$\mathrm{PMI}^{\circledR}$ at $56.3 \%$

New Orders, Production, Backlog of Orders and Employment Continue Growing
Supplier Deliveries Slowing
Inventories Unchanged
Prices Increasing at Faster Rate
(Tempe, Arizona) - Economic activity in the manufacturing sector expanded in July, and the overall economy grew for the 98th consecutive month, say the nation's supply executives in the latest Manufacturing ISM ${ }^{\circledR}$ Report On Business ${ }^{\circledR}$.

The report was issued today by Timothy R. Fiore, CPSM, C.P.M., Chair of the Institute for Supply Management ${ }^{\circledR}\left(\mathrm{ISM}^{\circledR}\right)$ Manufacturing Business Survey Committee: "The July $\mathrm{PMI}^{\circledR}$ registered 56.3 percent, a decrease of 1.5 percentage points from the June reading of 57.8 percent. The New Orders Index registered 60.4 percent, a decrease of 3.1 percentage points from the June reading of 63.5 percent. The Production Index registered 60.6 percent, a 1.8 percentage point decrease compared to the June reading of 62.4 percent. The Employment Index registered 55.2 percent, a decrease of 2 percentage points from the June reading of 57.2 percent. The Supplier Deliveries Index registered 55.4 percent, a 1.6 percentage point decrease from the June reading of 57 percent. The Inventories Index registered 50 percent, an increase of 1 percentage point from the June reading of 49 percent. The Prices Index registered 62 percent in July, an increase of 7 percentage points from the June reading of 55 percent, indicating higher raw materials prices for the 17th consecutive month, with a faster rate of increase in July compared with June. Comments from the panel generally reflect expanding business conditions, with new orders, production, employment, backlog and exports all growing in July compared to June, as well as supplier deliveries slowing (improving) and inventories unchanged during the period."

Of the 18 manufacturing industries, 15 reported growth in July in the following order: Plastics \& Rubber Products; Electrical Equipment, Appliances \& Components; Wood Products; Fabricated Metal Products; Machinery; Chemical Products; Paper Products; Food, Beverage \& Tobacco Products; Printing \& Related Support Activities; Computer \& Electronic Products; Nonmetallic Mineral Products; Furniture \& Related Products; Miscellaneous Manufacturing; Primary Metals; and Transportation Equipment. Three industries reported contraction in July compared to June: Apparel, Leather \& Allied Products; Textile Mills; and Petroleum \& Coal Product.

## WHAT RESPONDENTS ARE SAYING ...

"Orders are strong, and quote activity is just as strong. Gearing up for [a] strong third quarter." (Chemical Products)
"In regard to sales, we have had our best year ever. Demand still exceeds supply in our category. Competitors are investing in capital expansion." (Food, Beverage \& Tobacco Products)
"We are having huge sales numbers, and backlog is growing." (Computer \& Electronic Products)
"Strong demand for our products has our manufacturing plants focusing on uptime and production." (Nonmetallic Mineral Products)
"Export orders are continuing to strengthen. The understatement is how stable domestic business is as well." (Wood Products)
"Business is very steady, but everyone is waiting till the last minute to place their orders." (Machinery)
"Six profitable months in a row. First time since 2007." (Fabricated Metal Products)
"Starting to see better order entry and planning on turnaround for 2018." (Electrical Equipment, Appliances \& Components)
"Business has picked up the last few months, but next month is a bit slower - could be cyclical."
(Plastics \& Rubber Products)
"Labor shortages are pretty universal, leading to longer lead times through the supply chain. Pricing pressure as community clamors for premium capacity.\&quot (Transportation Equipment)

| $\begin{array}{l}\text { MANUFACTURING AT A GLANCE } \\ \text { July } 2017 \\ \text { Index }\end{array}$ |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\begin{array}{l}\text { Series } \\ \text { Index } \\ \text { Jul }\end{array}$ | $\begin{array}{l}\text { Series } \\ \text { Index } \\ \text { Jun }\end{array}$ | $\begin{array}{l}\text { Percentage } \\ \text { Point } \\ \text { Change }\end{array}$ | Direction |  |  | \(\left.\begin{array}{l}Rate <br>

of <br>
Change\end{array}, $$
\begin{array}{l}\text { Trend* } \\
\text { (Months) }\end{array}
$$\right\}\)

Manufacturing ISM ${ }^{\circledR}$ 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 Up in Price

Aluminum (9); Caustic Soda; Corn; Corrugate (10); Corrugated Boxes (5); Electric Components (2); LCD Displays; Lumber; Memory — Computer; Polypropylene; Precious Metals; Steel — Cold Rolled; Steel — Hot Rolled* (8); Titanium Dioxide; and Wheat.

## Commodities Down in Price

Milk Products; and Steel — Hot Rolled* (2).

Commodities in Short Supply<br>Capacitors; Electric Components (2); Electronic Components (5); Integrated Circuits; Mechanical Components; Memory - Computer; Resistors; and Titanium Dioxide.<br>Note: The number of consecutive months the commodity is listed is indicated after each item.<br>*Indicates both up and down in price.

## JULY 2017 MANUFACTURING INDEX SUMMARIES

## PMI ${ }^{\oplus}$

Manufacturing expanded in July as the $\mathrm{PMI}^{\circledR}$ registered 56.3 percent, a decrease of 1.5 percentage points from the June reading of 57.8 percent. This indicates growth in manufacturing for the 11th consecutive month and is the fourth highest reading in the last 12 months. A reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally contracting.

A PMI ${ }^{\circledR}$ above 43.3 percent, over a period of time, generally indicates an expansion of the overall economy. Therefore, the June $\mathrm{PMI}^{\circledR}$ indicates growth for the 98th consecutive month in the overall economy and the 11th straight month of growth in the manufacturing sector. Fiore says, "The past relationship between the $\mathrm{PMI}^{\circledR}$ and the overall economy indicates that the average $\mathrm{PMI}^{\circledR}$ for January through July ( 56.4 percent) corresponds to a 4.1 percent increase in real gross domestic product (GDP) on an annualized basis. In addition, if the $\mathrm{PMI}^{\circledR}$ for July ( 56.3 percent) is annualized, it corresponds to a 4.1 percent increase in real GDP annually."

THE LAST 12 MONTHS

| Month | PMI ${ }^{\text {® }}$ | Month | PMI ${ }^{\text {® }}$ |
| :---: | :---: | :---: | :---: |
| Jul 2017 | 56.3 | Jan 2017 | 56.0 |
| Jun 2017 | 57.8 | Dec 2016 | 54.5 |
| May 2017 | 54.9 | Nov 2016 | 53.5 |
| Apr 2017 | 54.8 | Oct 2016 | 52.0 |
| Mar 2017 | 57.2 | Sep 2016 | 51.7 |
| Feb 2017 | 57.7 | Aug 2016 | 49.4 |
| Average for 2017-56.4 PMI® <br> Average for 12 months - $54.7 \mathrm{PMI}^{\circledR}$ <br> High - 57.8 <br> Low-49.4 |  |  |  |

## New Orders

ISM ${ }^{\circledR}$ 's New Orders Index registered 60.4 percent in July, which is a decrease of 3.1 percentage points when compared to the 63.5 percent reported for June, indicating growth in new orders for the 11th consecutive month. "Order placements remained strong across most industry sectors in spite of seasonality factors including changes in demand and vacation periods," says Fiore. 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).

Fourteen of 18 industries reported growth in new orders in July, listed in the following order: Plastics \& Rubber Products; Electrical Equipment, Appliances \& Components; Chemical Products; Primary Metals; Fabricated Metal Products; Printing \& Related Support Activities; Furniture \& Related Products; Computer \& Electronic Products; Food, Beverage \& Tobacco Products; Nonmetallic Mineral Products; Paper Products; Transportation Equipment; Miscellaneous Manufacturing; and Machinery. One industry, Apparel, Leather \& Allied Products, reported a decrease in new orders in July compared to June.

| New <br> Orders | $\%$ <br> Better | $\%$ <br> Same | \% <br> Worse | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Jul 2017 | 33 | 55 | 12 | +21 | 60.4 |
| Jun 2017 | 38 | 54 | 8 | +30 | 63.5 |
| May 2017 | 34 | 57 | 9 | +25 | 59.5 |
| Apr 2017 | 38 | 51 | 11 | +27 | 57.5 |

## Production

ISM ${ }^{\circledR}$ 's Production Index registered 60.6 percent in July, which is a decrease of 1.8 percentage points when compared to the 62.4 percent reported for June, indicating growth in production for the 11th consecutive month. "Production remains at strong growth levels in most industries in spite of supplier delivery constraints and the continued need for additional labor," says Fiore. An index above 51.4 percent, over time, is generally consistent with an increase in the Federal Reserve Board's Industrial Production figures

The 14 industries reporting growth in production during the month of July — listed in order — are: Wood Products; Nonmetallic Mineral Products; Plastics \& Rubber Products; Transportation Equipment; Chemical Products; Machinery; Printing \& Related Support Activities; Miscellaneous Manufacturing; Food, Beverage \& Tobacco Products; Electrical Equipment, Appliances \& Components; Primary Metals; Fabricated Metal Products; Paper Products; and Computer \& Electronic Products. One industry, Textile Mills, reported a decrease in production in July compared to June.

| Production | $\%$ <br> Better | $\%$ <br> Same | $\%$ <br> Worse | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Jul 2017 | 33 | 54 | 13 | +20 | 60.6 |
| Jun 2017 | 34 | 59 | 7 | +27 | 62.4 |
| May 2017 | 31 | 57 | 12 | +19 | 57.1 |
| Apr 2017 | 39 | 53 | 8 | +31 | 58.6 |

## Employment

ISM ${ }^{\circledR}$ 's Employment Index registered 55.2 percent in July, a decrease of 2 percentage points when compared to the June reading of 57.2 percent. This indicates growth in employment in July for the 10th
consecutive month. Employment levels have been expanding since October 2016. "Business Survey Committee Members are beginning to mention an increase in turnover, with employees leaving for other opportunities. Overall, labor issues are becoming more prevalent," says Fiore. 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 11 reporting employment growth in July — listed in order are: Paper Products; Food, Beverage \& Tobacco Products; Plastics \& Rubber Products; Chemical Products; Printing \& Related Support Activities; Furniture \& Related Products; Electrical Equipment, Appliances \& Components; Fabricated Metal Products; Miscellaneous Manufacturing; Transportation Equipment; and Machinery. The three industries reporting a decrease in employment in July are:
Apparel, Leather \& Allied Products; Nonmetallic Mineral Products; and Primary Metals.

| Employment | \% <br> Higher | \% <br> Same | \% <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Jul 2017 | 24 | 66 | 10 | +14 | 55.2 |
| Jun 2017 | 28 | 61 | 11 | +17 | 57.2 |
| May 2017 | 23 | 65 | 12 | +11 | 53.5 |
| Apr 2017 | 24 | 63 | 13 | +11 | 52.0 |

## Supplier Deliveries

The delivery performance of suppliers to manufacturing organizations was slower in July, as the Supplier Deliveries Index registered 55.4 percent. This is 1.6 percentage points lower than the 57 percent reported for June. This is the 15th straight month of slowing supplier deliveries. "Many Business Survey Committee Members are commenting on suppliers struggling to keep up, largely due to labor retention, recruitment and stability issues," says Fiore. 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 July — listed in order — are: Plastics \& Rubber Products; Primary Metals; Machinery; Computer \& Electronic Products; Paper Products; Furniture \& Related Products; Fabricated Metal Products; Petroleum \& Coal Products; Nonmetallic Mineral Products; Food, Beverage \& Tobacco Products; Chemical Products; and Electrical Equipment, Appliances \& Components. One industry, Textile Mills, reported faster deliveries in July compared to June.

| Supplier <br> Deliveries | $\%$ <br> Slower | $\%$ <br> Same | $\%$ <br> Faster | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Jul 2017 | 19 | 74 | 7 | +12 | 55.4 |
| Jun 2017 | 17 | 78 | 5 | +12 | 57.0 |
| May 2017 | 13 | 82 | 5 | +8 | 53.1 |
| Apr 2017 | 17 | 79 | 4 | +13 | 55.1 |

Inventories*
The Inventories Index registered 50 percent in July, which is an increase of 1 percentage point when compared to the 49 percent reported for June, indicating raw materials inventories saw no change in July compared to June. "Several Business Survey Committee Members commented on their concern that inventory may not keep pace with production output going forward," says Fiore. 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 seven industries reporting higher inventories in July - listed in order - are: Electrical Equipment, Appliances \& Components; Textile Mills; Nonmetallic Mineral Products; Computer \& Electronic Products; Machinery; Fabricated Metal Products; and Food, Beverage \& Tobacco Products. The eight industries reporting lower inventories in July - listed in order - are: Apparel, Leather \& Allied Products;
Petroleum \& Coal Products; Primary Metals; Furniture \& Related Products; Transportation Equipment; Paper Products; Chemical Products; and Plastics \& Rubber Products.

| Inventories | $\%$ <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Jul 2017 | 19 | 62 | 19 | 0 | 50.0 |
| Jun 2017 | 16 | 66 | 18 | -2 | 49.0 |
| May 2017 | 18 | 67 | 15 | +3 | 51.5 |
| Apr 2017 | 19 | 64 | 17 | +2 | 51.0 |

## Customers' Inventories*

ISM ${ }^{\text {® }}$ 's Customers' Inventories Index registered 49 percent in July, which is 1.5 percentage points lower than the 50.5 percent reported for June, indicating that customers' inventory levels are considered too
low in July. Notably, 78 percent of respondents stated that customer inventory is about right, a level not achieved since May 2007.

The three manufacturing industries reporting customers' inventories as being too high during the month of July are: Apparel, Leather \& Allied Products; Fabricated Metal Products; and Computer \& Electronic Products. The seven industries reporting customers' inventories as too low during July - listed in order — are: Textile Mills; Nonmetallic Mineral Products; Paper Products; Chemical Products; Transportation Equipment; Machinery; and Food, Beverage \& Tobacco Products. Seven industries reported no change in customer inventories in July compared to June.

| Customers' <br> Inventories | \% <br> Reporting | \%Too <br> High | \%About <br> Right | \%Too <br> Low | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Jul 2017 | 58 | 10 | 78 | 12 | -2 | 49.0 |
| Jun 2017 | 52 | 16 | 69 | 15 | +1 | 50.5 |
| May 2017 | 56 | 14 | 71 | 15 | -1 | 49.5 |
| Apr 2017 | 54 | 9 | 73 | 18 | -9 | 45.5 |

## Prices*

The ISM ${ }^{\circledR}$ Prices Index registered 62 percent in July, an increase of 7 percentage points when compared to the June reading of 55 percent, indicating an increase in raw materials prices for the 17th consecutive month. In July, 33 percent of respondents reported paying higher prices, 9 percent reported paying lower prices, and 58 percent of supply executives reported paying the same prices as in June. Fiore comments, "The Business Survey Committee noted price increases in many areas, including metals (steel, aluminum, non-ferrous metals, precious metals); food products, including corn and wheat; electronic components; lumber and wood products; and chemicals, including several types of plastic resins." 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 14 that reported paying increased prices for raw materials in July — listed in order — are: Nonmetallic Mineral Products; Paper Products; Furniture \& Related Products; Primary Metals; Food, Beverage \& Tobacco Products; Petroleum \& Coal Products; Electrical Equipment, Appliances \& Components; Fabricated Metal Products; Plastics \& Rubber Products; Machinery; Transportation Equipment; Chemical Products; Computer \& Electronic Products; and Miscellaneous Manufacturing. One industry, Apparel, Leather \& Allied Products, reported paying lower prices in July compared to June.

| Prices | $\%$ <br> Reporting | $\%$ <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jul 2017 | 97 | 33 | 58 | 9 | +24 | 62.0 |
| Jun 2017 | 96 | 27 | 56 | 17 | +10 | 55.0 |
| May 2017 | 96 | 30 | 61 | 9 | +21 | 60.5 |
| Apr 2017 | 98 | 44 | 49 | 7 | +37 | 68.5 |

## Backlog of Orders*

ISM ${ }^{\circledR}$ 's Backlog of Orders Index registered 55 percent in July, a decrease of 2 percentage points from the 57 percent reported for June, indicating growth in order backlogs for the sixth consecutive month. Of the 88 percent of respondents who reported their backlog of orders, 25 percent reported greater backlogs, 15 percent reported smaller backlogs, and 60 percent reported no change from June. "Several Business Survey Committee Member comments indicated that backlog is increasing due to the supply chains inability to keep up with demand," says Fiore.

The nine industries reporting growth in order backlogs in July — listed in order — are: Nonmetallic Mineral Products; Primary Metals; Plastics \& Rubber Products; Paper Products; Computer \& Electronic Products; Electrical Equipment, Appliances \& Components; Fabricated Metal Products; Machinery; and Chemical Products. The three industries reporting a decrease in order backlogs during July are: Wood Products; Miscellaneous Manufacturing; and Food, Beverage \& Tobacco Products. Six industries reported no change in backlogs in July compared to June.

| Backlog of <br> Orders | $\%$ <br> Reporting | $\%$ <br> Greater | $\%$ <br> Same | $\%$ <br> Less | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Jul 2017 | 88 | 25 | 60 | 15 | +10 | 55.0 |
| Jun 2017 | 91 | 29 | 56 | 15 | +14 | 57.0 |
| May 2017 | 90 | 23 | 64 | 13 | +10 | 55.0 |
| Apr 2017 | 88 | 29 | 56 | 15 | +14 | 57.0 |

## New Export Orders*

ISM ${ }^{\circledR}$ 's New Export Orders Index registered 57.5 percent in July, a decrease of 2 percentage points when compared to the 59.5 percent reported for June, indicating growth in new export orders for the 17th
consecutive month. "Exports continue at a strong pace, with only one industry noting a decrease in export orders," says Fiore.

The 11 industries reporting growth in new export orders in July - listed in order — are: Apparel, Leather \& Allied Products; Wood Products; Primary Metals; Nonmetallic Mineral Products; Paper Products; Chemical Products; Miscellaneous Manufacturing; Machinery; Food, Beverage \& Tobacco Products; Transportation Equipment; and Fabricated Metal Products. One industry, Computer \& Electronic Products, reported a decrease in new export orders. Six industries reported no change in exports in July compared to June.

| New Export <br> Orders | $\%$ <br> Reporting | $\%$ <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Jul 2017 | 79 | 20 | 75 | 5 | +15 | 57.5 |
| Jun 2017 | 80 | 22 | 75 | 3 | +19 | 59.5 |
| May 2017 | 77 | 20 | 75 | 5 | +15 | 57.5 |
| Apr 2017 | 78 | 25 | 69 | 6 | +19 | 59.5 |

Imports*
ISM ${ }^{\text {® }}$ 's Imports Index registered 56 percent in July, an increase of 2 percentage points when compared to the 54 percent reported for June, indicating that imports are growing in July for the sixth consecutive month. "Imports continue at a strong pace with 16 of the 18 industries reporting the same or better import levels in July compared to June," says Fiore.

The 12 industries reporting growth in imports during the month of July - listed in order - are: Apparel, Leather \& Allied Products; Primary Metals; Nonmetallic Mineral Products; Transportation Equipment; Furniture \& Related Products; Food, Beverage \& Tobacco Products; Electrical Equipment, Appliances \& Components; Fabricated Metal Products; Miscellaneous Manufacturing; Chemical Products; Machinery; and Computer \& Electronic Products. One industry, Wood Products, reported a decrease in imports during July.

| Imports | \% Reporting | \% Higher | \% <br> Same | \% Lower | Net | Index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jul 2017 | 82 | 17 | 78 | 5 | +12 | 56.0 |
| Jun 2017 | 84 | 14 | 80 | 6 | +8 | 54.0 |
| May 2017 | 81 | 12 | 83 | 5 | +7 | 53.5 |
| Apr 2017 | 82 | 15 | 81 | 4 | +11 | 55.5 |

* 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 remained constant in July at 146 days. Average lead time for Production Materials increased by 1 day to 60 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies increased by 1 day to 35 days

| Percent Reporting |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Capital <br> Expenditures | Hand-toMouth | 30 <br> Days | 60 Days | $90$ <br> Days | 6 <br> Months | $\begin{aligned} & 1 \\ & \text { Year+ } \end{aligned}$ | Average Days |
| Jul 2017 | 19 | 8 | 9 | 18 | 25 | 21 | 146 |
| Jun 2017 | 20 | 7 | 11 | 17 | 23 | 22 | 146 |
| May 2017 | 19 | 8 | 12 | 15 | 24 | 22 | 146 |
| Apr 2017 | 20 | 8 | 12 | 16 | 21 | 23 | 146 |
|  |  |  |  |  |  |  |  |
| Production Materials | Hand-toMouth | $30$ <br> Days | $60$ <br> Days | $90$ <br> Days | 6 <br> Months | $\begin{aligned} & 1 \\ & \text { Year+ } \end{aligned}$ | Average Days |
| Jul 2017 | 12 | 35 | 27 | 18 | 7 | 1 | 60 |
| Jun 2017 | 13 | 39 | 20 | 20 | 7 | 1 | 59 |
| May 2017 | 12 | 37 | 23 | 20 | 6 | 2 | 62 |
| Apr 2017 | 13 | 36 | 25 | 19 | 5 | 2 | 60 |
|  |  |  |  |  |  |  |  |
| MRO <br> Supplies | Hand-toMouth | $30$ <br> Days | 60 Days | $90$ <br> Days | 6 <br> Months | $\begin{aligned} & 1 \\ & \text { Year+ } \end{aligned}$ | Average Days |
| Jul 2017 | 32 | 43 | 14 | 9 | 2 | 0 | 35 |
| Jun 2017 | 34 | 42 | 14 | 7 | 3 | 0 | 34 |
| May 2017 | 34 | 39 | 17 | 7 | 3 | 0 | 35 |
| Apr 2017 | 39 | 34 | 18 | 7 | 2 | 0 | 33 |

## 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 2017.

The data presented herein is obtained from a survey of manufacturing supply executives based on information they have collected within their respective organizations. ISM ${ }^{\circledR}$ 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 ${ }^{\circledR}$ 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 ( $\mathrm{PMI}^{\circledR}$, 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 $\mathrm{PMI}^{\circledR}$ 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. $\mathrm{A}_{\mathrm{PMI}}{ }^{\circledR}$ reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally declining. $\mathrm{A} \mathrm{PMI}^{\circledR}$ 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, $\mathrm{ISM}^{\circledR}$ 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 ${ }^{\circledR}$ ("ISM") Report On Business ${ }^{\circledR}$ (both Manufacturing and NonManufacturing) ("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 shall also contain Content of users and other ISM licensors. Except as provided herein or as explicitly allowed in writing by ISM, you shall 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.

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

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