PRESS RELEASE

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

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

TOTAL MANUFACTURING	MARCH 2020	FEBRUARY 2020	MARCH 2019
Production Index (2000=100)			
Value (*VaPI*)	-11.3	-1.0ʳ	-4.4
Volume (*VoPI*)	-6.3	4.0ʳ	-8.8
Net Sales Index (2000=100)			
Value (*VaNSI*)	-14.1	2.4ʳ	3.0
Volume (*VoNSI*)	-9.2	7.5ʳ	-1.8
Producer Price Index (2000=100)	-5.4	-4.8ʳ	4.8

r- revised

PRODUCTION

Value of Production Index posts a two-digit decrement in March 2020

Based on the preliminary results of the Monthly Integrated Survey of Selected Industries (MISSI), Value of Production Index (VaPI) for Manufacturing sector continued to drop at an annual rate of 11.3 percent in March 2020. This decline was faster than the reported decreases in the previous month at 1.0 percent and in March 2019 at 4.4 percent. *(Table A)*
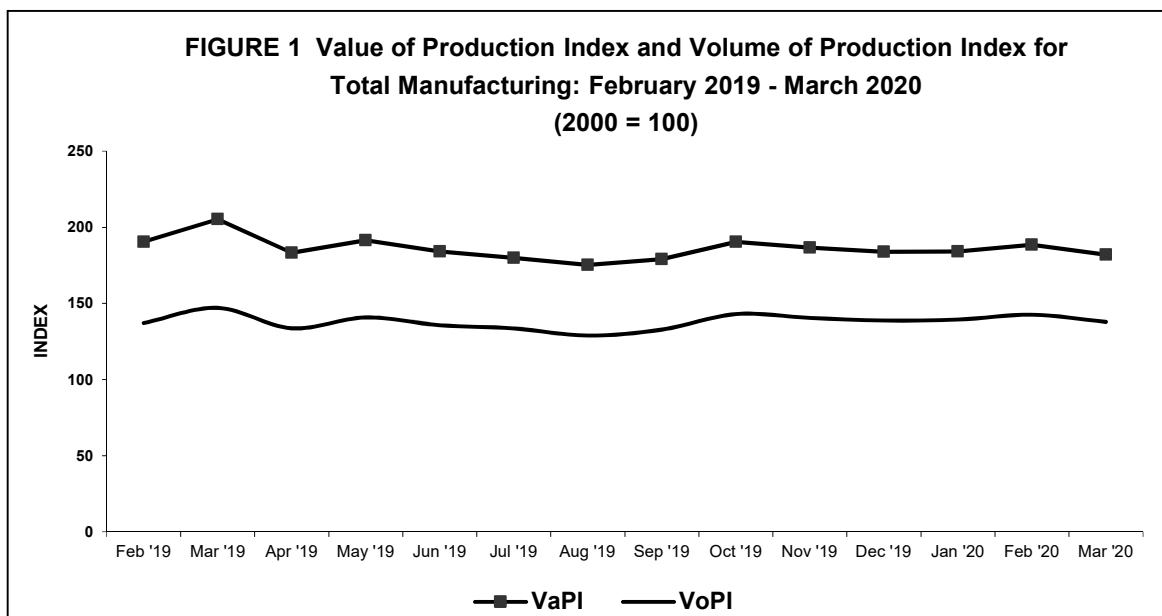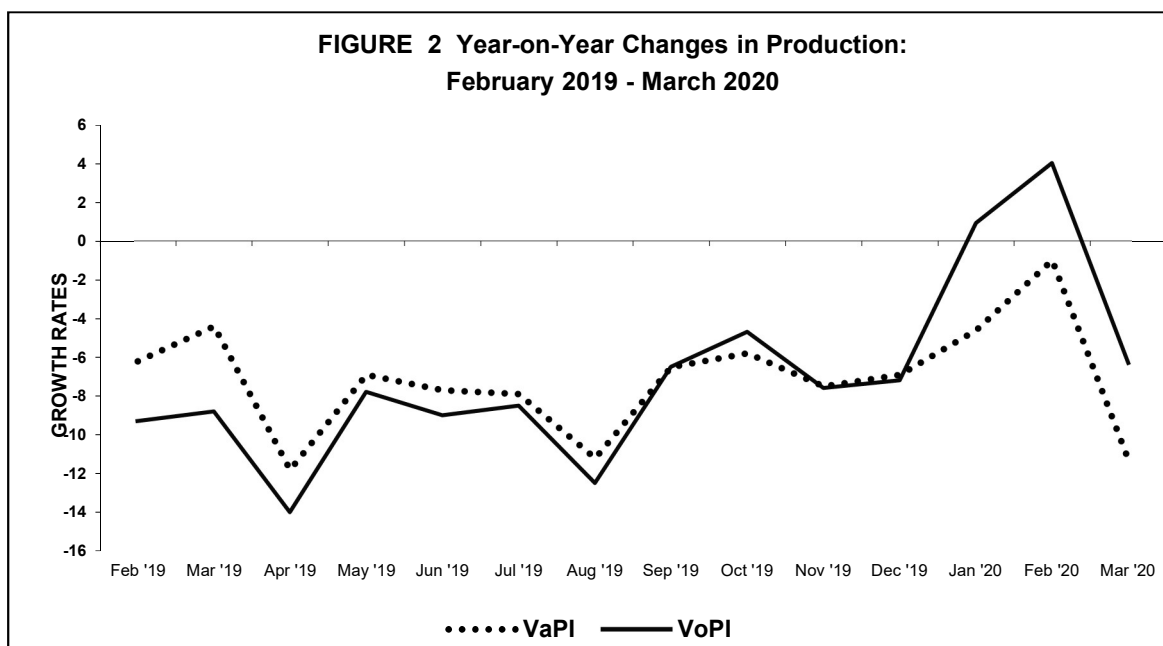
The reduction in VaPI was largely due to the decreases in the indices of 17 major industry groups, the first three, which had at least 30 percent annual declines, were **petroleum products (-40.5%), tobacco products (-30.9%) and miscellaneous manufactures (-30.2%).** *(Tables 1 and 1-A)*

Volume of Production Index likewise contracts

The Volume of Production Index (VoPI), likewise, dropped at an annual rate of 6.3 percent in March 2020, from a positive growth of 4.0 percent in the previous month. In March 2019, VoPI shrank at a faster rate of 8.8 percent. *(Table A)*

Fifteen major industry groups pulled down the VoPI with the following major industry groups exhibiting at least 25 percent decreases: **petroleum products** (-34.3%), **tobacco products** (-33.9%) and **miscellaneous manufactures** (-29.0%). *(Tables 1-B and 2)*

FIGURE 1 Value of Production Index and Volume of Production Index for Total Manufacturing: February 2019 - March 2020 (2000 = 100)

FIGURE 2 Year-on-Year Changes in Production:
February 2019 - March 2020

NET SALES

### Value of Net Sales Index posts two-digit decrement

The Value of Net Sales Index (VaNSI) reflected a two-digit annual decrement of 14.1 percent in March 2020 after hitting a 2.4 percent annual growth in the previous month. In March 2019, VaNSI grew by 3.0 percent annually. *(Table A)*

The downtrend in the indices of 15 major industries pulled down the VaNSI during the month with **petroleum products** (-39.1%) and **electrical machinery** (-33.1%) posting at least 30 percent decline. *(Tables 2-A and 3)*

Volume of Net Sales Index drops

Year-on-year , the Volume of Net Sales Index (VoNSI) decelerated by 9.2 percent in March 2020 from an increment of 7.5 percent in the previous month. In March 2019, it fell at an annual rate of 1.8 percent. *(Table A)*

Pulling down the VoNSI to its current level were the downward movements in the indices of 13 major industry groups led by **petroleum products** (-32.7%), **electrical machinery** (-29.3%) and **furniture and fixtures** (-24.4%). *(Tables 2-B and 4)*

FIGURE 3 Year-on-Year Changes in Net Sales: February 2019 - March 2020
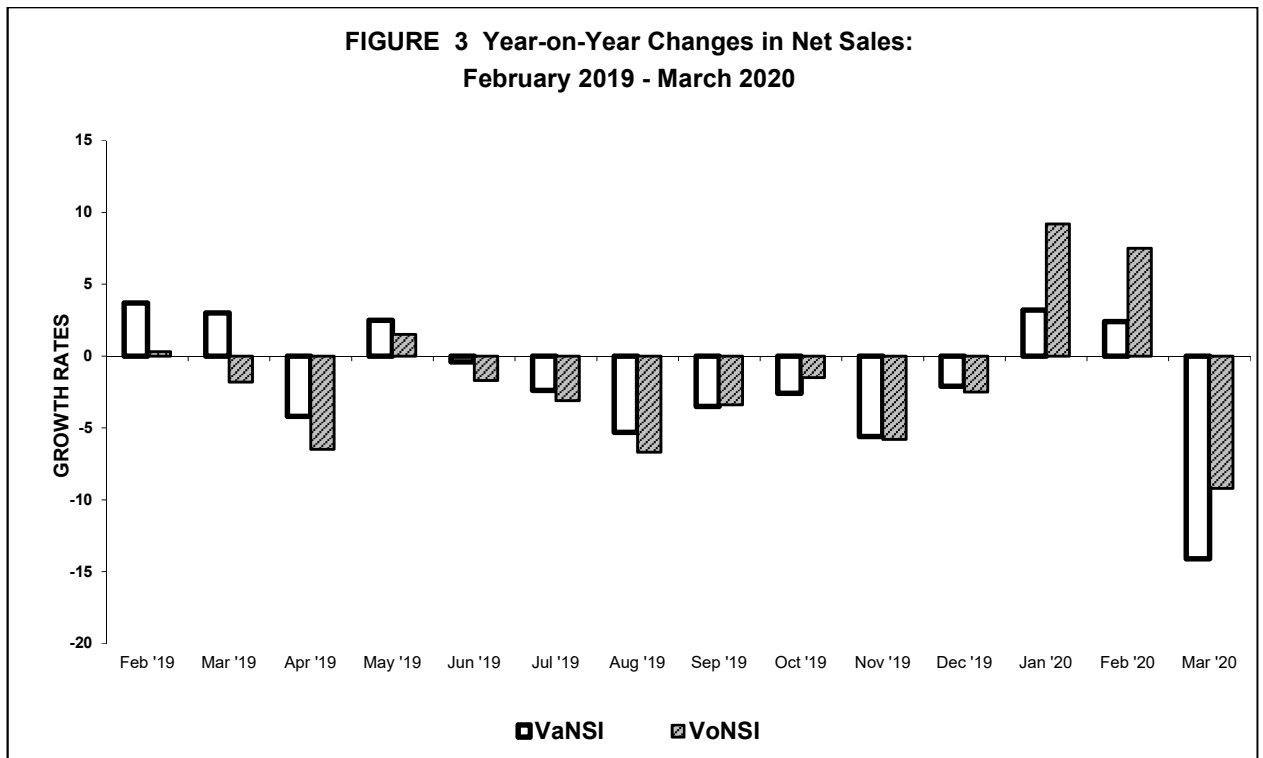
CAPACITY UTILIZATION

Average Capacity Utilization Rate is highest for petroleum products

Average capacity utilization rate for total manufacturing in March 2020 was posted at 84.5 percent. Twelve of the 20 major industries had at least 80 percent capacity utilization rates which was led by petroleum products (90.1%), basic metals (88.8%) and machinery except electrical (86.4%). (Table 6)

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

The proportion of establishments that operated at full capacity (90% to 100%) was more than one-fifth (21.9%) of the total number of establishments for manufacturing. Almost half (44.6%) operated at 70 to 89 percent capacity while almost one-third (33.5%) operated below 70 percent capacity. (Table B)

Table B Distribution of Key Manufacturing Establishments by Capacity Utilization for Total Manufacturing: March 2020

Capacity Utilization	Number of Responding Establishments	Percent Share
Below 50%	60	25.8
50% - 59%	6	2.6
60% - 69%	12	5.2
70% - 79%	42	18.0
80% - 89%	62	26.6
90% - 100%	51	21.9

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

MAJOR INDUSTRY GROUP	March 2020	February 2020
Gainers		
Chemical products	6.1	10.8ʳ
Furniture and fixtures	35.1	-6.4
Printing	16.1	52.5ʳ
Losers		
Electrical machinery	-24.5	-8.9ʳ
Petroleum products	-40.5	-32.3ʳ
Machinery except electrical	-12.7	21.6ʳ
Non-metallic mineral products	-27.5	2.7ʳ
Footwear and wearing apparel	-20.1	-4.4ʳ
Miscellaneous manufactures	-30.2	-23.8ʳ
Tobacco products	-30.9	-26.1
Basic metals	-13.3	-14.9ʳ
Paper and paper products	-25.7	-9.7
Beverages	-7.8	15.9ʳ
Food manufacturing	-2.0	5.3ʳ
Textiles	-15.7	-9.4
Transport equipment	-4.4	-8.1ʳ
Rubber and plastic products	-6.6	0.7
Fabricated metal products	-10.7	16.1ʳ
Leather products	-27.6	-26.1
Wood and wood products	-10.0	-25.3ʳ

r- revised

Note: *Major 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 Major Industry Group
February 2020 and March 2020
(2000 = 100)**

MAJOR INDUSTRY GROUP	March 2020	February 2020
Gainers		
Chemical products	15.2	23.2^r
Transport equipment	9.1	3.7^r
Printing	14.1	49.8^r
Furniture and fixtures	12.4	-22.1
Wood and wood products	2.2	-17.2^r
Losers		
Petroleum products	-34.3	-32.9^r
Electrical machinery	-20.1	-5.7^r
Machinery except electrical	-10.1	25.9^r
Non-metallic mineral products	-24.8	6.1^r
Tobacco products	-33.9	-29.3
Miscellaneous manufactures	-29.0	-22.6^r
Beverages	-10.4	12.7^r
Paper and paper products	-22.8	-6.0^r
Food manufacturing	-2.3	5.8^r
Footwear and wearing apparel	-11.5	6.5^r
Basic metals	-6.7	-10.3^r
Textiles	-9.9	-5.1^r
Rubber and plastic products	-4.4	3.6
Leather products	-15.0	-13.3
Fabricated metal products	-0.4	29.3^r

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 Major Industry Group
February 2020 and March 2020
(2000 =100)

MAJOR INDUSTRY GROUP	March 2020	February 2020
Gainers		
Food manufacturing	6.2	4.6[r]
Chemical products	7.6	16.3[r]
Tobacco products	22.3	30.6
Miscellaneous manufactures	5.7	5.1
Printing	4.0	31.1[r]
Losers		
Electrical machinery	-33.1	-12.2[r]
Petroleum products	-39.1	-1.6[r]
Machinery except electrical	-19.7	18.3[r]
Transport equipment	-22.8	-0.2
Beverages	-21.1	21.3[r]
Basic metals	-18.2	-16.6[r]
Footwear and wearing apparel	-23.1	5.2[r]
Non-metallic mineral products	-17.7	-1.0[r]
Paper and paper products	-21.7	-2.8[r]
Textiles	-13.4	-3.0[r]
Wood and wood products	-21.5	-30.9[r]
Furniture and fixtures	-9.1	-7.0
Fabricated metal products	-4.8	8.5
Leather products	-22.3	-19.3[r]
Rubber and plastic products	-0.8	4.7

r- revised

Note: *Major 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
February 2020 and March 2020
(2000 = 100)**

MAJOR INDUSTRY GROUP	March 2020	February 2020
Gainers		
Chemical products	16.8	29.3[r]
Food manufacturing	5.9	5.2[r]
Tobacco products	16.7	24.7
Miscellaneous manufactures	7.6	6.8[r]
Fabricated metal products	6.2	20.8[r]
Printing	2.2	28.8[r]
Rubber and plastic products	1.5	7.7
Losers		
Electrical machinery	-29.3	-9.2[r]
Petroleum products	-32.7	-2.4[r]
Machinery except electrical	-17.4	22.4[r]
Beverages	-23.3	17.9[r]
Basic metals	-11.9	-12.1[r]
Transport equipment	-11.9	12.6
Footwear and wearing apparel	-14.9	17.2[r]
Non-metallic mineral products	-14.6	2.3[r]
Paper and paper products	-18.6	1.1[r]
Furniture and fixtures	-24.4	-22.6
Textiles	-7.4	1.6[r]
Wood and wood products	-10.8	-23.4[r]
Leather products	-8.8	-5.8[r]

r- revised
Note: *Major 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 (3/4-digit PSIC)**

        i. For the First Month of the Base Year

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

where:

$VaPI_{ijm}$ = VaPI for the ith industry class (3/4-digit) of the jth industry group (2/3-digit) at the current month m

V_{ijm} = total value of production for all sample establishments in the ith industry class of the jth industry group at the current month m

V_{ijo} = average monthly value of production at base year 0

ii. For Succeeding Months

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

where:

$VaPI_{ijm}$	=	VaPI for the ith industry class (3/4-digit) of the jth industry group (2/3-digit) at the current month m
$VaPI_{ij(m-1)}$	=	VaPI for the ith industry class of the jth industry group for the previous month m-1
V_{ijm}	=	total value of production for all sample establishments in the ith industry class of the jth industry group at the current month m
$V_{ij(m-1)}$	=	total value of production for all sample establishments in the ith industry class of the jth industry group for the previous month m-1

b. Computation of Index for Industry Group Level (2/3-digit PSIC)

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

where:

$VaPI_{jm}$	=	VaPI for j^{th} industry group (2/3-digit PSIC) at current month m
$VaPI_{ijm}$	=	VaPI for the ith industry class (3/4-digit) of the jth industry group at the current month m
W_{ij}	=	Weight for the ith industry class of the jth industry group
n	=	Number of industry class in the jth industry group

Same formula for industry groups without Sub-sector

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

$$VaPI_{m} = \sum_{j=1}^{p} W_{j} \times VaPI_{jm}$$

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 jth 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)

Volume of Production Index (VoPI)

a. **Computation fo Index for Industry Class Level (3/4-digit PSIC)**

$$VoPI_{ijm} = \frac{VaPI_{ijm}}{PPI_{ijm}} \times 100$$

where:

$VoPI_{ijm}$ = VoPI for the ith industry class (3/4-digit) of the jth industry group (2/3-digit) at the current month m

$VaPI_{ijm}$ = VaPI for the ith industry class of the jth industry group at the current month m

PPI_{ijm} = PPI for the ith industry class of the jth industry group at the current month m

b. **Computation of Index for Industry Group Level (2/3-digit PSIC)**

$$VoPI_{jm} = \frac{VaPI_{jm}}{PPI_{jm}} \times 100$$

where:

$VoPI_{jm}$ = VoPI for the jth industry group (2/3-digit) at the current month m

$VaPI_{jm}$ = VaPI for the jth industry group at the current month m

PPI_{jm} = PPI fot the jth industry group at the current mont m

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

$$VoPI_m = \frac{VaPI_m}{PPI_m} \times 100$$

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

3. **Volume of Net Sales Index (VoNSI)**

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

4. **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. These are presented in the table below.

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

* - Major industry groups categorized into industry classes