4 ^r |
| Transport equipment | -82.7 | -14.5 ^r |
| Chemical products | -41.0 | 8.4 ^r |
| Footwear and wearing apparel | -97.8 | -10.6 ^r |
| Non-metallic mineral products | -87.4 | -24.1 ^r |
| Rubber and plastic products | -87.4 | -13.2 ^r |
| Basic metals | -46.6 | -5.9 ^r |
| Tobacco products | -87.5 | -54.0 ^r |
| Miscellaneous manufactures | -78.4 | -24.5 ^r |
| Paper and paper products | -67.6 | -23.3 ^r |
| Fabricated metal products | -88.5 | 6.5 ^r |
| Textiles | -52.2 | -11.2 ^r |
| Furniture and fixtures | -91.7 | -10.5 ^r |
| Printing | -57.1 | 13.9 ^r |
| Wood and wood products | -71.3 | 5.9 ^r |
| Leather products | -99.0 | -15.0 |

p-preliminary

r-revised

Note: Industry groups are ranked according to their contribution to the overall annual growth rate

**TABLE 2-A Year-on-Year Growth Rate (%) of Value of Net Sales Index
by Industry Group
March 2020 and April 2020
(2000 =100)**

| INDUSTRY GROUP | April 2020 ^p | March 2020 |
|-------------------------------|-------------------------|--------------------|
| Gainers | | |
| Tobacco products | 3.7 | -0.4 ^r |
| Losers | | |
| Electrical machinery | -68.7 | -34.0 ^r |
| Food manufacturing | -58.5 | 7.9 ^r |
| Petroleum products | -81.9 | -29.9 ^r |
| Machinery except electrical | -82.7 | -23.0 ^r |
| Transport equipment | -90.2 | -39.9 ^r |
| Chemical products | -43.1 | 3.5 ^r |
| Beverages | -72.5 | -22.7 ^r |
| Footwear and wearing apparel | -98.0 | -22.9 ^r |
| Basic metals | -59.4 | -17.2 ^r |
| Non-metallic mineral products | -86.9 | -30.0 ^r |
| Miscellaneous manufactures | -82.1 | 1.9 ^r |
| Paper and paper products | -77.9 | -26.7 ^r |
| Fabricated metal products | -88.7 | -8.3 ^r |
| Rubber and plastic products | -87.4 | -6.4 ^r |
| Textiles | -48.2 | -13.0 ^r |
| Furniture and fixtures | -89.8 | -9.1 |
| Printing | -45.9 | 3.8 ^r |
| Wood and wood products | -94.0 | -25.3 ^r |
| Leather products | -96.3 | -22.3 |

p-preliminary

r- revised

Note: Industry groups are ranked according to their contribution to the overall annual growth rate.

**TABLE 2-B Year-on-Year Growth Rate (%) of Volume of Net Sales Index
by Industry Group
March 2020 and April 2020
(2000 = 100)**

| INDUSTRY GROUP | April 2020 ^p | March 2020 |
|-------------------------------|-------------------------|--------------------|
| Losers | | |
| Electrical machinery | -67.8 | -31.1 ^r |
| Food manufacturing | -58.6 | 8.0 ^r |
| Petroleum products | -77.2 | -21.9 ^r |
| Machinery except electrical | -82.3 | -21.0 ^r |
| Transport equipment | -89.8 | -31.8 ^r |
| Chemical products | -40.3 | 9.0 ^r |
| Beverages | -73.0 | -24.9 ^r |
| Footwear and wearing apparel | -97.8 | -14.0 ^r |
| Non-metallic mineral products | -86.6 | -27.6 ^r |
| Basic metals | -56.7 | -11.0 ^r |
| Miscellaneous manufactures | -81.9 | 3.6 ^r |
| Paper and paper products | -76.6 | -22.7 ^r |
| Fabricated metal products | -87.3 | 4.2 ^r |
| Rubber and plastic products | -87.1 | -4.2 ^r |
| Textiles | -47.9 | -6.7 ^r |
| Furniture and fixtures | -91.5 | -24.5 ^r |
| Printing | -46.9 | 2.0 ^r |
| Wood and wood products | -93.5 | -15.1 ^r |
| Leather products | -95.6 | -9.1 ^r |
| Tobacco products | -1.0 | -4.9 ^r |

p-preliminary

r-revised

Note: Industry groups are ranked according to their contribution to the overall annual growth rate.

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 from 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

$$\text{VaPI}_{ijm} = \frac{V_{ijm}}{V_{ij0}} \times 100$$

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

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

where:

- VaPI_{ijm} = VaPI for the i^{th} industry class of the j^{th} industry group at the current month m
- $\text{VaPI}_{ij(m-1)}$ = 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

$$\text{VaPI}_{jm} = \sum_{i=1}^n W_{ij} \times \text{VaPI}_{ijm}$$

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

$$\text{VaPI}_m = \sum_{j=1}^p W_j \times \text{VaPI}_{jm}$$

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 fo Index for Industry Class Level

$$\text{VoPI}_{ijm} = \frac{\text{VaPI}_{ijm}}{\text{PPI}_{ijm}} \times 100$$

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

$$\text{VoPI}_{jm} = \frac{\text{VaPI}_{jm}}{\text{PPI}_{jm}} \times 100$$

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)

$$\text{VoPI}_m = \frac{\text{VaPI}_m}{\text{PPI}_m} \times 100$$

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 fo Index for Industry Class Level

$$AveCU_{ijm} = \sum_{k=1}^n \left(AveCU_{kijm} \times \frac{Prod_{kijm}}{Prod_{ijm}} \right)$$

where:

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

$AveCU_{kijm}$ = 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

$Prod_{kijm}$ = Production value of the k^{th} sample establishment in the i^{th} industry class of the j^{th} industry group at the current month m

$Prod_{ijm}$ = Total value of production of the i^{th} industry class of the j^{th} industry group

b. Computation of Index for Industry Group Level (without industry classes)

$$AveCU_{jm} = \sum_{k=1}^n \left(AveCU_{kjm} \times \frac{Prod_{kjm}}{Prod_{jm}} \right)$$

where:

- $AveCU_{jm}$ = Average capacity utilization rate of the j^{th} industry group at the current month m
- $AveCU_{kj}$ = 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 of the k^{th} sample establishment in the j^{th} industry group at the current month m
- $Prod_{jm}$ = Total value of production of the j^{th} industry group at the current month m

c. Computation of Index for Industry Group Level (with industry classes)

$$AveCU_{jm} = \sum_{i=1}^n (AveCU_{ijm} \times W_{ijm})$$

where:

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

d. Computation of Index for Total Manufacturing

$$AveCU_m = \sum_{j=1}^{20} (AveCU_{jm} \times W_{jm})$$

where:

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

$AveCU_{jm}$ = Average capacity utilization rate of the jth industry group at the current month m

W_{jm} = Weight of the jth industry group at the current m

6. 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.

III. 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.

IV. 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