FOR RELEASE: April 3, 2017

| Contact: | Kristina |  |  | Cahill |
| :---: | :---: | :---: | :---: | :---: |
|  | Report | On | Business ${ }^{\text {® }}$ | Analyst |
|  | ISM ${ }^{\oplus}$, | ROB/Research |  | Manager |
|  | Tempe, |  |  | Arizona |
|  | 800/888-6276, |  | Ext. | 3015 |

E-mail: kcahill@instituteforsupplymanagement.org

## March 2017 Manufacturing ISM ${ }^{\circledR}$ Report On Business ${ }^{\circledR}$

DO NOT CONFUSE THIS NATIONAL REPORT with the various regional purchasing reports released across the country. The national report's information reflects the entire United States, 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 March 2017.

PMI $^{\oplus}$ at $57.2 \%$

## New Orders, Production and Employment Growing <br> Supplier Deliveries Slowing Inventories Contracting

(Tempe, Arizona) - Economic activity in the manufacturing sector expanded in March, and the overall economy grew for the 94th consecutive month, say the nation's supply executives in the latest Manufacturing ISM ${ }^{\oplus}$ Report On Business ${ }^{\oplus}$.

The report was issued today by Bradley J. Holcomb, CPSM, CPSD, Chair of the Institute for Supply Management ${ }^{\oplus}$ (ISM ${ }^{\oplus}$ ) Manufacturing Business Survey Committee: "The March PMI ${ }^{\oplus}$ registered 57.2 percent, a decrease of 0.5 percentage point from the February reading of 57.7 percent. The New Orders Index registered 64.5 percent, a decrease of 0.6 percentage point from the February reading of 65.1 percent. The Production Index registered 57.6 percent, 5.3 percentage points lower than the February reading of 62.9 percent. The Employment Index registered 58.9 percent, an increase of 4.7 percentage points from the February reading of 54.2 percent. Inventories of raw materials registered 49 percent, a decrease of 2.5 percentage points from the February reading of 51.5 percent. The Prices Index registered 70.5 percent in March, an increase of 2.5 percentage points from the February reading of 68 percent, indicating higher raw materials prices for the 13th consecutive month. Consistent with generally positive comments from the panel, all 18 industries reported growth in new orders for the month of March."

Of the 18 manufacturing industries, 17 reported growth in March in the following order: Electrical Equipment, Appliances \& Components; Printing \& Related Support Activities; Furniture \& Related Products; Textile Mills; Machinery; Primary Metals; Miscellaneous Manufacturing; Wood Products; Nonmetallic Mineral Products; Plastics \& Rubber Products; Paper Products; Transportation Equipment; Chemical Products; Computer \& Electronic Products; Food, Beverage \& Tobacco Products; Fabricated Metal Products; and Petroleum \& Coal Products. No industry reported contraction in March compared to February.

## WHAT RESPONDENTS ARE SAYING ...

- "Business conditions continue to improve." (Chemical Products)
- "Business outlook is positive." (Computer \& Electronic Products)
- "Regional business is strong. Hiring qualified team members has improved." (Fabricated Metal Products)
- "We had a lot of storm orders, so it really pushed our sales up this month." (Miscellaneous Manufacturing)
- "Starting to see some prices creeping up. We are raising our sales prices as well." (Food, Beverage \& Tobacco Products)
- "Business up 10-15 percent." (Machinery)
- "Industry outlook is looking relatively flat currently, and the view for calendar year 2017 looks to be flat as well. Job market has been very good in the region, and finding talent has been challenging." (Transportation Equipment)
- "Overall, material inflation is now clearly upon us." (Paper Products)
- "Business is strong and looking up." (Furniture \& Related Products)
- "Opportunities for new business seem more abundant now. Orders and RFQs increasing." (Nonmetallic Mineral Products)

MANUFACTURING AT A GLANCE
March 2017

| Index | Series <br> Index <br> Mar | Series <br> Index <br> Feb | Percentage <br> Point <br> Change | Direction | Rate of Change | Trend* <br> (Months) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PMI ${ }^{\text {® }}$ | 57.2 | 57.7 | -0.5 | Growing | Slower | 7 |
| New Orders | 64.5 | 65.1 | -0.6 | Growing | Slower | 7 |
| Production | 57.6 | 62.9 | -5.3 | Growing | Slower | 7 |
| Employment | 58.9 | 54.2 | +4.7 | Growing | Faster | 6 |
| Supplier Deliveries | 55.9 | 54.8 | +1.1 | Slowing | Faster | 11 |
| Inventories | 49.0 | 51.5 | -2.5 | Contracting | From Growing | 1 |
| Customers' Inventories | 47.0 | 47.5 | -0.5 | Too Low | Faster | 6 |
| Prices | 70.5 | 68.0 | +2.5 | Increasing | Faster | 13 |
| Backlog of Orders | 57.5 | 57.0 | +0.5 | Growing | Faster | 2 |
| New Export Orders | 59.0 | 55.0 | +4.0 | Growing | Faster | 13 |
| Imports | 53.5 | 54.0 | -0.5 | Growing | Slower | 2 |
| OVERALL ECONOMY |  |  |  | Growing | Slower | 94 |
| Manufacturing Sector |  |  |  | Growing | Slower | 7 |

Manufacturing ISM ${ }^{\oplus}$ Report On Business ${ }^{\circledR}$ 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

Acetone; Acrylates; Aluminum (5); Butadiene (3); Caustic Soda (2); Copper (5); Corrugate (6); Corrugated Boxes; Corrugated Packaging; Foam; HDPE; Nylon; Plastic Resin; Polypropylene (2); Rubber — Natural (2); Scrap Metal (2); Stainless Steel (12); Steel (15); Steel Tubing (2); Steel — Carbon (4); Steel — Cold Rolled (5); Steel — Hot Rolled (4); and Titanium Dioxide (4).

# Commodities Down in Price 

None.

## Commodities in Short Supply

Capacitors; Electronic Components; and Methacrylates.
Note: The number of consecutive months the commodity is listed is indicated after each item.

## MARCH 2017 MANUFACTURING INDEX SUMMARIES

## PMI ${ }^{\circledR}$

Manufacturing expanded in March as the $\mathrm{PMI}^{\circledR}$ registered 57.2 percent, a decrease of 0.5 percentage point from the February reading of 57.7 percent, indicating growth in manufacturing for the seventh consecutive month. A reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally contracting.

A PMI ${ }^{\oplus}$ above 43.3 percent, over a period of time, generally indicates an expansion of the overall economy. Therefore, the March PMI ${ }^{\oplus}$ indicates growth for the 94th consecutive month in the overall economy and the seventh straight month of growth in the manufacturing sector. Holcomb stated, "The past relationship between the $\mathrm{PMI}^{\oplus}$ and the overall economy indicates that the average PMI ${ }^{\oplus}$ for January through March ( 57 percent) corresponds to a 4.3 percent increase in real gross domestic product (GDP) on an annualized basis. In addition, if the $\mathrm{PMI}^{\circledR}$ for March ( 57.2 percent) is annualized, it corresponds to a 4.4 percent increase in real GDP annually."

THE LAST 12 MONTHS

| Month | $\boldsymbol{P M I}^{\bullet}$ | Month | $\boldsymbol{P M I}^{\boldsymbol{e}}$ |
| :--- | :--- | :--- | :--- |
| Mar 2017 | 57.2 | Sep 2016 | 51.7 |
| Feb 2017 | 57.7 | Aug 2016 | 49.4 |
| Jan 2017 | 56.0 | Jul 2016 | 52.3 |
| Dec 2016 | 54.5 | Jun 2016 | 52.8 |
| Nov 2016 | 53.5 | May 2016 | 51.0 |
| Oct 2016 | 52.0 | Apr 2016 | 50.7 |
| Average for 12 months - 53.2 <br> High - 57.7 <br> Low -49.4 |  |  |  |

## New Orders

ISM ${ }^{\otimes}$ 's New Orders Index registered 64.5 percent in March, which is a decrease of 0.6 percentage point when compared to the 65.1 percent reported for February, indicating growth in new orders for the seventh consecutive month. A New Orders Index above 52.3 percent, over time, is generally consistent with an increase in the Census Bureau's series on manufacturing orders (in constant 2000 dollars).

All 18 industries reported growth in new orders in March, listed in the following order: Wood Products; Printing \& Related Support Activities; Electrical Equipment, Appliances \& Components; Apparel, Leather \& Allied Products; Paper Products; Plastics \& Rubber Products; Primary Metals; Furniture \& Related Products; Machinery; Nonmetallic Mineral Products; Transportation Equipment; Miscellaneous Manufacturing; Textile Mills; Chemical Products; Computer \& Electronic Products; Fabricated Metal Products; Petroleum \& Coal Products; and Food, Beverage \& Tobacco Products.

| New <br> Orders | $\%$ <br> Better | Same <br> Oar | Worse |  | Net |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Index |  |  |  |  |  |
| Mar 2017 | 45 | 45 | 10 | +35 | 64.5 |
| Feb 2017 | 42 | 48 | 10 | +32 | 65.1 |
| Jan 2017 | 32 | 52 | 16 | +16 | 60.4 |
| Dec 2016 | 32 | 48 | 20 | +12 | 60.3 |

## Production

ISM ${ }^{\otimes}$ 's Production Index registered 57.6 percent in March, which is a decrease of 5.3 percentage points when compared to the 62.9 percent reported for February, indicating growth in production for the seventh consecutive month. An index above 51.4 percent, over time, is generally consistent with an increase in the Federal Reserve Board's Industrial Production figures.

The 17 industries reporting growth in production during the month of March — listed in order — are: Textile Mills; Apparel, Leather \& Allied Products; Electrical Equipment, Appliances \& Components; Furniture \& Related Products; Miscellaneous Manufacturing; Machinery; Printing \& Related Support Activities; Nonmetallic Mineral Products; Fabricated Metal Products; Primary Metals; Transportation Equipment; Chemical Products; Petroleum \& Coal Products; Plastics \& Rubber Products; Paper Products; Food, Beverage \& Tobacco Products; and Computer \& Electronic Products. No industry reported a decrease in March compared to February.

| Production | \% | \% | \% |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Better | Same | Worse | Net | Index |
| Mar 2017 | 34 | 53 | 13 | +21 | 57.6 |
| Feb 2017 | 37 | 53 | 10 | +27 | 62.9 |
| Jan 2017 | 32 | 50 | 18 | +14 | 61.4 |
| Dec 2016 | 28 | 55 | 17 | +11 | 59.4 |

## Employment

ISM ${ }^{\otimes}$ 's Employment Index registered 58.9 percent in March, an increase of 4.7 percentage points when compared to the February reading of 54.2 percent, indicating growth in employment in March for the sixth consecutive month. This is the highest reading since June 2011, when the Employment Index registered 61.3 percent. An Employment Index above 50.5 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) data on manufacturing employment.

Of the 18 manufacturing industries, the 14 reporting employment growth in March - listed in order - are: Electrical Equipment, Appliances \& Components; Printing \& Related Support Activities; Furniture \& Related Products; Nonmetallic Mineral Products; Primary Metals; Paper Products; Machinery; Transportation Equipment; Food, Beverage \& Tobacco Products; Computer \& Electronic Products; Plastics \& Rubber Products; Fabricated Metal Products; Miscellaneous Manufacturing; and Chemical Products. The three industries reporting a decrease in employment in March are: Apparel, Leather \& Allied Products; Petroleum \& Coal Products; and Textile Mills.

|  | \% |  | \% | Net | Inde |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mar 2017 | 27 | 62 | 11 | +16 | 58.9 |
| Feb 2017 | 21 | 66 | 13 | +8 | 54.2 |
| Jan 2017 | 21 | 66 | 13 | +8 | 56.1 |
| Dec 2016 | 15 | 73 | 12 | +3 | 52.8 |

## Supplier Deliveries

The delivery performance of suppliers to manufacturing organizations was slower in March, as the Supplier Deliveries Index registered 55.9 percent, which is 1.1 percentage points higher than the 54.8 percent reported for February. A reading below 50 percent indicates faster deliveries, while a reading above 50 percent indicates slower deliveries.

The 12 industries reporting slower supplier deliveries in March - listed in order - are: Textile Mills; Machinery; Electrical Equipment, Appliances \& Components; Food, Beverage \& Tobacco Products; Chemical Products; Petroleum \& Coal Products; Nonmetallic Mineral Products; Plastics \& Rubber Products; Computer \& Electronic Products; Miscellaneous Manufacturing; Transportation Equipment; and Fabricated Metal Products. Six industries reported no change in supplier deliveries in March compared to February. No industry reported faster supplier deliveries in March compared to February.

| Supplier <br> Deliveries | $\%$ | $\%$ <br> Same | $\%$ <br> Faster | Net | Inde |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mar 2017 | 16 | 81 | 3 | +13 | 55.9 |
| Feb 2017 | 16 | 79 | 5 | +11 | 54.8 |
| Jan 2017 | 12 | 84 | 4 | +8 | 53.6 |
| Dec 2016 | 9 | 86 | 5 | +4 | 53.0 |

## Inventories*

The Inventories Index registered 49 percent in March, which is a decrease of 2.5 percentage points when compared to the 51.5 percent reported for February, indicating raw materials inventories are contracting in March. An Inventories Index greater than 42.9 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 eight industries reporting higher inventories in March — listed in order - are: Textile Mills; Furniture \& Related Products; Printing \& Related Support Activities; Electrical Equipment, Appliances \& Components; Primary Metals; Miscellaneous Manufacturing; Food, Beverage \& Tobacco Products; and Computer \& Electronic Products. The six industries reporting lower inventories in March — listed in order - are: Apparel, Leather \& Allied Products; Fabricated Metal Products; Nonmetallic Mineral Products; Transportation Equipment; Chemical Products; and Machinery.

| Inventories |  | Same | $\%$ <br> Lower |  | In |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mar 2017 | 18 | 62 | 20 | -2 | 49.0 |
| Feb 2017 | 19 | 65 | 16 | +3 | 51.5 |
| Jan 2017 | 18 | 61 | 21 | -3 | 48.5 |
| Dec 2016 | 17 | 60 | 23 | -6 | 47.0 |

## Customers' Inventories*

ISM ${ }^{\oplus}$ 's Customers' Inventories Index registered 47 percent in March, which is 0.5 percentage point lower than the 47.5 percent reported for February, indicating that customers' inventory levels are considered too low in March for the sixth consecutive month.

The two manufacturing industries reporting customers' inventories as being too high during the month of March are: Primary Metals; and Transportation Equipment. The nine industries reporting customers' inventories as too low during March — listed in order - are: Textile Mills; Apparel, Leather \& Allied Products; Plastics \& Rubber Products; Paper Products; Chemical Products; Machinery; Fabricated Metal Products; Food, Beverage \& Tobacco Products; and Computer \& Electronic Products. Six industries reported no change in customer inventories in March compared to February.

| Customers' <br> Inventories | \% <br> Reporting | $\begin{aligned} & \text { \% Too } \\ & \text { High } \end{aligned}$ | \% About <br> Right | $\begin{aligned} & \% \text { Too } \\ & \text { Low } \end{aligned}$ |  | Index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mar 2017 | 53 | 14 | 66 | 20 | -6 | 47.0 |
| Feb 2017 | 53 | 15 | 65 | 20 | -5 | 47.5 |
| Jan 2017 | 58 | 13 | 71 | 16 | -3 | 48.5 |
| Dec 2016 | 54 | 12 | 74 | 14 | -2 | 49.0 |

## Prices*

The $\mathrm{ISM}^{\ominus}$ Prices Index registered 70.5 percent in March, an increase of 2.5 percentage points when compared to the February reading of 68 percent, indicating an increase in raw materials prices for the 13th consecutive month. The March reading is the highest since May 2011, when the Prices Index registered 76.5 percent. In March, 47 percent of respondents reported paying higher prices, 6 percent reported paying lower prices, and 47 percent of supply executives reported paying the same prices as in February. A Prices Index above 52.4 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) Producer Price Index for Intermediate Materials.

Of the 18 manufacturing industries, the 16 that reported paying increased prices for its raw materials in March — listed in order - are: Apparel, Leather \& Allied Products; Plastics \& Rubber Products; Electrical Equipment, Appliances \& Components; Textile Mills; Fabricated Metal Products; Primary Metals; Paper Products; Chemical Products; Machinery; Miscellaneous Manufacturing; Food, Beverage \& Tobacco Products; Nonmetallic Mineral Products; Transportation Equipment; Furniture \& Related Products; Computer \& Electronic Products; and Petroleum \& Coal Products. No industry reported paying lower prices during the month of March compared to February.


| Mar 2017 | 47 | 47 | 6 | +41 | 70.5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Feb 2017 | 41 | 54 | 5 | +36 | 68.0 |
| Jan 2017 | 44 | 50 | 6 | +38 | 69.0 |
| Dec 2016 | 38 | 55 | 7 | +31 | 65.5 |

## Backlog of Orders*

ISM ${ }^{\oplus}$ 's Backlog of Orders Index registered 57.5 percent in March, an increase of 0.5 percentage point from the 57 percent reported for February, indicating growth in order backlogs for the second consecutive month. Of the 89 percent of respondents who reported their backlog of orders, 27 percent reported greater backlogs, 12 percent reported smaller backlogs, and 61 percent reported no change from February.

The 13 industries reporting growth in order backlogs in March — listed in order - are: Textile Mills; Wood Products; Furniture \& Related Products; Electrical Equipment, Appliances \& Components; Plastics \& Rubber Products; Transportation Equipment; Machinery; Nonmetallic Mineral Products; Paper Products; Computer \& Electronic Products; Chemical Products; Fabricated Metal Products; and Primary Metals. The only industry reporting a decrease in order backlogs during March is Miscellaneous Manufacturing.

| Backlog of Orders | $\%$ <br> Reporting | $\%$ <br> Greater | \% Same | $\begin{aligned} & \% \\ & \text { Less } \end{aligned}$ | Net | Index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mar 2017 | 89 | 27 | 61 | 12 | +15 | 57.5 |
| Feb 2017 | 88 | 26 | 62 | 12 | +14 | 57.0 |
| Jan 2017 | 89 | 21 | 57 | 22 | -1 | 49.5 |
| Dec 2016 | 88 | 21 | 56 | 23 | -2 | 49.0 |

## New Export Orders*

ISM ${ }^{\oplus}$ 's New Export Orders Index registered 59 percent in March, an increase of 4 percentage points when compared to the 55 percent reported for February, indicating growth in new export orders for the 13th consecutive month. This is the highest reading since November 2013, when the index registered 59.5 percent.

The 11 industries reporting growth in new export orders in March - listed in order - are: Wood Products; Furniture \& Related Products; Transportation Equipment; Chemical Products; Paper Products; Computer \& Electronic Products; Electrical Equipment, Appliances \& Components; Food, Beverage \& Tobacco Products; Fabricated Metal Products; Machinery; and Miscellaneous Manufacturing. The only industry reporting a decrease in new export orders during March is Plastics \& Rubber Products. Six industries reported no change in new export orders in March compared to February.

| New Export Orders | $\%$ <br> Reporting | $\%$ <br> Higher | $\begin{aligned} & \% \\ & \text { Same } \end{aligned}$ | Lower | Net | Index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mar 2017 | 78 | 23 | 72 | 5 | +18 | 59.0 |
| Feb 2017 | 80 | 16 | 78 | 6 | +10 | 55.0 |
| Jan 2017 | 80 | 15 | 79 | 6 | +9 | 54.5 |
| Dec 2016 | 80 | 17 | 78 | 5 | +12 | 56.0 |

Imports*
ISM ${ }^{\oplus}$ 's Imports Index registered 53.5 percent in March, a decrease of 0.5 percentage point when compared to the 54 percent reported for February, indicating that imports are growing in March for the second consecutive month.

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

| Imports | $\begin{aligned} & \% \\ & \text { Reporting } \end{aligned}$ | $\begin{aligned} & \% \\ & \text { Higher } \end{aligned}$ | $\begin{aligned} & \% \\ & \text { Same } \end{aligned}$ | $\%$ <br> Lower | Net | Index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Mar 2017 | 81 | 15 | 77 | 8 | +7 | 53.5 |
| Feb 2017 | 83 | 14 | 80 | 6 | +8 | 54.0 |
| Jan 2017 | 81 | 11 | 78 | 11 | 0 | 50.0 |
| Dec 2016 | 83 | 10 | 81 | 9 | +1 | 50.5 |

* 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 in March by 1 day to 140 days. Average lead time for Production Materials decreased by 2 days to 59 days. Average lead time for Maintenance, Repair and Operating (MRO)

Supplies decreased by 2 days to 31 days.

| Percent Reporting |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Capital <br> Expenditures | Hand-toMouth | 30 <br> Days | 60 <br> Days | $\begin{aligned} & 90 \\ & \text { Days } \end{aligned}$ | $\begin{aligned} & 6 \\ & \text { Months } \end{aligned}$ | Year | Average Days |
| Mar 2017 | 20 | 7 | 11 | 17 | 26 | 19 | 140 |
| Feb 2017 | 19 | 7 | 11 | 18 | 26 | 19 | 141 |
| Jan 2017 | 19 | 8 | 12 | 16 | 26 | 19 | 140 |
| Dec 2016 | 19 | 9 | 11 | 18 | 24 | 19 | 138 |
| Production Materials | Hand-toMouth | 30 <br> Days | 60 <br> Days | 90 <br> Days | $\begin{aligned} & 6 \\ & \text { Months } \end{aligned}$ | Year | Average Days |
| Mar 2017 | 15 | 37 | 26 | 15 | 4 | 3 | 59 |
| Feb 2017 | 16 | 34 | 27 | 15 | 5 | 3 | 61 |
| Jan 2017 | 14 | 33 | 26 | 17 | 7 | 3 | 65 |
| Dec 2016 | 14 | 40 | 19 | 17 | 6 | 4 | 65 |
| MRO <br> Supplies | Hand-toMouth | 30 <br> Days | 60 <br> Days | $90$ <br> Days | $\begin{aligned} & 6 \\ & \text { Months } \end{aligned}$ | $1$ | Average Days |
| Mar 2017 | 38 | 40 | 12 | 9 | 1 | 0 | 31 |
| Feb 2017 | 36 | 39 | 17 | 6 | 2 | 0 | 33 |
| Jan 2017 | 34 | 43 | 16 | 6 | 1 | 0 | 31 |
| Dec 2016 | 39 | 37 | 16 | 6 | 1 | 1 | 33 |

## About This Report

The data presented herein is obtained from a survey of manufacturing supply executives based on information they have collected within their respective organizations. ISM $^{\ominus}$ 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 $^{\oplus}$ Report On Business ${ }^{\circledR}$ is based on data compiled from purchasing and supply executives nationwide. Membership of the Manufacturing Business Survey Committee is diversified by NAICS, based on each industry's contribution to gross domestic product (GDP). Manufacturing Business Survey Committee responses are divided into the following NAICS code categories: 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).

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 ${ }^{\oplus}$, 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 ${ }^{\circledR}$ 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 ${ }^{\oplus}$ reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally declining. A PMI ${ }^{\oplus}$ above 43.3 percent, over a period of time, indicates that the overall economy, or gross domestic product (GDP), is generally expanding; below 43.3 percent, it is generally declining. The distance from 50 percent or 43.3 percent is indicative of the strength of the expansion or decline. With some of the indicators within this report, ISM $^{\otimes}$ has indicated the departure point between expansion and decline of comparable government series, as determined by regression analysis.

The Manufacturing ISM $^{\circledR}$ Report On Business ${ }^{\circledR}$ 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 $^{\circledR}$ 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 ${ }^{\circledR}$ 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 ${ }^{\circledR}$ Report On Business ${ }^{\circledR}$ 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

The Institute for Supply Management ${ }^{\oplus}$ ("ISM") Report On Business ${ }^{\circledR}$ (both Manufacturing and Non-Manufacturing) ("ISM ROB") contains information, text, files, images, video, sounds, musical works, works of authorship, applications, and any other materials or content (collectively, "Content") of ISM ("ISM ROB Content"). ISM ROB Content is protected by copyright, trademark, trade secret, and other laws, and as between you and ISM, ISM owns and retains all rights in the ISM ROB Content. ISM hereby grants you a limited, revocable, nonsublicensable license to access and display on your individual device the ISM ROB Content (excluding any software code) solely for your personal, non-commercial use. The ISM ROB Content may also contain Content of users and other ISM licensors. Except as provided herein or as explicitly allowed in writing by ISM, you may not copy, download, stream, capture, reproduce, duplicate, archive, upload, modify, translate, publish, broadcast, transmit, retransmit, distribute, perform, display, sell, or otherwise use any ISM ROB Content.

Except as explicitly and expressly permitted by ISM, you are strictly prohibited from creating works or materials (including but not limited to tables, charts, datastreams, timeseries variables, fonts, icons, link buttons, wallpaper, desktop themes, on-line postcards, montages, mash-ups and similar videos, greeting cards, and unlicensed merchandise) that derive from or are based on the ISM ROB Content. This prohibition applies regardless of whether the derivative works or materials are sold, bartered, or given away. You may not either directly or through the use of any device, software, internet site, web-based service, or other means remove, alter, bypass, avoid, interfere with, or circumvent any copyright, trademark, or other proprietary notices marked on the Content or any digital rights management mechanism, device, or other content protection or access control measure associated with the Content including geo-filtering mechanisms. Without prior written authorization from ISM, you may not build a business utilizing the Content, whether or not for profit.

You may not create, recreate, distribute, incorporate in other work, or advertise an index of any portion of the Content unless you receive prior written authorization from ISM. Requests for permission to reproduce or distribute ISM ROB Content can be made by contacting in writing at: ISM Research, Institute for Supply Management, 309 W . Elliot Road, Suite 113, Tempe, AZ 85284-1556, or by emailing kcahill@instituteforsupplymanagement.org, Subject: Content Request.

ISM shall not have any liability, duty, or obligation for or relating to the ISM ROB Content or other information contained herein, any errors, inaccuracies, omissions or delays in providing any ISM ROB Content, or for any actions taken in reliance thereon. In no event shall ISM be liable for any special, incidental, or consequential damages, arising out of the use of the ISM ROB. Report On Business ${ }^{\oplus}$, $\mathrm{PMI}^{\oplus}$, and ${ }^{\text {NMI }}{ }^{\oplus}$ are registered trademarks of Institute for Supply Management ${ }^{\circledR}$. Institute for Supply Management ${ }^{\oplus}$ and ISM $^{\oplus}$ are registered trademarks of Institute for Supply Management, Inc.

## About Institute for Supply Management ${ }^{\text {® }}$

Institute for Supply Management ${ }^{\oplus}\left(\right.$ ISM $\left.^{\oplus}\right)$ serves supply management professionals in more than 90 countries. Its 50,000 members around the world manage about US\$1 trillion in corporate and government supply chain procurement annually. Founded in 1915 as the first supply management institute in the world, ISM is committed to advancing the practice of supply management to drive value and competitive advantage for its members, contributing to a prosperous and sustainable world. ISM leads the profession through the ISM Report On Business ${ }^{\oplus}$, its highly regarded certification programs and the newly launched ISM Mastery Model ${ }^{\oplus}$. This report has been issued by the association since 1931, except for a four-year interruption during World War II.

The full text version of the Manufacturing ISM ${ }^{\circledR}$ Report On Business ${ }^{\circledR}$ is posted on ISM $^{\oplus}{ }^{\oplus}$ s website at www.ismrob.org on the first business day* of every month after 10:00 a.m. (ET).

The next Manufacturing ISM ${ }^{\oplus}$ Report On Business ${ }^{\circledR}$ featuring the April 2017 data will be released at 10:00 a.m. (ET) on Monday, May 1, 2017.
*Unless the NYSE is closed.

