SPECIAL RELEASE

**SEASONALLY ADJUSTED
PRODUCTION INDEX AND NET SALES INDEX
(Monthly Integrated Survey of Selected Industries)
November 2023
(2018 = 100)**

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Table A. Month-on-Month Growth Rates of Seasonally Adjusted Production Index and Net Sales Index for Total Manufacturing and Food Manufacturing (2018=100) October 2023[r] and November 2023[p] (in Percent)

INDICATOR	October 2023[r]	November 2023[p]
TOTAL MANUFACTURING		
Production Index (2018=100)		
Value of Production Index (*VaPI*)	**-3.8**	**1.1**
Volume of Production Index (*VoPI*)	**-4.1**	**0.7**
Net Sales Index (2018=100)		
Value of Net Sales Index *(VaNSI)*	**-0.8**	**-2.2**
Volume of Net Sales Index *(VoNSI)*	**-1.0**	**-3.3**
FOOD MANUFACTURING		
Production Index (2018=100)		
Value of Production Index (*VaPI*)	**-1.2**	**2.9**
Volume of Production Index (*VoPI*)	**-0.3**	**2.4**
Net Sales Index (2018=100)		
Value of Net Sales Index *(VaNSI)*	**-1.2**	**-1.9**
Volume of Net Sales Index *(VoNSI)*	**-0.5**	**-2.3**

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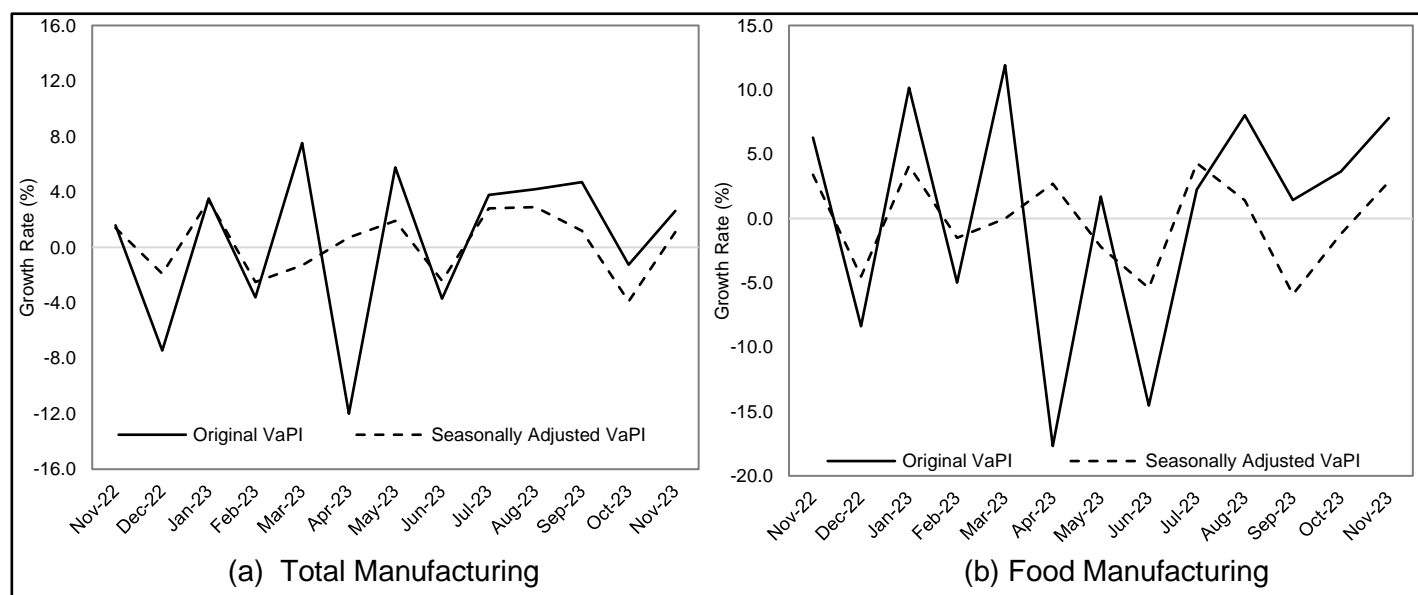*Source: Philippine Statistics Authority*

1. Value of Production Index (VaPI)

The seasonally adjusted VaPI for total manufacturing in November 2023 grew at a monthly rate of 1.1 percent from 3.8 percent monthly contraction observed in October 2023. (Figure 1a, and Tables A and 1)

Similarly, the seasonally adjusted VaPI for food manufacturing grew by 2.9 percent in November 2023. This was a recovery from the previous month's drop of 1.2 percent. (Figure 1b, and Tables A and 1)

Figure 1. Month-on-Month Growth Rates of Original and Seasonally Adjusted Value of Production Index (VaPI) for Total Manufacturing and Food Manufacturing November 2022 to November 2023[p]
(2018=100)

(a) Total Manufacturing

(b) Food Manufacturing

p - preliminary
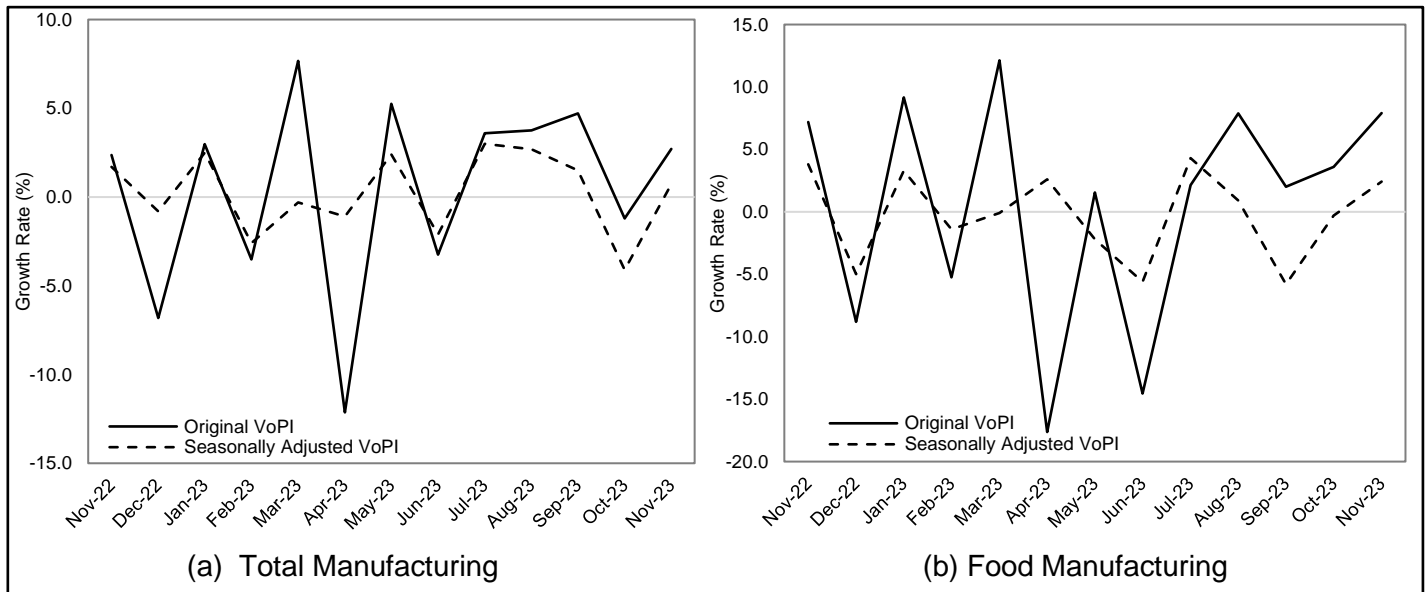*Source: Philippine Statistics Authority*

2. Volume of Production Index (VoPI)

The monthly rate of the seasonally adjusted VoPI for total manufacturing increased at 0.7 percent in November 2023. This was a recovery from the 4.1 percent month-on-month decrement in October 2023. (Figure 2a, and Tables A and 2)

Likewise, the seasonally adjusted VoPI for food manufacturing expanded month-on-month by 2.4 percent in November 2023 from the 0.3 percent monthly decrement in the previous month. (Figure 2b, and Tables A and 2)

Figure 2. Month-on-Month Growth Rates of Original and Seasonally Adjusted
Volume of Production Index (VoPI) for Total Manufacturing and Food Manufacturing
November 2022 to November 2023ᵖ
(2018=100)

(a) Total Manufacturing

(b) Food Manufacturing

p - preliminary
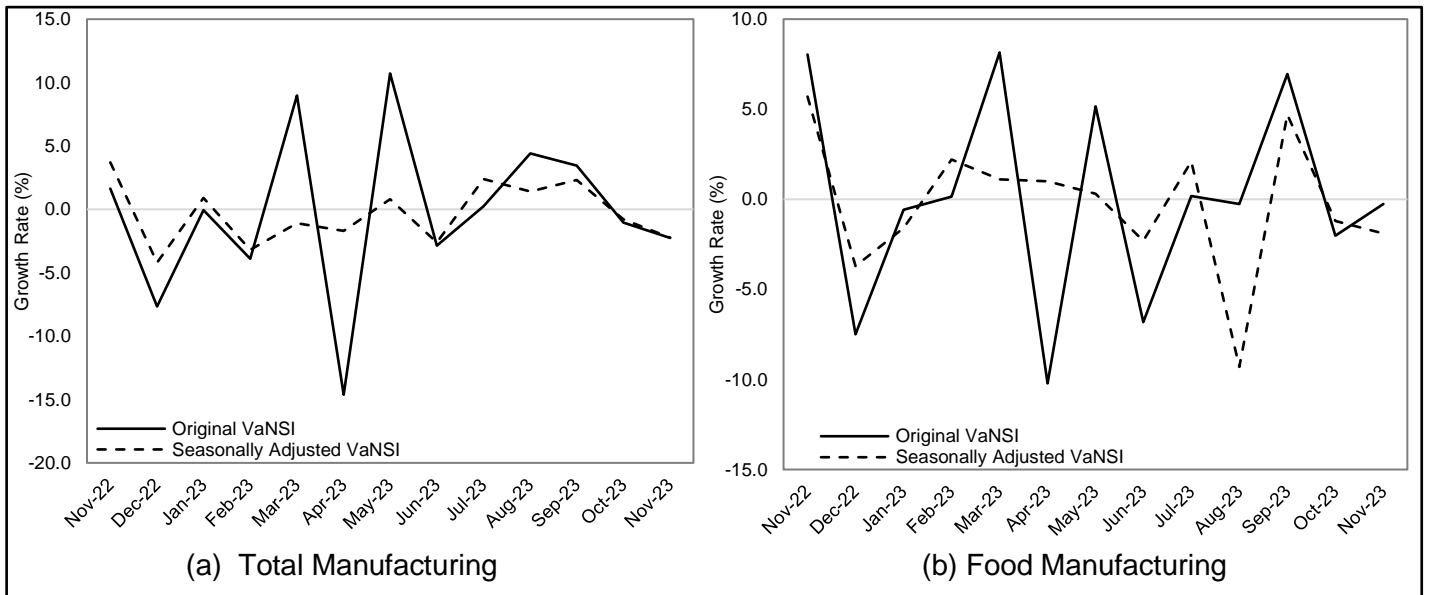*Source: Philippine Statistics Authority*

3. Value of Net Sales Index (VaNSI)

In November 2023, the monthly rate of the seasonally adjusted VaNSI for total manufacturing declined further by 2.2 percent from 0.8 percent monthly drop in October 2023. (Figure 3a, and Tables A and 3)

Likewise, the month-on-month growth rate of the seasonally adjusted VaNSI for food manufacturing decreased by 1.9 percent during the month. This downturn was faster from last month's monthly decline of 1.2 percent. (Figure 3b, and Tables A and 3)

Figure 3. Month-on-Month Growth Rates of Original and Seasonally Adjusted Value
of Net Sales Index (VaNSI) for Total Manufacturing and Food Manufacturing
November 2022 to November 2023ᵖ
(2018=100)

(a) Total Manufacturing   (b) Food Manufacturing

p - preliminary
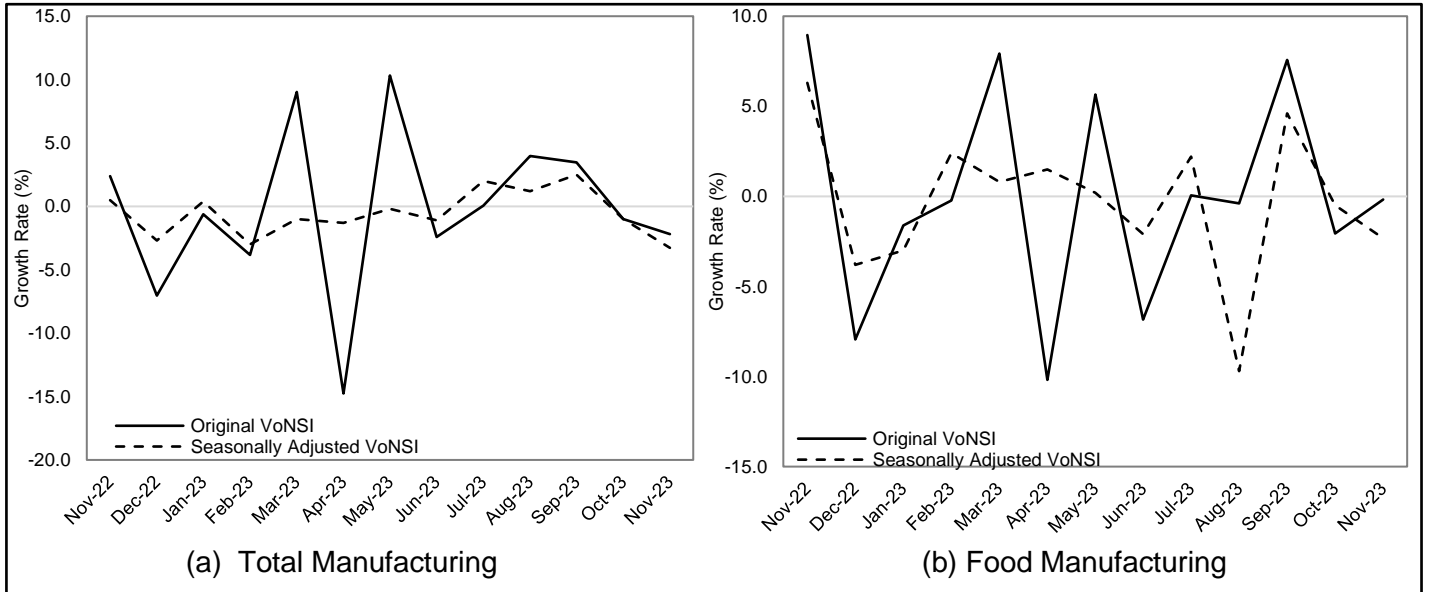*Source: Philippine Statistics Authority*

4. Volume of Net Sales Index (VoNSI)

Month-on-month, the seasonally adjusted VoNSI for total manufacturing declined further in November 2023 by 3.3 percent from the 1.0 percent monthly decline observed in October 2023. (Figure 4a, and Tables A and 4)

Likewise, the seasonally adjusted VoNSI for food manufacturing declined further by 2.3 percent month-on-month in November 2023 from its monthly contraction of 0.5 percent in the previous month. (Figure 4b, and Tables A and 4)

Figure 4. Month-on-Month Growth Rates of Original and Seasonally Adjusted
Volume of Net Sales Index (VoNSI) for Total Manufacturing and Food
Manufacturing: November 2022 to November 2023^p
(2018=100)

(a) Total Manufacturing

(b) Food Manufacturing

p - preliminary
Source: Philippine Statistics Authority

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Technical Notes

The Monthly Integrated Survey of Selected Industries (MISSI) generates the original series of the Value of Production Index (VaPI), Volume of Production Index (VoPI), Value of Net Sales Index (VaNSI), and Volume of Net Sales Index (VoNSI). These indices provide information on the performance of growth-oriented industries in the manufacturing section.

This special release features the seasonally adjusted VaPI, VoPI, VaNSI, and VoNSI using X-13 Auto-Regressive Integrated Moving Average (ARIMA) of JDemetra+. The seasonally adjusted series show the trend of value and volume of production and net sales of the manufacturing section without the effects of seasonal factors.

The decomposition model chosen for the seasonal adjustment for each index is shown below.

Table A. Summary of Statistical Models Used in the Generation of Seasonally Adjusted MISSI Indices
(2018=100)

Index	Statistical Model
Value of Production Index (VaPI) Total Manufacturing	Additive Model: (0,1,1)(0,1,1) No data transformation.
Value of Production Index (VaPI) Food Manufacturing	Multiplicative Model: (1,1,1)(0,1,1) Data series have been log-transformed.
Volume of Production Index (VoPI) Total Manufacturing	Additive Model: (0,1,1)(0,1,1) No data transformation.
Volume of Production Index (VoPI) Food Manufacturing	Multiplicative Model: (1,0,0)(0,1,1) Data series have been log-transformed.
Value of Net Sales Index (VaNSI) Total Manufacturing	Additive Model: (1,1,0)(0,1,1) No data transformation.
Value of Net Sales Index (VaNSI) Food Manufacturing	Additive Model: (0,1,1)(0,1,1) No data transformation.
Volume of Net Sales Index (VoNSI) Total Manufacturing	Additive Model: (1,1,0)(0,1,1) No data transformation.
Volume of Net Sales Index (VoNSI) Food Manufacturing	Additive Model: (0,1,1)(0,1,1) No data transformation.