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## July 2019 Manufacturing ISM® Report On Business®

PMI® at 51.2%

**New Orders, Production, and Employment Growing** 

Supplier Deliveries Slowing at a Faster Rate; Backlog Contracting

Raw Materials Inventories Contracting; Customers' Inventories Too Low

**Prices Decreasing; Exports and Imports Contracting** 

(Tempe, Arizona) — Economic activity in the **manufacturing sector** expanded in July, and the **overall economy** grew for the 123rd consecutive month, say the nation's supply executives in the latest **Manufacturing ISM**<sup>®</sup> **Report On Business**<sup>®</sup>.

The report was issued today by Timothy R. Fiore, CPSM, C.P.M., Chair of the Institute for Supply Management® (ISM®) Manufacturing Business Survey Committee: "The July PMI® registered 51.2 percent, a decrease of 0.5 percentage point from the June reading of 51.7 percent. The New Orders Index registered 50.8 percent, an increase of 0.8 percentage point from the June reading of 50 percent. The Production Index registered 50.8 percent, a 3.3-percentage point decrease compared to the June reading of 54.1 percent. The Employment Index registered 51.7 percent, a decrease of 2.8 percentage points from the June reading of 54.5 percent. The Supplier Deliveries Index registered 53.3 percent, a 2.6-percentage point increase from the June reading of 50.7 percent. The Inventories Index registered 49.5 percent, an increase of 0.4 percentage point from the June reading of 49.1 percent. The Prices Index registered 45.1 percent, a 2.8-percentage point decrease from the June reading of 47.9 percent.

"Comments from the panel reflect continued expanding business strength, but at soft levels. July was the fourth straight month of slowing PMI® expansion. **Demand** expansion resumed, with the New Orders Index recording marginal growth, the Customers' Inventories Index entering "about right" territory, and the Backlog of Orders Index contracting for the third straight month, at stronger levels compared to prior months. New export orders also contracted. **Consumption** (measured by the Production and Employment indexes) continued to expand, but at lower levels. This resulted in a combined decrease of 6.1 percentage points to the PMI® calculation due to minimal new-order growth, backlog contraction and customer-inventory gains. **Inputs** — expressed as supplier deliveries, inventories and imports — were lower this month, due to inventory tightening for the second straight month and continued slower supplier deliveries, resulting in a combined 3.0-percentage point improvement in the Supplier Deliveries and Inventories indexes. Imports and new export orders contracted. Overall, inputs indicate (1) supply chains are responding marginally slower and (2) supply managers are closely matching inventories to new orders. Prices contracted for the second consecutive month, indicating lower overall systemic demand.

"Respondents expressed less concern about U.S.-China trade turbulence, but trade remains a significant issue. More respondents noted supply chain adjustments as a result of moving manufacturing from China. Overall, sentiment this month is evenly mixed," says Fiore.

Of the 18 manufacturing industries, nine reported growth in July, in the following order: Wood Products; Printing & Related Support Activities; Furniture & Related Products; Food, Beverage & Tobacco Products; Plastics & Rubber Products; Computer & Electronic Products; Textile Mills; Petroleum & Coal Products; and Chemical Products. The nine industries reporting contraction in July — in the following order — are: Apparel, Leather & Allied Products; Fabricated Metal Products; Primary Metals; Nonmetallic Mineral Products; Transportation Equipment; Paper Products; Miscellaneous Manufacturing; Electrical Equipment, Appliances & Components; and Machinery.

#### WHAT RESPONDENTS ARE SAYING

- "General business trends are continuing to show signs of weakness resulting from tariffs and cost impacts of importing and exporting." (Electrical Equipment, Appliances & Components)
- "Business is strong mostly due to seasonality. Tariffs surcharges are now being passed through to all customers. Labor is tight, putting pressure on wages costs." (Furniture & Related Products)
- "All aspects of business remain strong, but we're starting to see the frictional effect of tariffs on exports." (Plastics & Rubber Products)
- "We are a third-tier supplier to [a major aircraft manufacturer], and it appears its production slowdown of [an aircraft] is having a direct effect on our slowing orders." (Miscellaneous Manufacturing)
- "Business has slowed, but it is still steady and expected to pick up next month." (Machinery)

- "There is a drop in demand for steel products, which has had a major impact on steel prices and the domestic scrap market." (Fabricated Metal Products)
- "The economy is holding steady. All the uncertainty seems to be priced in accordingly, and supply plans are consistent throughout 2019. Business conditions improving yet still facing headwinds in foreign exchange, commodities, and certain direct materials." (Food, Beverage & Tobacco Products)
- "[Automotive] sales continue to decline, and forecasts have been reduced due to softer predicted demand. Attention to product cost not sales price is increasing." (Transportation Equipment)
- "Weakness in end markets accelerating rapidly. Continuing to reduce production based on weakening demand and declining current orders." (Chemical Products)
- "China tariffs continue to be a concern. The uncertainty of future tariffs involving China, Canada, and Mexico is also a concern. China tariffs for electronic parts are averaging 17 percent." (Computer & Electronic Products)

# Manufacturing at a Glance July 2019

Index	Series Index Jul	Series Index Jun	Percentage Point Change	Direction	Rate of Change	Trend* (Months)
$\mathbf{PMI}^{@}$	51.2	51.7	-0.5	Growing	Slower	35
New Orders	50.8	50.0	+0.8	Growing	From Unchanged	1
Production	50.8	54.1	-3.3	Growing	Slower	35
<b>Employment</b>	51.7	54.5	-2.8	Growing	Slower	34
Supplier Deliveries	53.3	50.7	+2.6	Slowing	Faster	41
<b>Inventories</b>	49.5	49.1	+0.4	Contracting	Slower	2
Customers' Inventories	45.7	44.6	+1.1	Too Low	Slower	34
Prices	45.1	47.9	-2.8	Decreasing	Faster	2
Backlog of Orders	43.1	47.4	-4.3	Contracting	Faster	3
New Export Orders	48.1	50.5	-2.4	Contracting	From Growing	1
Imports	47.0	50.0	-3.0	Contracting	From Unchanged	1
o	VERALL:	ECONOM	ıy	Growing	Slower	123
	Manufactu			Growing	Slower	35

 $Manufacturing \ ISM^{\otimes} \ Report \ On \ Business^{\circledcirc} \ data \ is \ seasonally \ adjusted \ for \ the \ New \ Orders, \ Production, \ Employment \ and \ Supplier \ Deliveries \ Indexes.$ 

## Commodities reported up/down in price and in short supply

#### **Commodities Up in Price**

Corn (2); and Steel Products\* (3).

#### **Commodities Down in Price**

Aluminum (4); Aluminum Products; Copper (2); Corrugated Boxes (2); Electrical Components; Polypropylene; Steel; Steel — Hot Rolled (4); Steel — Scrap; Steel — Stainless (2); and Steel Products\* (7).

#### **Commodities in Short Supply**

Electrical Components (2); and Helium.

The number of consecutive months the commodity is listed is indicated after each item. \*Indicates both up and down in price.

## **July Manufacturing Index Summaries**

#### **PMI**<sup>®</sup>

Manufacturing expanded in July, as the PMI<sup>®</sup> registered 51.2 percent, a decrease of 0.5 percentage point from the June reading of 51.7 percent. This is the lowest reading since August 2016, when the index registered 49.6 percent. "This indicates growth in manufacturing for the 35th consecutive month. The PMI<sup>®</sup> continued a period of expansion softening, with four straight months of expansion decline. Softening this month was primarily due to slower growth in demand and consumption, indicated by the New Orders, Production and Employment indexes. Four of the six big industries expanded, as was the case in June, but at lower levels," says Fiore. A reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally contracting.

A PMI<sup>®</sup> above 42.9 percent, over a period of time, generally indicates an expansion of the overall economy. Therefore, the July PMI<sup>®</sup> indicates growth for the 123rd consecutive month in the overall economy and the 35th straight month of growth in the manufacturing sector. "The past relationship between the PMI<sup>®</sup> and the overall economy indicates that the PMI<sup>®</sup> for July

<sup>\*</sup>Number of months moving in current direction.

(51.2 percent) corresponds to a 2.5-percent increase in real gross domestic product (GDP) on an annualized basis," says Fiore.

#### THE LAST 12 MONTHS

**PMI**® Month Jul 2019 51.2 Jun 2019 51.7 May 2019 52.1 **Apr 2019** 52.8 Mar 2019 55.3 Feb 2019 54.2 **PMI** Month Jan 2019 56.6 Dec 2018 54.3 Nov 2018 58.8 Oct 2018 57.5 Sep 2018 59.5 Aug 2018 60.8 Average for 12 months - 55.4 High - 60.8 Low - 51.2

#### **New Orders**

ISM®'s New Orders Index registered 50.8 percent in July, an increase of 0.8 percentage point when compared to the 50 percent reported for June. This indicates that new orders grew after being unchanged for one month. "Customer demand expanded slightly in July following one month of no expansion. Three of the top six industry sectors expanded, and three contracted during the period," says Fiore. A New Orders Index above 52.5 percent, over time, is generally consistent with an increase in the Census Bureau's series on manufacturing orders (in constant 2000 dollars).

Of 18 manufacturing industries, seven reported growth in new orders in July, in the following order: Furniture & Related Products; Wood Products; Printing & Related Support Activities; Food, Beverage & Tobacco Products; Textile Mills; Chemical Products; and Computer & Electronic Products. The 10 industries reporting a decline in new orders in July — in the following order — are: Apparel, Leather & Allied Products; Primary Metals; Petroleum & Coal Products; Fabricated Metal Products; Electrical Equipment, Appliances & Components; Transportation Equipment; Nonmetallic Mineral Products; Miscellaneous Manufacturing; Paper Products; and Plastics & Rubber Products.

% Higher	% Same	% Lower	Net	Index
23.0	52.1	24.9	-1.9	50.8
24.6	55.9	19.5	+5.1	50.0
26.9	56.7	16.4	+10.5	52.7
31.0	50.2	18.8	+12.2	51.7
	23.0 24.6 26.9	23.0 52.1 24.6 55.9 26.9 56.7	23.0 52.1 24.9 24.6 55.9 19.5 26.9 56.7 16.4	24.6 55.9 19.5 +5.1 26.9 56.7 16.4 +10.5

#### **Production**

ISM®'s Production Index registered 50.8 percent in July, which is a decrease of 3.3 percentage points when compared to the 54.1 percent reported for June, indicating growth in production for the 35th consecutive month. "Production expansion continued in July, at a weaker pace compared to June. For the second straight month, production output was able to improve customer-inventory positions and reduce backlog orders," says Fiore. An index above 51.7 percent, over time, is generally consistent with an increase in the Federal Reserve Board's Industrial Production figures.

The eight industries reporting growth in production during the month of July — listed in order — are: Wood Products; Printing & Related Support Activities; Furniture & Related Products; Food, Beverage & Tobacco Products; Textile Mills; Primary Metals; Chemical Products; and Computer & Electronic Products. The 10 industries reporting a decrease in production in July — listed in order — are: Apparel, Leather & Allied Products; Paper Products; Electrical Equipment, Appliances & Components; Nonmetallic Mineral Products; Transportation Equipment; Petroleum & Coal Products; Fabricated Metal Products; Miscellaneous Manufacturing; Machinery; and Plastics & Rubber Products.

% Higher	% Same	% Lower	Net	Index
19.7	59.4	20.8	-1.1	50.8
31.7	48.7	19.6	+12.1	54.1
25.4	54.9	19.7	+5.7	51.3
30.4	51.5	18.1	+12.3	52.3
	19.7 31.7 25.4	19.7 59.4 31.7 48.7 25.4 54.9	19.7     59.4     20.8       31.7     48.7     19.6       25.4     54.9     19.7	31.7 48.7 19.6 +12.1 25.4 54.9 19.7 +5.7

## **Employment**

ISM®'s Employment Index registered 51.7 percent in July, a decrease of 2.8 percentage points when compared to the June reading of 54.5 percent. This indicates growth in employment in July for the 34th consecutive month. "Employment continued to expand slightly compared to June. Comments were generally 'pro hire,' but there is a growing reluctance to replace unplanned exits and retirements," says Fiore. An Employment Index above 50.8 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) data on manufacturing employment.

Of 18 manufacturing industries, nine reported employment growth in July, in the following order: Furniture & Related Products; Printing & Related Support Activities; Food, Beverage & Tobacco Products; Plastics & Rubber Products; Petroleum & Coal Products; Electrical Equipment, Appliances & Components; Paper Products; Machinery; and Chemical Products. The six industries reporting a decrease in employment in July, in the following order, are: Apparel, Leather & Allied Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Transportation Equipment; and Miscellaneous Manufacturing.

ıdex
1.7
4.5
3.7
2.4

#### **Supplier Deliveries**

The delivery performance of suppliers to manufacturing organizations slowed in July, as the Supplier Deliveries Index registered 53.3 percent. This is 2.6 percentage points higher than the 50.7 percent reported for June. "This is the 41st straight month of slowing supplier deliveries, in contrast with the reduction in production material lead times noted in the Buying Policy section of this report," says Fiore. A reading below 50 percent indicates faster deliveries, while a reading above 50 percent indicates slower deliveries.

The seven industries reporting slower supplier deliveries in July — listed in order — are: Wood Products; Petroleum & Coal Products; Apparel, Leather & Allied Products; Plastics & Rubber Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; and Miscellaneous Manufacturing. The five industries reporting faster supplier deliveries in July are: Paper Products; Electrical Equipment, Appliances & Components; Fabricated Metal Products; Transportation Equipment; and Chemical Products. Six industries reported no change in supplier deliveries in July as compared to June.

% Slower	% Same	% Faster	<b>Net Index</b>
13.1	80.8	6.1	+7.0 53.3
9.7	83.0	7.3	+2.4 50.7
11.0	82.9	6.1	+4.9 52.0
18.0	73.6	8.4	+9.6 54.6
	13.1 9.7 11.0	13.1 80.8 9.7 83.0 11.0 82.9	9.783.07.311.082.96.1

#### Inventories\*

The Inventories Index registered 49.5 percent in July, an increase of 0.4 percentage point from the 49.1 percent reported for June. "The index contracted for the second straight month. Inventories were again depleted relative to production, due to production-output strength. Many respondents noted that they continue to watch inventories closely to align with softening demand," says Fiore. An Inventories Index greater than 44.3 percent, over time, is generally consistent with expansion in the Bureau of Economic Analysis (BEA) figures on overall manufacturing inventories (in chained 2000 dollars).

The seven industries reporting higher inventories in July — listed in order — are: Printing & Related Support Activities; Plastics & Rubber Products; Electrical Equipment, Appliances & Components; Nonmetallic Mineral Products; Paper Products; Food, Beverage & Tobacco Products; and Computer & Electronic Products. The eight industries reporting a decrease in inventories in July — in the following order — are: Apparel, Leather & Allied Products; Furniture & Related Products; Fabricated Metal Products; Textile Mills; Miscellaneous Manufacturing; Primary Metals; Transportation Equipment; and Chemical Products.

Inventories	% Higher	% Same	% Lower	<b>Net Index</b>
Jul 2019	17.4	64.1	18.4	-1.0 49.5
Jun 2019	16.5	65.1	18.4	-1.9 49.1
May 2019	18.8	64.3	16.9	+1.9 50.9
<b>Apr 2019</b>	20.5	64.8	14.7	+5.8 52.9

#### **Customers' Inventories\***

ISM®'s Customers' Inventories Index registered 45.7 percent in July, which is 1.1 percentage points higher than the 44.6 percent reported for June, indicating that customers' inventory levels were considered too low. "Although customers' inventories are too low for the 34th consecutive month, they are now at optimum levels. This is the third straight month of increasing customer-inventory levels," says Fiore.

The five industries reporting customers' inventories as too high during the month of July are: Apparel, Leather & Allied Products; Nonmetallic Mineral Products; Miscellaneous Manufacturing; Electrical Equipment, Appliances & Components; and Paper Products. The 10 industries reporting customers' inventories as too low during July — listed in order — are: Wood Products; Textile Mills; Plastics & Rubber Products; Machinery; Transportation Equipment; Food, Beverage & Tobacco Products; Fabricated Metal Products; Primary Metals; Computer & Electronic Products; and Chemical Products.

## Customers' Inventories % Reporting % Too High % About Right % Too Low Net Index

<b>Jul 2019</b>	74	10.5	70.5	19.1	-8.6 45.7
Jun 2019	77	11.1	66.9	22.0	-10.9 44.6
May 2019	81	10.5	66.5	23.0	-12.5 43.7
Apr 2019	78	10.5	64.2	25.3	-14.8 42.6

#### **Prices\***

The ISM® Prices Index registered 45.1 percent in July, a decrease of 2.8 percentage points from the June reading of 47.9 percent, indicating raw materials prices decreased for the second month in a row. "Prices contracted in July at higher rates compared to June. Respondents reported a large-scale decrease in prices for aluminum, copper, corrugate, computer memory and steel products," says Fiore. A Prices Index above 52.5 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) Producer Price Index for Intermediate Materials.

Four of the 18 industries reported paying increased prices for raw materials in July: Printing & Related Support Activities; Food, Beverage & Tobacco Products; Petroleum & Coal Products; and Miscellaneous Manufacturing. The 10 industries reporting a decrease in prices for raw materials in July — listed in the following order — are: Textile Mills; Paper Products; Primary Metals; Furniture & Related Products; Fabricated Metal Products; Plastics & Rubber Products; Machinery; Chemical Products; Transportation Equipment; and Computer & Electronic Products.

% Higher	% Same	% Lower	Net	Index
15.9	58.4	25.7	-9.8	45.1
19.7	56.4	23.9	-4.2	47.9
22.0	62.3	15.7	+6.3	53.2
19.0	62.1	19.0	0.0	50.0
	15.9 19.7 22.0	15.9 58.4 19.7 56.4 22.0 62.3	15.9     58.4     25.7       19.7     56.4     23.9       22.0     62.3     15.7	19.7 56.4 23.9 -4.2 22.0 62.3 15.7 +6.3

## **Backlog of Orders\***

ISM<sup>®</sup>'s Backlog of Orders Index registered 43.1 percent in July, which is 4.3 percentage points lower than the 47.4 percent reported in June, indicating order backlogs contracted for a third consecutive month, at a faster rate in July. "Backlogs shrank during July due to production output being able to exceed new order intake rates," says Fiore.

The two industries reporting growth in order backlogs in July are: Printing & Related Support Activities; and Furniture & Related Products. The 12 industries reporting a decrease in order backlogs during July — listed in order — are: Textile Mills; Primary Metals; Paper Products; Chemical Products; Food, Beverage & Tobacco Products; Nonmetallic Mineral Products; Electrical Equipment, Appliances & Components; Computer & Electronic Products; Fabricated Metal Products; Transportation Equipment; Miscellaneous Manufacturing; and Machinery.

Backlog of Orders*	% Reporting	% Higher	% Same	% Lower	Net Index
<b>Jul 2019</b>	88	13.6	59.0	27.5	-13.9 43.1
Iun 2019	88	17.8	59.2	23.0	-52 171

#### Backlog of Orders\* % Reporting % Higher % Same % Lower Net Index

May 2019	88	21.7	51.1	27.2	-5.5 47.2
<b>Apr 2019</b>	89	24.1	59.8	16.2	+7.9 53.9

## **New Export Orders\***

ISM®'s New Export Orders Index registered 48.1 percent in July, 2.4 percentage points lower compared to the June reading of 50.5 percent, indicating that new export orders contracted following one month of growth. "Many respondents noted global trade softness in China as a reason for sluggish activity. Two of the six big industry sectors expanded, while three reported contraction," says Fiore.

The three industries reporting growth in new export orders in July are: Miscellaneous Manufacturing; Food, Beverage & Tobacco Products; and Chemical Products. The seven industries reporting a decrease in new export orders in July — listed in order — are: Apparel, Leather & Allied Products; Fabricated Metal Products; Primary Metals; Paper Products; Plastics & Rubber Products; Transportation Equipment; and Computer & Electronic Products. Eight industries reported no change in new export orders in July as compared to June.

New Export Orders\* % Reporting % Higher % Same % Lower Net Index

<b>Jul 2019</b>	75	8.5	79.3	12.2	-3.7 48.1
Jun 2019	77	13.2	74.5	12.3	+0.9 50.5
<b>May 2019</b>	77	13.6	74.6	11.7	+1.9 51.0
<b>Apr 2019</b>	78	9.1	80.8	10.1	-1.0 49.5

#### Imports\*

ISM®'s Imports Index registered 47 percent in July, a decrease of 3 percentage points when compared to the 50 percent reported for June, indicating that imports contracted in July after being unchanged in June. "Three of the six big industry sectors contributed to the contraction. The Imports Index reached its lowest level since August 2016, when it registered 46.8 percent," says Fiore.

The only industry reporting growth in imports during the month of July is Wood Products. The 11 industries reporting a decrease in imports in July — in the following order — are: Apparel, Leather & Allied Products; Paper Products; Electrical Equipment, Appliances & Components; Furniture & Related Products; Primary Metals; Nonmetallic Mineral Products; Fabricated Metal Products; Machinery; Computer & Electronic Products; Plastics & Rubber Products; and Transportation Equipment. Six industries reported no change in raw materials imports in July as compared to June.

#### Imports % Reporting % Higher % Same % Lower Net Index

<b>Imports</b>	% Reporting	% Higher	% Same	% Lower	<b>Net Index</b>
Jul 2019	83	8.6	76.7	14.7	-6.1 47.0
Jun 2019	83	11.1	77.8	11.1	0.0 50.0
May 2019	84	10.7	77.4	11.9	-1.2 49.4
Apr 2019	85	12.5	74.4	13.0	-0.5 49.8

<sup>\*</sup>The Inventories, Customers' Inventories, Prices, Backlog of Orders, New Export Orders and Imports Indexes do not meet the accepted criteria for seasonal adjustments.

## **Buying Policy**

Average commitment lead time for Capital Expenditures decreased by three days in July to 148 days. Average lead time for Production Materials decreased by seven days in July to 65 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies decreased by five days in July to 31 days. "Average lead-time commitment decline is consistent with respondents' comments," says Fiore.

## **Percent Reporting**

Capital Expenditur	es	Hand-to Mouth		30 Days	60 Days	90 Days	6 Months	1 Yea +	r Average Days	
Jul 2019		20		6	8	18	27	21	148	
Jun 2019	)	19		4	11	16	29	21	151	
May 2019	)	21		4	12	15	28	20	145	
<b>Apr 201</b> 9	)	22		4	9	20	23	22	146	
Production Materials		Hand-to Mouth		30 Days	60 Days	90 Days	6 Months	1 Year	r Average Days	
Jul 2019		11		36	26	18	6	3	65	
Jun 2019	ı	12		32	26	17	9	4	72	
May 2019	)	11		32	27	17	9	4	72	
<b>Apr 2019</b>	)	11		31	30	16	8	4	71	
MRO Supplies Hand-to-Mouth 30 Days 60 Days 90 Days 6 Months 1 Year + Average Days										
<b>Jul 2019</b>	40		36	16	6	2	0		31	
Jun 2019	37		37	17	6	2	1		36	
<b>May 2019</b>	36		40	17	4	2	1		35	
<b>Apr 2019</b>	38		37	16	6	2	1		35	

#### **About This Report**

DO NOT CONFUSE THIS NATIONAL REPORT with the various regional purchasing reports released across the country. The national report's information reflects the entire U.S., while the regional reports contain primarily regional data from their local vicinities. Also, the information in the regional reports is not used in calculating the results of the national report. The information compiled in this report is for the month of July 2019.

The data presented herein is obtained from a survey of manufacturing supply executives based on information they have collected within their respective organizations. ISM® makes no representation, other than that stated within this release, regarding the individual company data collection procedures. The data should be compared to all other economic data sources when used in decision-making.

#### **Data and Method of Presentation**

The Manufacturing ISM® Report On Business® is based on data compiled from purchasing and supply executives nationwide. The composition of the Manufacturing Business Survey Committee is stratified according to the North American Industry Classification System (NAICS) and each of the following NAICS-based industry's contribution to gross domestic product (GDP): Food, Beverage & Tobacco Products; Textile Mills; Apparel, Leather & Allied Products; Wood Products; Paper Products; Printing & Related Support Activities; Petroleum & Coal Products; Chemical Products; Plastics & Rubber Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliances & Components; Transportation Equipment; Furniture & Related Products; and Miscellaneous Manufacturing (products such as medical equipment and supplies, jewelry, sporting goods, toys and office supplies). The data are weighted based on each industry's contribution to GDP. Beginning in February 2018 with January 2018 data, computation of the indexes is accomplished utilizing unrounded numbers.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, Backlog of Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Customer' Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries) and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index. Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive).

The resulting single index number for those meeting the criteria for seasonal adjustments (PMI<sup>®</sup>, New Orders, Production, Employment and Supplier Deliveries) is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements, and differences attributable to non-moveable holidays. All seasonal adjustment factors are subject annually to relatively minor changes when conditions warrant them. The PMI<sup>®</sup> is a composite index based on the

diffusion indexes of five of the indexes with equal weights: New Orders (seasonally adjusted), Production (seasonally adjusted), Employment (seasonally adjusted), Supplier Deliveries (seasonally adjusted), and Inventories.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. A PMI® reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally declining. A PMI® above 42.9 percent, over a period of time, indicates that the overall economy, or gross domestic product (GDP), is generally expanding; below 42.9 percent, it is generally declining. The distance from 50 percent or 42.9 percent is indicative of the extent of the expansion or decline. With some of the indicators within this report, ISM® has indicated the departure point between expansion and decline of comparable government series, as determined by regression analysis. The **Manufacturing ISM® Report On Business®** survey is sent out to Manufacturing Business Survey Committee respondents the first part of each month. Respondents are asked to ONLY report on information for the current month. ISM® receives survey responses throughout most of any given month, with the majority of respondents generally waiting until late in the month to submit responses in order to give the most accurate picture of current business activity. ISM® then compiles the report for release on the first business day of the following month.

The industries reporting growth, as indicated in the **Manufacturing ISM**<sup>®</sup> *Report On Business*<sup>®</sup> monthly report, are listed in the order of most growth to least growth. For the industries reporting contraction or decreases, those are listed in the order of the highest level of contraction/decrease to the least level of contraction/decrease.

Responses to Buying Policy reflect the percent reporting the current month's lead time, the approximate weighted number of days ahead for which commitments are made for Capital Expenditures; Production Materials; and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (five days), 30 days, 60 days, 90 days, six months (180 days), a year or more (360 days), and the weighted average number of days. These responses are raw data, never revised, and not seasonally adjusted since there is no significant seasonal pattern.

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The next **Manufacturing ISM**<sup>®</sup> *Report On Business*<sup>®</sup> featuring **August 2019** data will be released at 10:00 a.m. ET on **Tuesday**, **September 3**, **2019**.

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