FOR RELEASE: September 3, 2019

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August 2019 Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup>

PMI<sup>®</sup> at 49.1%

New Orders, Production, and Employment Contracting

Supplier Deliveries Slowing at a Slower 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 contracted in August, and the overall economy grew for the 124th 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<sup>®</sup> (ISM<sup>®</sup>) Manufacturing Business Survey Committee: "The August PMI<sup>®</sup> registered 49.1 percent, a decrease of 2.1 percentage points from the July reading of 51.2 percent. The New Orders Index registered 47.2 percent, a decrease of 3.6 percentage points from the July reading of 50.8 percent. The Production Index registered 49.5 percent, a 1.3-percentage point decrease compared to the July reading of 50.8 percent. The Employment Index registered 47.4 percent, a decrease of 4.3 percentage points from the July reading of 51.7 percent. The Supplier Deliveries Index registered 51.4 percent, a 1.9-percentage point decrease from the July reading of 53.3 percent. The Inventories Index registered 49.9 percent, an increase of 0.4 percentage point from the July reading of 49.5 percent. The Prices Index registered 46 percent, a 0.9-percentage point increase from the July reading of 45.1 percent.

"Comments from the panel reflect a notable decrease in business confidence. August saw the end of the PMI<sup>®</sup> expansion that spanned 35 months, with steady expansion softening over the last four months. Demand contracted, with the New Orders Index contracting, the Customers' Inventories Index recovering slightly from prior months and the Backlog of Orders Index contracting for the fourth straight month. The New Export Orders Index contracted strongly and experienced the biggest loss among the subindexes. Consumption (measured by the Production and Employment Indexes) contracted at higher levels, contributing the strongest negative numbers (a combined 5.6-percentage point decrease) to the PMI<sup>®</sup>, driven by a lack of demand. Inputs — expressed as supplier deliveries, inventories and imports — were again lower in August, due to inventory tightening for the third straight month and continued slower supplier deliveries. This resulted in a combined 1.5-percentage point decline in the Supplier Deliveries and Inventories indexes. Imports and new export orders contracted to new lows. Overall, inputs indicate (1) supply chains are responding better and (2) companies are continuing to closely match inventories to new orders, a positive sign for future expansion. Prices contracted for the third consecutive month, indicating lower overall systemic demand.

"Respondents expressed slightly more concern about U.S.-China trade turbulence, but trade remains the most significant issue, indicated by the strong contraction in new export orders. Respondents continued to note supply chain adjustments as a result of moving manufacturing from China. Overall, sentiment this month declined and reached its lowest level in 2019," says Fiore.

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

#### WHAT RESPONDENTS ARE SAYING

"Seeing some relief in the availability of electronic components in the marketplace, but there are still pockets of short supply, allocation, long lead times and the like. Tariffs continue to be a strain on the supply chain and the economy overall." (Computer & Electronic Products)

"While business is strong, there is an undercurrent of fear and alarm regarding the trade wars and a potential recession." (Chemical Products)

"Slowest month (July) this year so far in sales." (Transportation Equipment)

"Late planting of the corn and soybean crops has increased uncertainty over the final acres and yields. This is leading to volatile markets." (Food, Beverage & Tobacco Products)

"Slightly lower rate of incoming orders may be seasonal or a sign of a general slowdown. Monitoring closely." (Fabricated Metal Products)

"Incoming sales seem to be slowing down, and this is usually our busiest season. Concerns about the economy and tariffs." (Furniture & Related Products)

"Business is starting to show signs of a broad slowdown." (Machinery)

"Generally, business remains steady. However, we continue to plan for a hard Brexit and a long trade war between the U.S. and China." (Miscellaneous Manufacturing)

"The market for large building structures is slowing." (Nonmetallic Mineral Products)

"Current business is OK, nothing to brag about. Under projections and slightly below last year, [but] margins are hanging in there." (Plastics & Rubber Products)

Manufacturing at a Glance August 2019

Index	Series Index Aug	Series Index Jul	Percentage Point Change	Direction	Rate of Change	Trend* (Months)
PMI <sup>®</sup>	49.1	51.2	-2.1	Contracting	From Growing	1
New Orders	47.2	50.8	-3.6	Contracting	From Growing	1
Production	49.5	50.8	-1.3	Contracting	From Growing	1
Employment	47.4	51.7	-4.3	Contracting	From Growing	1
Supplier Deliveries	51.4	53.3	-1.9	Slowing	Slower	42
Inventories	49.9	49.5	+0.4	Contracting	gSlower	3
Customers' Inventories	44.9	45.7	-0.8	Too Low	Faster	35
Prices	46.0	45.1	+0.9	Decreasing	Slower	3
Backlog of Orders	46.3	43.1	+3.2	Contracting	gSlower	4
New Export Orders	5 43.3	48.1	-4.8	Contracting	gFaster	2
Imports	46.0	47.0	-1.0	Contracting	gFaster	2

Index	Series Index Aug	Series Index Jul	Percentage Point Change	Direction	Rate of Change	Trend* (Months)
OVERALL ECONON	ΛY			Growing	Slower	124
Manufacturing Sec	ctor			Contractin	From <sup>g</sup> Growing	1

Manufacturing ISM<sup>®</sup> Report On Business<sup>®</sup> data is seasonally adjusted for the New Orders, Production, Employment and Supplier Deliveries Indexes.

\*Number of months moving in current direction.

Commodities reported up/down in price and in short supply

Commodities Up in Price

Polypropylene; Scrap; and Steel— Hot Rolled\*.

Commodities Down in Price

Aluminum (5); Aluminum Products (2); Caustic Soda; Corrugated Boxes (3); Natural Gas; Crude Oil; Pulp; Steel (2); Steel — Hot Rolled\*; Steel Products\* (8) and Steel — Stainless.

Commodities in Short Supply

Electronic Components; and Helium (2).

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

August 2019 Manufacturing Index Summaries

#### PMI®

Manufacturing contracted in August, as the PMI<sup>®</sup> registered 49.1 percent, a decrease of 2.1 percentage points from the July reading of 51.2 percent. This is the lowest reading since January 2016, when the index registered 48 percent. "The PMI<sup>®</sup> contracted for the first time since August 2016 (when it registered 49.6 percent) and ended a 35-month expansion period in which the composite index averaged 56.5 percent. The August contraction ended four straight months of expansion softening. Only one of the PMI<sup>®</sup> subindexes (Supplier Deliveries) registered expansion. Three of the six big industries modestly expanded, but two contracted strongly," 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 August PMI<sup>®</sup> indicates growth for the 124th consecutive month in the overall economy, and the first month of contraction following 35 straight months 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 August (49.1 percent) corresponds to a 1.8-percent increase in real gross domestic product (GDP) on an annualized basis," says Fiore.

The Last 12 Months

Month	PMI®
Aug 2019	49.1
Jul 2019	51.2
Jun 2019	51.7
May 2019	52.1
Apr 2019	52.8
Mar 2019	55.3
Month	PMI®
Feb 2019	54.2
Jan 2019	56.6
Dec 2018	54.3
Nov 2018	58.8
Oct 2018	57.5
Sep 2018	59.5
Average for 12 months - 54.4 High - 59.5 Low - 49.1	

## New Orders

ISM<sup>®</sup>'s New Orders Index registered 47.2 percent in August, a decrease of 3.6 percentage points when compared to the 50.8 percent reported for July. This indicates that new orders contracted after growing

for one month. "Customer demand contracted for the first time since December 2015 (when the New Orders Index registered 49.6 percent) and ended a 43-month expansion period in which it averaged 58.5 percent. One of the top six industry sectors expanded, and four contracted in August," 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, three reported growth in new orders in August: Nonmetallic Mineral Products; Machinery; and Chemical Products. The 11 industries reporting a decline in new orders in August — in the following order — are: Apparel, Leather & Allied Products; Paper Products; Wood Products; Transportation Equipment; Textile Mills; Fabricated Metal Products; Petroleum & Coal Products; Plastics & Rubber Products; Primary Metals; Miscellaneous Manufacturing; and Computer & Electronic Products.

New Orders	% Higher	% Same	% Lower	Net	Index
Aug 2019	17.5	56.6	25.9	-8.4	47.2
Jul 2019	23.0	52.1	24.9	-1.9	50.8
Jun 2019	24.6	55.9	19.5	+5.1	50.0
May 2019	26.9	56.7	16.4	+10.5	52.7

### Production

ISM<sup>®</sup>'s Production Index registered 49.5 percent in August, which is a decrease of 1.3 percentage points when compared to the 50.8 percent reported for July, indicating contraction after growth for 35 consecutive months. "Production contracted for the first time since August 2016 (when the index registered 49.6 percent) and ended a 35-month expansion with an average reading of 58.9 percent. Two of the big six industry sectors expanded, and three contracted. Production output was not able to improve customer-inventory positions, and backlog orders contraction rates improved compared to the prior month," 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 four industries reporting growth in production during the month of August are: Textile Mills; Food, Beverage & Tobacco Products; Nonmetallic Mineral Products; and Chemical Products. The nine industries reporting a decrease in production in August — listed in order — are: Apparel, Leather & Allied Products; Paper Products; Petroleum & Coal Products; Transportation Equipment; Primary Metals; Electrical Equipment, Appliances & Components; Plastics & Rubber Products; Fabricated Metal Products; and Machinery.

Production	% Higher	% Same	% Lower	Net	Index
Aug 2019	22.0	54.7	23.2	-1.2	49.5
Jul 2019	19.7	59.4	20.8	-1.1	50.8
Jun 2019	31.7	48.7	19.6	+12.1	54.1
May 2019	25.4	54.9	19.7	+5.7	51.3

## Employment

ISM<sup>®</sup>'s Employment Index registered 47.4 percent in August, a decrease of 4.3 percentage points when compared to the July reading of 51.7 percent. This indicates contraction in August after 34 consecutive months of employment growth. "Employment contracted for the first time since September 2016, when the index registered 48.9 percent. One of the six big industry sectors expanded, and three contracted during the period. August ended an expansion cycle in which the index averaged 55.8 percent. Comments were generally neutral concerning hiring for attrition. Force reduction comments were minimal, but 25 percent of general comments were negative regarding employment expansion," 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, six reported employment growth in August, in the following order: Furniture & Related Products; Textile Mills; Miscellaneous Manufacturing; Petroleum & Coal Products; Nonmetallic Mineral Products; and Paper Products. The nine industries reporting a decrease in employment in August, in the following order, are: Wood Products; Printing & Related Support Activities; Apparel, Leather & Allied Products; Primary Metals; Transportation Equipment; Electrical Equipment, Appliances & Components; Fabricated Metal Products; Computer & Electronic Products; and Machinery.

Employment	% Higher	% Same	% Lower	Net	Index
Aug 2019	15.0	66.0	19.0	-4.0	47.4
Jul 2019	19.2	66.3	14.5	+4.7	51.7
Jun 2019	26.2	61.2	12.6	+13.6	54.5
May 2019	23.1	63.6	13.2	+9.9	53.7

## **Supplier Deliveries**

The delivery performance of suppliers to manufacturing organizations slowed in August, as the Supplier Deliveries Index registered 51.4 percent. This is 1.9 percentage points lower than the 53.3 percent reported for July. "This is the 42nd straight month of slowing supplier deliveries, but at marginal rates indicating that supply chain constraints to production performance are minimal," says Fiore. A reading below 50 percent indicates faster deliveries, while a reading above 50 percent indicates slower deliveries.

The eight industries reporting slower supplier deliveries in August — listed in order — are: Wood Products; Textile Mills; Computer & Electronic Products; Machinery; Paper Products; Food, Beverage & Tobacco Products; Miscellaneous Manufacturing; and Transportation Equipment. The three industries reporting faster supplier deliveries in August are: Plastics & Rubber Products; Fabricated Metal Products; and Electrical Equipment, Appliances & Components. Seven industries reported no change in supplier deliveries in August as compared to July.

% Slower	% Same	% Faster	Net	Index
12.7	77.8	9.5	+3.2	51.4
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
	12.7 13.1 9.7	12.777.813.180.89.783.0	12.777.89.513.180.86.19.783.07.3	12.777.89.5+3.213.180.86.1+7.09.783.07.3+2.4

# Inventories\*

The Inventories Index registered 49.9 percent in August, an increase of 0.4 percentage point from the 49.5 percent reported for July. "The index contracted for the third straight month. Inventories were again depleted relative to production, due to production-output strength and the close attention being paid to input material receipts relative to new orders received. Supply chains are responding well to the decrease in 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 August — listed in order — are: Printing & Related Support Activities; Wood Products; Petroleum & Coal Products; Textile Mills; Electrical Equipment, Appliances & Components; Primary Metals; and Food, Beverage & Tobacco Products. The eight industries reporting a decrease in inventories in August — in the following order — are: Nonmetallic Mineral Products; Fabricated Metal Products; Miscellaneous Manufacturing; Transportation Equipment; Paper Products; Chemical Products; Plastics & Rubber Products; and Computer & Electronic Products.

Inventories	% Higher	% Same	% Lower	Net	Index
Aug 2019	19.4	61.0	19.7	-0.3	49.9
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

## Customers' Inventories\*

ISM<sup>®</sup>'s Customers' Inventories Index registered 44.9 percent in August, which is 0.8 percentage point lower than the 45.7 percent reported for July, indicating that customers' inventory levels were considered too low. "Customers' inventories are too low for the 35th consecutive month, and the index's decrease from the prior month is considered positive for future production potential," says Fiore.

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

Customers' Inventories	% Reporting	% Too High	% About Right	% Too Low	Net	Index
Aug 2019	79	11.9	66.0	22.0	-10.1	44.9
Jul 2019	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

### Prices\*

The ISM<sup>®</sup> Prices Index registered 46 percent in August, an increase of 0.9 percentage point from the July reading of 45.1 percent, indicating raw materials prices decreased for the third consecutive month. "Prices contracted in August, but at lower rates compared to July. Respondents reported decreases in prices for aluminum, corrugate, energy, wood pulp and steel products, but the panel also reported price growth in hot-rolled steel, which is a positive sign for future price recovery," 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 August: Plastics & Rubber Products; Computer & Electronic Products; Fabricated Metal Products; and Miscellaneous Manufacturing. The 10 industries reporting a decrease in prices for raw materials in August — listed in the following order — are: Apparel, Leather & Allied Products; Paper Products; Petroleum & Coal Products; Furniture & Related Products; Wood Products; Primary Metals; Food, Beverage & Tobacco Products; Electrical Equipment, Appliances & Components; Chemical Products; and Machinery.

Prices	% Higher	% Same	% Lower	Net	Index
Aug 2019	14.9	62.2	22.9	-8.0	46.0
Jul 2019	15.9	58.4	25.7	-9.8	45.1
Jun 2019	19.7	56.4	23.9	-4.2	47.9
May 2019	22.0	62.3	15.7	+6.3	53.2

## Backlog of Orders\*

ISM<sup>®</sup>'s Backlog of Orders Index registered 46.3 percent in August, which is 3.2 percentage points higher than the 43.1 percent reported in July, indicating order backlogs contracted for a fourth consecutive month, but at a slower rate in August. "Backlogs shrank during August due to production output being able to exceed new order intake rates, but the index's indication of slowing contraction is a positive sign for future production," says Fiore.

The five industries reporting growth in order backlogs in August are: Nonmetallic Mineral Products; Plastics & Rubber Products; Miscellaneous Manufacturing; Fabricated Metal Products; and Computer & Electronic Products. The 10 industries reporting a decrease in order backlogs during August — listed in order — are: Apparel, Leather & Allied Products; Textile Mills; Electrical Equipment, Appliances & Components; Primary Metals; Furniture & Related Products; Transportation Equipment; Chemical Products; Paper Products; Food, Beverage & Tobacco Products; and Machinery.

Backlog of Orders*	% Reporting	% Higher	% Same	% Lower	Net	Index
Aug 2019	87	17.9	56.8	25.3	-7.4	46.3
Jul 2019	88	13.6	59.0	27.5	-13.9	43.1
Jun 2019	88	17.8	59.2	23.0	-5.2	47.4

Backlog of Orders*	% Reporting	% Higher	% Same	% Lower	Net	Index
May 2019	88	21.7	51.1	27.2	-5.5	47.2

New Export Orders\*

ISM<sup>®</sup>'s New Export Orders Index registered 43.3 percent in August, 4.8 percentage points lower compared to the July reading of 48.1 percent, indicating that new export orders contracted for the second month in a row. "The index had its lowest reading since April 2009 (42.9 percent). One of the six big industry sectors expanded, and four contracted during the period. Many respondents continued to note global trade softness as a reason for sluggish activity," says Fiore.

The two industries reporting growth in new export orders in August are: Furniture & Related Products; and Food, Beverage & Tobacco Products. The 10 industries reporting a decrease in new export orders in August — listed in order — are: Petroleum & Coal Products; Apparel, Leather & Allied Products; Primary Metals; Fabricated Metal Products; Electrical Equipment, Appliances & Components; Paper Products; Transportation Equipment; Machinery, Miscellaneous Manufacturing; and Computer & Electronic Products. Six industries reported no change in new export orders in August as compared to July.

New Export Orders*	% Reporting	% Higher	% Same	% Lower	Net	Index
Aug 2019	75	10.4	65.8	23.8	-13.4	43.3
Jul 2019	75	8.5	79.3	12.2	-3.7	48.1
Jun 2019	77	13.2	74.5	12.3	+0.9	50.5
May 2019	77	13.6	74.6	11.7	+1.9	51.0

### Imports\*

ISM<sup>®</sup>'s Imports Index registered 46 percent in August, a decrease of 1 percentage point when compared to the 47 percent reported for July, indicating that imports contracted in August for the second consecutive month. "Five of the six big industry sectors contracted, with none expanding during the period. The Imports Index reached its lowest level since December 2015 (46 percent)," says Fiore.

The four industries reporting growth in imports during the month of August are: Furniture & Related Products; Textile Mills; Nonmetallic Mineral Products; and Miscellaneous Manufacturing. The 10 industries reporting a decrease in imports in August — in the following order — are: Wood Products; Apparel, Leather & Allied Products; Petroleum & Coal Products; Plastics & Rubber Products; Electrical Equipment, Appliances & Components; Fabricated Metal Products; Food, Beverage & Tobacco Products; Machinery; Computer & Electronic Products; and Transportation Equipment.

Imports	% Reporting	% Higher	% Same	% Lower	Net	Index
Aug 2019	81	8.5	74.9	16.5	-8.0	46.0
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

\*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 four days in August to 144 days. Average lead time for Production Materials was unchanged in August at 65 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies increased by six days in August to 37 days.

#### Percent Reporting

Capital Expenditures	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days
Aug 2019	21	4	11	18	26	20	144
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

Production Materials	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days	
Aug 2019	10	35	29	15	9	2	65	
Jul 2019	11	36	26	18	6	3	65	
Jun 2019	12	32	26	17	9	4	72	
May 2019	11	32	27	17	9	4	72	

MRO Supplies	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days
Aug 2019	40	34	15	7	3	1	37
Jul 2019	40	36	16	6	2	0	31
Jun 2019	37	37	17	6	2	1	36
May 2019	36	40	17	4	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 August 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<sup>®</sup> 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 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, Customers' 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.

# ISM ROB Content

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