Contact: Kristina Cahill<br>Report On Business ${ }^{\circledR}$ Analyst<br>ISM ${ }^{\oplus}$, ROB/Research Manager<br>Tempe, Arizona<br>480-752-6276, Ext. 3015<br>E-mail: kcahill@instituteforsupplymanagement.org

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

PMI ${ }^{\oplus}$ at $60.8 \%$

New Orders, Production, Backlog of Orders and Employment Continue Growing
Supplier Deliveries Slowing
Raw Materials Inventories Growing, Customers' Inventories Too Low
Prices Increasing at Faster Rate
(Tempe, Arizona) - Economic activity in the manufacturing sector expanded in September, and the overall economy grew for the 100th consecutive month, say the nation's supply executives in the latest Manufacturing ISM ${ }^{\oplus}$ Report On Business ${ }^{\circledR}$.

The report was issued today by Timothy R. Fiore, CPSM, C.P.M., Chair of the Institute for Supply Management ${ }^{\oplus}\left(I S M^{\oplus}\right)$ Manufacturing Business Survey Committee: "The September PMI ${ }^{\oplus}$ registered 60.8 percent, an increase of 2 percentage points from the August reading of 58.8 percent. The New Orders Index registered 64.6 percent, an increase of 4.3 percentage points from the August reading of 60.3 percent. The Production Index registered 62.2 percent, a 1.2 percentage point increase compared to the August reading of 61 percent. The Employment Index registered 60.3 percent, an increase of 0.4 percentage point from the August reading of 59.9 percent. The Supplier Deliveries Index registered 64.4 percent, a 7.3 percentage point increase from the August reading of 57.1 percent. The Inventories Index registered 52.5 percent, a decrease of 3 percentage points from the August reading of 55.5 percent. The Prices Index registered 71.5 percent in September, a 9.5 percentage point increase from the August level of 62, indicating higher raw materials prices for the 19th consecutive month. Comments from the panel reflect expanding business conditions, with new orders, production, employment, order backlogs and export orders all growing in September; as well as, supplier deliveries slowing (improving) and inventories growing at a slower rate during the period. The Customers' Inventories Index remains at low levels."

Of the 18 manufacturing industries, 17 reported growth in September, in the following order: Textile Mills; Machinery; Nonmetallic Mineral Products; Transportation Equipment; Plastics \& Rubber Products;

Paper Products; Wood Products; Computer \& Electronic Products; Food, Beverage \& Tobacco Products; Chemical Products; Fabricated Metal Products; Miscellaneous Manufacturing; Petroleum \& Coal Products; Apparel, Leather \& Allied Products; Printing \& Related Support Activities; Electrical Equipment, Appliances \& Components; and Primary Metals. One industry, Furniture \& Related Products, reported contraction in September compared to August.

WHAT RESPONDENTS ARE SAYING ...
"Hurricanes causing supply chain and pricing issues." (Chemical Products)
"Business levels continue [to be] strong; usually by now, a seasonal downturn begins." (Machinery)
"Energy sector (oil and gas) continues to be strong. Price of oil appears to be beginning to stabilize." (Computer \& Electronic Products)
"We've had a very good year and we are forecasting continued strong demand for our product in 2018." (Miscellaneous Manufacturing)
"Business is strong. However, we are concerned about price increases due to the hurricanes." (Plastics \& Rubber Products)
"We are closely watching the Houston events as many of our production chemicals are produced in the Gulf region. Some tightening of supply and/or price increases expected." (Paper Products)
"Labor shortages continue to haunt operational capacity both at [the] local plant [level] and up and down the supply chain."(Transportation Equipment)
"Hurricanes Harvey and Irma will have significant effects on input costs. Disruption in supply chain. Concerns of transportation." (Food, Beverage \& Tobacco Products)
"Hurricane Harvey, and now Irma, have impacted the business (building materials). Increasing sales but also causing significant price increases on input raw materials.\&quot (Nonmetallic Mineral Products)
"Lumber prices starting to drop, and log prices starting to increase. Not the best combination.\&quot (Wood Products)

| MANUFACTURING AT A GLANCE September 2017 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Index | Series <br> Index <br> Sep | Series <br> Index <br> Aug | Percentage <br> Point <br> Change | Direction | Rate <br> of Change | Trend* <br> (Months) |
| PMI ${ }^{\text {® }}$ | 60.8 | 58.8 | +2.0 | Growing | Faster | 13 |
| New Orders | 64.6 | 60.3 | +4.3 | Growing | Faster | 13 |
| Production | 62.2 | 61.0 | +1.2 | Growing | Faster | 13 |
| Employment | 60.3 | 59.9 | +0.4 | Growing | Faster | 12 |
| Supplier Deliveries | 64.4 | 57.1 | +7.3 | Slowing | Faster | 17 |
| Inventories | 52.5 | 55.5 | -3.0 | Growing | Slower | 2 |
| Customers' Inventories | 42.0 | 41.0 | +1.0 | Too Low | Slower | 3 |
| Prices | 71.5 | 62.0 | +9.5 | Increasing | Faster | 19 |
| Backlog of Orders | 58.0 | 57.5 | +0.5 | Growing | Faster | 8 |
| New Export Orders | 57.0 | 55.5 | +1.5 | Growing | Faster | 19 |
| Imports | 54.0 | 54.5 | -0.5 | Growing | Slower | 8 |
| OVERALL ECONOMY |  |  |  | Growing | Faster | 100 |
| Manufacturing Sector |  |  |  | Growing | Faster | 13 |

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 (11); Brass; Caustic Soda (3); Copper (2); Corrugate (12); Freight; Gasoline; HDPE; Home Heating Oil; Hydrochloric Acid; LDPE; Lumber (3); Memory — Computer (3); Nickel; Plastic Resins (2); Polyethylene Products; Polypropylene; Polyvinyl Chloride; Solvents (2); Stainless Steel; Steel Scrap — All Types (2); Steel (2); and Steel — Hot Rolled (10).

## Commodities Down in Price

None.

## Commodities in Short Supply

Capacitors (3); Electric Components (4); Freight; HDPE; Memory - Computer (3); Methacrylates (2); Plastic Resins; Polyvinyl Chloride; Resistors; Synthetic Fibers; and Titanium Dioxide.

Note: The number of consecutive months the commodity is listed is indicated after each item.

## SEPTEMBER 2017 MANUFACTURING INDEX SUMMARIES

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

Manufacturing expanded in September as the $\mathrm{PMI}^{\circledR}$ registered 60.8 percent, an increase of 2 percentage points from the August reading of 58.8 percent. This indicates growth in manufacturing for the 13 th consecutive month and is the highest reading since May 2004, when the index registered 61.4 percent. A reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally contracting.

A $\mathrm{PMI}^{\circledR}$ above 43.3 percent, over a period of time, generally indicates an expansion of the overall economy. Therefore, the September $\mathrm{PMI}^{\circledR}$ indicates growth for the 100th consecutive month in the overall economy and the 13th 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 September (57.1 percent) corresponds to a 4.4 percent increase in real gross domestic
product (GDP) on an annualized basis. In addition, if the PMI $^{\circledR}$ for September ( 60.8 percent) is annualized, it corresponds to a 5.5 percent increase in real GDP annually."

THE LAST 12 MONTHS

| Month | PMI® | Month | PMI |
| :--- | :--- | :--- | :--- |
| Sep 2017 | 60.8 | Mar 2017 | 57.2 |
| Aug 2017 | 58.8 | Feb 2017 | 57.7 |
| 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 |
| Average for 2017 - 57.1 <br> Average for 12 months - 56.2 <br> High - 60.8 <br> Low - 52.0 |  |  |  |

## New Orders

ISM ${ }^{\text {® }}$ 's New Orders Index registered 64.6 percent in September, which is an increase of 4.3 percentage points when compared to the 60.3 percent reported for August, indicating growth in new orders for the 13th consecutive month. "Order input continues at a strong pace averaging 61.6 percent since December 2016 setting the pace for production activity," 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 September, listed in the following order: Apparel, Leather \& Allied Products; Plastics \& Rubber Products; Nonmetallic Mineral Products;
Miscellaneous Manufacturing; Paper Products; Chemical Products; Transportation Equipment;
Machinery; Food, Beverage \& Tobacco Products; Petroleum \& Coal Products; Computer \& Electronic Products; Primary Metals; Fabricated Metal Products; and Electrical Equipment, Appliances \&

Components. Three industries - Textile Mills; Furniture \& Related Products; and Printing \& Related Support Activities - reported a decrease in new orders in September compared to August.

| New <br> Orders | $\%$ <br> Better | $\%$ <br> Same | $\%$ <br> Worse | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Sep 2017 | 35 | 56 | 9 | +26 | 64.6 |
| Aug 2017 | 33 | 52 | 15 | +18 | 60.3 |
| Jul 2017 | 33 | 55 | 12 | +21 | 60.4 |
| Jun 2017 | 38 | 54 | 8 | +30 | 63.5 |

## Production

ISM ${ }^{\circledR}$ 's Production Index registered 62.2 percent in September, which is an increase of 1.2 percentage points when compared to the 61.0 percent reported for August, indicating growth in production for the 13th consecutive month. "Production remains at strong growth levels in most industries, in spite of weather conditions and supplier delivery constraints experienced during the period," 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 13 industries reporting growth in production during the month of September - listed in order are: Textile Mills; Apparel, Leather \& Allied Products; Wood Products; Nonmetallic Mineral Products; Machinery; Transportation Equipment; Chemical Products; Computer \& Electronic Products; Miscellaneous Manufacturing; Fabricated Metal Products; Food, Beverage \& Tobacco Products; Electrical Equipment, Appliances \& Components; and Paper Products. Two industries - Furniture \& Related Products; and Petroleum \& Coal Products - reported a decrease in production in September compared to August.

| Production | $\%$ <br> Better | $\%$ | $\%$ <br> Worse | Net | Index |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sep 2017 | 31 | 59 | 10 | +21 | 62.2 |
| Aug 2017 | 32 | 56 | 12 | +20 | 61.0 |
| Jul 2017 | 33 | 54 | 13 | +20 | 60.6 |
| Jun 2017 | 34 | 59 | 7 | +27 | 62.4 |

## Employment

ISM ${ }^{\circledR 1}$ s Employment Index registered 60.3 percent in September, an increase of 0.4 percentage point when compared to the August reading of 59.9 percent. This indicates growth in employment in September for the 12th consecutive month. Employment levels have been expanding since October 2016, and this month's Index reading is the highest since June 2011, when it 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 13 reporting employment growth in September - listed in order — are: Textile Mills; Wood Products; Machinery; Paper Products; Nonmetallic Mineral Products; Printing \& Related Support Activities; Fabricated Metal Products; Plastics \& Rubber Products; Primary Metals; Transportation Equipment; Food, Beverage \& Tobacco Products; Computer \& Electronic Products; and Petroleum \& Coal Products. The three industries reporting a decrease in employment in September are: Apparel, Leather \& Allied Products; Chemical Products; and Electrical Equipment, Appliances \& Components.

| Employment | $\%$ <br> Higher | \% <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Sep 2017 | 24 | 69 | 7 | +17 | 60.3 |
| Aug 2017 | 26 | 67 | 7 | +19 | 59.9 |
| Jul 2017 | 24 | 66 | 10 | +14 | 55.2 |
| Jun 2017 | 28 | 61 | 11 | +17 | 57.2 |

The delivery performance of suppliers to manufacturing organizations was slower in September, as the Supplier Deliveries Index registered 64.4 percent. This is 7.3 percentage points higher than the 57.1 percent reported for August. This is the 17th straight month of slowing supplier deliveries, and the index achieved its highest level since July 2004, when it registered 64.5 percent. A reading below 50 percent indicates faster deliveries, while a reading above 50 percent indicates slower deliveries.

The 14 industries reporting slower supplier deliveries in September — listed in order — are: Textile Mills; Apparel, Leather \& Allied Products; Printing \& Related Support Activities; Nonmetallic Mineral Products; Paper Products; Machinery; Plastics \& Rubber Products; Petroleum \& Coal Products; Chemical Products; Electrical Equipment, Appliances \& Components; Food, Beverage \& Tobacco Products; Computer \& Electronic Products; Fabricated Metal Products; and Transportation Equipment. One industry, Furniture \& Related Products, reported faster deliveries in September compared to August.

| Supplier <br> Deliveries | $\%$ <br> Slower | $\%$ <br> Same | $\%$ <br> Faster | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Sep 2017 | 32 | 64 | 4 | +28 | 64.4 |
| Aug 2017 | 18 | 78 | 4 | +14 | 57.1 |
| Jul 2017 | 19 | 74 | 7 | +12 | 55.4 |
| Jun 2017 | 17 | 78 | 5 | +12 | 57.0 |

## Inventories*

The Inventories Index registered 52.5 percent in September, which is a decrease of 3 percentage points when compared to the 55.5 percent reported for August, indicating raw materials inventories grew in September compared to August, but at a slower rate. 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 nine industries reporting higher inventories in September - listed in order — are: Textile Mills; Furniture \& Related Products; Transportation Equipment; Computer \& Electronic Products; Machinery; Plastics \& Rubber Products; Miscellaneous Manufacturing; Fabricated Metal Products; and Petroleum \& Coal Products. The six industries reporting lower inventories in September — listed in order — are:

Apparel, Leather \& Allied Products; Primary Metals; Nonmetallic Mineral Products; Chemical Products; Paper Products; and Electrical Equipment, Appliances \& Components.

| Inventories | $\%$ <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Sep 2017 | 22 | 61 | 17 | +5 | 52.5 |
| Aug 2017 | 22 | 67 | 11 | +11 | 55.5 |
| Jul 2017 | 19 | 62 | 19 | 0 | 50.0 |
| Jun 2017 | 16 | 66 | 18 | -2 | 49.0 |

## Customers' Inventories*

ISM ${ }^{\circledR}$ 's Customers' Inventories Index registered 42 percent in September, which is 1 percentage point higher than the 41 percent reported for August, indicating that customers' inventory levels are still considered too low in September."The index remains at a low level indicating that downstream customers continue to operate at a high level of demand that production cannot fully satisfy," says Fiore.

Two manufacturing industries - Nonmetallic Mineral Products; and Furniture \& Related Products reported customers' inventories as being too high during the month of September. The 10 industries reporting customers' inventories as too low during September - listed in order - are: Apparel, Leather \& Allied Products; Textile Mills; Primary Metals; Wood Products; Transportation Equipment; Plastics \& Rubber Products; Chemical Products; Machinery; Fabricated Metal Products; and Computer \& Electronic Products. Six industries reported no change in customer inventories in September compared to August.

| Customers' <br> Inventories | $\%$ <br> Reporting | \%Too <br> High | \%About <br> Right | \%Too <br> Low | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sep 2017 | 58 | 6 | 72 | 22 | -16 | 42.0 |
| Aug 2017 | 55 | 5 | 72 | 23 | -18 | 41.0 |
| Jul 2017 | 58 | 10 | 78 | 12 | -2 | 49.0 |
| Jun 2017 | 52 | 16 | 69 | 15 | +1 | 50.5 |

## Prices*

The ISM ${ }^{\circledR}$ Prices Index registered 71.5 percent in September, an increase of 9.5 percentage points from the August level of 62 percent indicating an increase in raw materials prices for the 19th consecutive month. In September, 45 percent of respondents reported paying higher prices, 2 percent reported paying lower prices, and 53 percent of supply executives reported paying the same prices as in August. The Prices Index is at its highest level since May 2011, when it registered 76.5 percent. Fiore comments, "The Business Survey Committee noted price increases in many areas, including metals (steel and aluminum); food ingredients; electronic components; lumber and wood products; basic chemicals; and plastics. The ongoing impacts from Hurricane Harvey are still largely unknown, and many respondents noted this uncertainty." 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.

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

| Prices | $\%$ <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Sep 2017 | 45 | 53 | 2 | +43 | 71.5 |
| Aug 2017 | 30 | 64 | 6 | +24 | 62.0 |
| Jul 2017 | 33 | 58 | 9 | +24 | 62.0 |
| Jun 2017 | 27 | 56 | 17 | +10 | 55.0 |

## Backlog of Orders*

ISM ${ }^{\oplus}$ 's Backlog of Orders Index registered 58 percent in September, an increase of 0.5 percentage point from the 57.5 percent reported for August, indicating growth in order backlogs for the eighth consecutive month. Of the 89 percent of respondents who reported their backlog of orders, 29 percent reported greater backlogs, 13 percent reported smaller backlogs, and 58 percent reported no change from August.

The 12 industries reporting growth in order backlogs in September - listed in order - are: Apparel, Leather \& Allied Products; Paper Products; Plastics \& Rubber Products; Fabricated Metal Products; Computer \& Electronic Products; Chemical Products; Machinery; Petroleum \& Coal Products;
Miscellaneous Manufacturing; Transportation Equipment; Food, Beverage \& Tobacco Products; and Electrical Equipment, Appliances \& Components. The two industries reporting a decrease in order backlogs during September are: Textile Mills; and Furniture \& Related Products.

| Backlog of <br> Orders | $\%$ <br> Reporting | $\%$ <br> Greater | $\%$ <br> Same | $\%$ <br> Less | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sep 2017 | 89 | 29 | 58 | 13 | +16 | 58.0 |
| Aug 2017 | 90 | 28 | 59 | 13 | +15 | 57.5 |
| Jul 2017 | 88 | 25 | 60 | 15 | +10 | 55.0 |
| Jun 2017 | 91 | 29 | 56 | 15 | +14 | 57.0 |

## New Export Orders*

ISM ${ }^{\circledR}$ 's New Export Orders Index registered 57 percent in September, an increase of 1.5 percentage points when compared to the 55.5 percent reported for August, indicating growth in new export orders for the 19th consecutive month.

The nine industries reporting growth in new export orders in September - listed in order - are: Chemical Products; Food, Beverage \& Tobacco Products; Machinery; Fabricated Metal Products; Paper Products; Transportation Equipment; Miscellaneous Manufacturing; Plastics \& Rubber Products; and Computer \& Electronic Products. Two industries — Nonmetallic Mineral Products; and Printing \& Related Support Activities - reported a decrease in new export orders. Seven industries reported no change in export orders in September compared to August.

| New Export <br> Orders | $\%$ <br> Reporting | $\%$ <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sep 2017 | 78 | 18 | 78 | 4 | +14 | 57.0 |
| Aug 2017 | 81 | 16 | 79 | 5 | +11 | 55.5 |
| Jul 2017 | 79 | 20 | 75 | 5 | +15 | 57.5 |
| Jun 2017 | 80 | 22 | 75 | 3 | +19 | 59.5 |

Imports*
ISM ${ }^{\circledR}$ 's Imports Index registered 54 percent in September, a decrease of 0.5 percentage point when compared to the 54.5 percent reported for August, indicating that imports are growing in September for the eighth consecutive month but at a slightly slower rate compared to August.

The eight industries reporting growth in imports during the month of September - listed in order are: Transportation Equipment; Furniture \& Related Products; Plastics \& Rubber Products; Computer \& Electronic Products; Chemical Products; Miscellaneous Manufacturing; Machinery; and Fabricated Metal Products. Four industries - Primary Metals; Nonmetallic Mineral Products; Electrical Equipment, Appliances \& Components; and Food, Beverage \& Tobacco Products - reported a decrease in imports during September compared to August.

| Imports | $\%$ <br> Reporting | $\%$ <br> Higher | $\%$ <br> Same | Lower <br> Sep 2017 | 83 | 14 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Net |  |  |  |  |  |  | Index

* 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 declined in September to 142 days from 143 days. Average lead time for Production Materials increased by 1 day to 62 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies decreased by 1 day to 35 days.

| Percent Reporting |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Capital <br> Expenditures | Hand- <br> to- <br> Mouth | 30 <br> Days | 60 <br> Days | 90 <br> Days | 6 <br> Months | 1 <br> Year+ | Average <br> Days |
| Sep 2017 | 20 | 8 | 11 | 15 | 26 | 20 | 142 |
| Aug 2017 | 19 | 7 | 12 | 17 | 25 | 20 | 143 |
| Jul 2017 | 19 | 8 | 9 | 18 | 25 | 21 | 146 |
| Jun 2017 | 20 | 7 | 11 | 17 | 23 | 22 | 146 |


| Production <br> Materials | Hand- <br> to- <br> Mouth | 30 <br> Days | 60 <br> Days | 90 <br> Days | 6 <br> Months | 1 <br> Year+ | Average <br> Days |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sep 2017 | 11 | 34 | 29 | 18 | 6 | 2 | 62 |  |
| Aug 2017 | 12 | 38 | 24 | 18 | 6 | 2 | 61 |  |
| Jul 2017 | 12 | 35 | 27 | 18 | 7 | 1 | 60 |  |
| Jun 2017 | 13 | 39 | 20 | 20 | 7 | 1 | 59 |  |
| MRO | Hand- <br> to- <br> Mouth | 30 | Days | 60 <br> Days | 90 | Days | Months | Year+ |
| Avays |  |  |  |  |  |  |  |  |

## 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 September 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 ( $\mathrm{PMII}^{\circledR}$, 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. 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, 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.

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 shall 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 shall not build a business utilizing the Content, whether or not for profit.

You shall 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 ${ }^{\circledR}$, PMI ${ }^{\oplus}$, and $\mathrm{NMI}^{\circledR}$ are registered trademarks of Institute for Supply Management ${ }^{\circledR}$. Institute for Supply Management ${ }^{\circledR}$ and ISM ${ }^{\circledR}$ are registered trademarks of Institute for Supply Management, Inc.

About Institute for Supply Management ${ }^{\circledR}$
Institute for Supply Management ${ }^{\circledR}\left(\right.$ ISM $\left.^{\circledR}\right)$ 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 ${ }^{\circledR}$, its highly regarded certification programs and the newly launched ISM Mastery Model ${ }^{\circledR}$. 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 $\mathrm{ISM}^{\circledR}$ Report On Business ${ }^{\circledR}$ is posted on $\mathrm{ISM}^{\circledR}{ }^{\circledR}$ s website at www.ismrob.org on the first business day* of every month after 10:00 a.m. ET.

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

