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

PMI ${ }^{\oplus}$ at $58.7 \%$

New Orders, Production, Backlog of Orders and Employment Continue Growing Supplier Deliveries Slowing at Slower Rate
Raw Materials' Inventories Contracting, Customers' Inventories Too Low
Prices Increasing at Slower Rate
(Tempe, Arizona) - Economic activity in the manufacturing sector expanded in October, and the overall economy grew for the 101st 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 ${ }^{\oplus}\left(I^{(S M}{ }^{\circledR}\right)$ Manufacturing Business Survey Committee: "The October ${ }^{\text {PMI }}{ }^{\oplus}$ registered 58.7 percent, a decrease of 2.1 percentage points from the September reading of 60.8 percent. The New Orders Index registered 63.4 percent, a decrease of 1.2 percentage points from the September reading of 64.6 percent. The Production Index registered 61 percent, a 1.2 percentage point decrease compared to the September reading of 62.2 percent. The Employment Index registered 59.8 percent, a decrease of 0.5 percentage point from the September reading of 60.3 percent. The Supplier Deliveries Index registered 61.4 percent, a 3 percentage point decrease from the September reading of 64.4 percent. The Inventories Index registered 48 percent, a decrease of 4.5 percentage points from the September reading of 52.5 percent. The Prices Index registered 68.5 percent in October, a 3 percentage point decrease from the September level of 71.5, indicating higher raw materials prices for the 20th consecutive month. Comments from the panel reflect expanding business conditions, with new orders, production, employment, order backlogs and export orders all continuing to grow in October, supplier deliveries continuing to slow (improving) and inventories contracting during the period. Prices continue to remain under pressure. The Customers' Inventories Index remains at low levels."

Of the 18 manufacturing industries, 16 reported growth in October, in the following order: Paper Products; Nonmetallic Mineral Products; Machinery; Transportation Equipment; Wood Products; Food,

Beverage \& Tobacco Products; Miscellaneous Manufacturing; Petroleum \& Coal Products; Plastics \& Rubber Products; Textile Mills; Chemical Products; Computer \& Electronic Products; Fabricated Metal Products; Furniture \& Related Products; Electrical Equipment, Appliances \& Components; and Primary Metals. Two industries reported the same level of activity as September.

## WHAT RESPONDENTS ARE SAYING ...

"Raw material costs on the rise, but purchasing operation has navigated shortages caused by hurricanes." (Chemical Products)
"Incoming orders are strong, mainly due to recovery efforts in the wake of Hurricanes Harvey and Irma. Backlogs are up due to operating inefficiencies." (Machinery)
"Hurricanes have caused shortages in the resin market, resulting in price increases, inventory constraints and increased lead times." (Computer \& Electronic Products)
"Ongoing market growth. Minimal impact expected from hurricanes so far in this season." (Miscellaneous Manufacturing)
"Business seems to be a bit depressed due to the storms last month, but is picking back up." (Fabricated Metal Products)
"Business continues to be better than expected." (Transportation Equipment)
"Business is good. Supplier deliveries have extended. Things are really picking up." (Food, Beverage \& Tobacco Products)
"Our plants are sold out for 2017 — we can’t take any new orders." (Nonmetallic Mineral Products)
"In plastics processing, Hurricane Harvey is the reason for every price increase being announced - and virtually all suppliers are announcing price increases." (Plastics \& Rubber Products)

| MANUFACTURING AT A GLANCE October 2017 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Index | Series <br> Index <br> Oct | Series <br> Index <br> Sep | Percentage <br> Point <br> Change | Direction | Rate <br> of Change | Trend* <br> (Months) |
| PMI ${ }^{\text {® }}$ | 58.7 | 60.8 | -2.1 | Growing | Slower | 14 |
| New Orders | 63.4 | 64.6 | -1.2 | Growing | Slower | 14 |
| Production | 61.0 | 62.2 | -1.2 | Growing | Slower | 14 |
| Employment | 59.8 | 60.3 | -0.5 | Growing | Slower | 13 |
| Supplier Deliveries | 61.4 | 64.4 | -3.0 | Slowing | Slower | 18 |
| Inventories | 48.0 | 52.5 | -4.5 | Contracting | From Growing | 1 |
| Customers' Inventories | 43.5 | 42.0 | +1.5 | Too Low | Slower | 4 |
| Prices | 68.5 | 71.5 | -3.0 | Increasing | Slower | 20 |
| Backlog of Orders | 55.0 | 58.0 | -3.0 | Growing | Slower | 9 |
| New Export Orders | 56.5 | 57.0 | -0.5 | Growing | Slower | 20 |
| Imports | 54.0 | 54.0 | 0.0 | Growing | Same | 9 |
| OVERALL ECONOMY |  |  |  | Growing | Slower | 101 |
| Manufacturing Sector |  |  |  | Growing | Slower | 14 |

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 (12); Brass (2); Caustic Soda (4); Chemicals; Corrugate (13); Corrugated Boxes; Distillates; Diesel; Freight (2); Glycols; HDPE (2); Hydrochloric Acid (2); LDPE (2); Memory — Computer (4); Plasticizers; Plastic Resins (3); Polyethylene (2); Polypropylene (2); Polyvinyl Chloride (2); Resin Based Products; Solvents (3); Stainless Steel; Steel — Hot Rolled* (11); Sulfuric Acid; Titanium Dioxide; and Vitamins.

## Commodities Down in Price <br> Steel - Scrap; and Steel - Hot Rolled*.

## Commodities in Short Supply

Capacitors (4); Electric Components (5); HDPE (2); Integrated Circuits; Methacrylates (3); Plasticizers; and Polyethylene Resin.
*Indicates both up and down in price.

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

OCTOBER 2017 MANUFACTURING INDEX SUMMARIES

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

Manufacturing expanded in October as the $\mathrm{PMI}^{\circledR}$ registered 58.7 percent, a decrease of 2.1 percentage points from the September reading of 60.8 percent. This indicates growth in manufacturing for the 14th consecutive month and continues expansion consistent with pre-hurricane levels. 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 October $\mathrm{PMI}^{\circledR}$ indicates growth for the 101st consecutive month in the overall economy and the 14th 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 $\mathrm{PMI}^{\oplus}$ for January through October ( 57.3 percent) corresponds to a 4.4 percent increase in real gross domestic product (GDP) on an annualized basis. In addition, if the $\mathrm{PMI}^{\boxplus}$ for October ( 58.7 percent) is annualized, it corresponds to a 4.9 percent increase in real GDP annually."

THE LAST 12 MONTHS

| Month | PMI® | Month | PMI |
| :--- | :--- | :--- | :--- |
| Oct 2017 | 58.7 | Apr 2017 | 54.8 |
| 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 | | Average for 2017-57.3 |
| :--- |
| Average for 12 months - 56.8 |
| High - 60.8 |
| Low - 53.5 |

## New Orders

ISM ${ }^{\oplus}$ 's New Orders Index registered 63.4 percent in October, which is a decrease of 1.2 percentage points when compared to the 64.6 percent reported for September, indicating growth in new orders for the 14th consecutive month. "New Order expansion continues at a strong pace, consistent with prehurricane levels," 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).

Twelve of 18 industries reported growth in new orders in October, listed in the following order: Paper Products; Apparel, Leather \& Allied Products; Wood Products; Machinery; Miscellaneous Manufacturing; Food, Beverage \& Tobacco Products; Nonmetallic Mineral Products; Transportation Equipment; Chemical Products; Computer \& Electronic Products; Petroleum \& Coal Products; and Primary Metals.

Three industries - Printing \& Related Support Activities; Plastics \& Rubber Products; and Fabricated Metal Products - reported a decrease in new orders in October compared to September.

| New <br> Orders | $\%$ <br> Better | $\%$ <br> Same | $\%$ <br> Worse | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 35 | 52 | 13 | +22 | 63.4 |
| Sep 2017 | 35 | 56 | 9 | +26 | 64.6 |
| Aug 2017 | 33 | 52 | 15 | +18 | 60.3 |
| Jul 2017 | 33 | 55 | 12 | +21 | 60.4 |

## Production

ISM ${ }^{\circledR 1}$ s Production Index registered 61 percent in October, which is a decrease of 1.2 percentage points when compared to the 62.2 percent reported for September, indicating growth in production for the 14th consecutive month. "Production expansion continues at a strong pace in spite of supply chain difficulties including the reduction of inventory levels seen 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 15 industries reporting growth in production during the month of October — listed in order - are: Paper Products; Apparel, Leather \& Allied Products; Wood Products; Nonmetallic Mineral Products; Transportation Equipment; Miscellaneous Manufacturing; Food, Beverage \& Tobacco Products;

Electrical Equipment, Appliances \& Components; Furniture \& Related Products; Chemical Products; Machinery; Petroleum \& Coal Products; Plastics \& Rubber Products; Computer \& Electronic Products; and Fabricated Metal Products. One industry - Primary Metals - reported a decrease in production in October compared to September.

| Production | $\%$ <br> Better | $\%$ <br> Same | $\%$ <br> Worse | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 30 | 59 | 11 | +19 | 61.0 |
| Sep 2017 | 31 | 59 | 10 | +21 | 62.2 |
| Aug 2017 | 32 | 56 | 12 | +20 | 61.0 |
| Jul 2017 | 33 | 54 | 13 | +20 | 60.6 |

## Employment

ISM ${ }^{\oplus}$ 's Employment Index registered 59.8 percent in October, a decrease of 0.5 percentage point when compared to the September reading of 60.3 percent. This indicates growth in employment in October for the 13th consecutive month. "Employment levels remain strong, consistent and in keeping pace with production output," 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 15 reporting employment growth in October - listed in order - are: Textile Mills; Printing \& Related Support Activities; Nonmetallic Mineral Products; Paper Products; Food, Beverage \& Tobacco Products; Machinery; Petroleum \& Coal Products; Plastics \& Rubber Products; Furniture \& Related Products; Fabricated Metal Products; Transportation Equipment; Primary Metals; Chemical Products; Computer \& Electronic Products; and Miscellaneous Manufacturing. The only industry reporting a decrease in employment in October is Apparel, Leather \& Allied Products.

| Employment | $\%$ <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 25 | 68 | 7 | +18 | 59.8 |
| Sep 2017 | 24 | 69 | 7 | +17 | 60.3 |
| Aug 2017 | 26 | 67 | 7 | +19 | 59.9 |
| Jul 2017 | 24 | 66 | 10 | +14 | 55.2 |

## Supplier Deliveries

The delivery performance of suppliers to manufacturing organizations was slower in October, as the Supplier Deliveries Index registered 61.4 percent. This is 3 percentage points lower than the 64.4 percent reported for September. "This is the 18th straight month of slowing supplier deliveries, and reflects delivery performance improvement over the prior month, which was impacted by weather conditions," 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 October - listed in order - are: Plastics \& Rubber Products; Machinery; Paper Products; Petroleum \& Coal Products; Electrical Equipment, Appliances \& Components; Nonmetallic Mineral Products; Fabricated Metal Products; Computer \& Electronic Products; Transportation Equipment; Food, Beverage \& Tobacco Products; Chemical Products; and Primary Metals. Two industries - Furniture \& Related Products; and Miscellaneous Manufacturing - reported faster deliveries in October compared to September.

| Supplier <br> Deliveries | $\%$ <br> Slower | $\%$ <br> Same | $\%$ <br> Faster | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 26 | 69 | 5 | +21 | 61.4 |
| Sep 2017 | 32 | 64 | 4 | +28 | 64.4 |
| Aug 2017 | 18 | 78 | 4 | +14 | 57.1 |
| Jul 2017 | 19 | 74 | 7 | +12 | 55.4 |

Inventories*
The Inventories Index registered 48 percent in October, which is a decrease of 4.5 percentage points when compared to the 52.5 percent reported for September, indicating raw materials inventories contracted in October compared to September. "The inventory contraction reflects the difficulty of the supply chain to deliver materials and services meeting production schedules," 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 six industries reporting higher inventories in October - listed in order — are: Nonmetallic Mineral Products; Machinery; Furniture \& Related Products; Transportation Equipment; Miscellaneous Manufacturing; and Primary Metals. The 11 industries reporting lower inventories in October - listed in order - are: Apparel, Leather \& Allied Products; Textile Mills; Petroleum \& Coal Products; Printing \& Related Support Activities; Electrical Equipment, Appliances \& Components; Chemical Products; Paper

Products; Plastics \& Rubber Products; Fabricated Metal Products; Computer \& Electronic Products; and Food, Beverage \& Tobacco Products.

| Inventories | \% <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 17 | 62 | 21 | -4 | 48.0 |
| Sep 2017 | 22 | 61 | 17 | +5 | 52.5 |
| Aug 2017 | 22 | 67 | 11 | +11 | 55.5 |
| Jul 2017 | 19 | 62 | 19 | 0 | 50.0 |

## Customers' Inventories*

ISM ${ }^{\text {® }}$ 's Customers' Inventories Index registered 43.5 percent in October, which is 1.5 percentage points higher than the 42 percent reported for September, indicating that customers' inventory levels are still considered too low in October. "The index remains at low levels, but indicates that production output made a slight improvement in meeting the input/output balance," says Fiore.

Two manufacturing industries - Furniture \& Related Products; and Fabricated Metal Products reported customers' inventories as being too high during the month of October. The nine industries reporting customers' inventories as too low during October - listed in order - are: Plastics \& Rubber Products; Electrical Equipment, Appliances \& Components; Paper Products; Nonmetallic Mineral Products; Food, Beverage \& Tobacco Products; Transportation Equipment; Chemical Products; Computer \& Electronic Products; and Machinery. Six industries reported no change in customer inventories in October compared to September.

| Customers' <br> Inventories | $\%$ <br> Reporting | \%Too <br> High | \%About <br> Right | \%Too <br> Low | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 54 | 9 | 69 | 22 | -13 | 43.5 |
| 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 |

## Prices*

The ISM ${ }^{\circledR}$ Prices Index registered 68.5 percent in October, a decrease of 3 percentage points from the September level of 71.5 percent indicating an increase in raw materials prices for the 20th consecutive month. In October, 43 percent of respondents reported paying higher prices, 6 percent reported paying lower prices, and 51 percent of supply executives reported paying the same prices as in September. "The Business Survey Committee noted price increases in many areas, including metals (steel, stainless, brass and aluminum); fuels and distillates; electronic components; many basic and intermediate chemicals; and plastic resins and parts made from these materials. The near-term impacts from Hurricane Harvey were evident during the period," says Fiore. 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.

Fourteen industries reported paying increased prices for raw materials in October, in the following order: Textile Mills; Apparel, Leather \& Allied Products; Paper Products; Plastics \& Rubber Products; Petroleum \& Coal Products; Nonmetallic Mineral Products; Chemical Products; Food, Beverage \& Tobacco Products; Machinery; Miscellaneous Manufacturing; Transportation Equipment; Computer \& Electronic Products; Furniture \& Related Products; and Primary Metals. One industry, Fabricated Metal Products, reported prices as decreasing during the period.

| Prices | $\%$ <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 43 | 51 | 6 | +37 | 68.5 |
| Sep 2017 | 45 | 53 | 2 | +43 | 71.5 |
| Aug 2017 | 30 | 64 | 6 | +24 | 62.0 |
| Jul 2017 | 33 | 58 | 9 | +24 | 62.0 |

## Backlog of Orders*

ISM ${ }^{\oplus}$ 's Backlog of Orders Index registered 55 percent in October, a decrease of 3 percentage points from the 58 percent reported for September, indicating growth in order backlogs for the ninth consecutive month but at a slower rate. "Backlog remains strong, but the growth rate has been reduced during the period," says Fiore. Of the 88 percent of respondents who reported their backlog of orders, 26 percent reported greater backlogs, 16 percent reported smaller backlogs, and 58 percent reported no change from September.

The nine industries reporting growth in order backlogs in October - listed in order - are: Textile Mills; Paper Products; Apparel, Leather \& Allied Products; Nonmetallic Mineral Products; Machinery; Plastics \& Rubber Products; Miscellaneous Manufacturing; Chemical Products; and Transportation Equipment. The four industries reporting a decrease in order backlogs during October are: Primary Metals; Printing \& Related Support Activities; Computer \& Electronic Products; and Fabricated Metal Products.

| Backlog of <br> Orders | $\%$ <br> Reporting | $\%$ <br> Greater | $\%$ <br> Same | $\%$ <br> Less | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 88 | 26 | 58 | 16 | +10 | 55.0 |
| 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 |

## New Export Orders*

ISM ${ }^{\circledR}$ 's New Export Orders Index registered 56.5 percent in October, a decrease of 0.5 percentage point when compared to the 57 percent reported for September, indicating growth in new export orders for the 20th consecutive month.

The eight industries reporting growth in new export orders in October — listed in order — are: Paper Products; Machinery; Transportation Equipment; Furniture \& Related Products; Computer \& Electronic Products; Food, Beverage \& Tobacco Products; Chemical Products; and Miscellaneous Manufacturing. Three industries - Electrical Equipment, Appliances \& Components; Plastics \& Rubber Products; and Fabricated Metal Products - reported a decrease in new export orders. Seven industries reported no change in export orders in October compared to September.

| New Export <br> Orders | $\%$ <br> Reporting | $\%$ <br> Higher | $\%$ <br> Same | $\%$ <br> Lower | Net | Index |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 77 | 17 | 79 | 4 | +13 | 56.5 |
| 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 |

Imports*
ISM ${ }^{\circledR}$ 's Imports Index registered 54 percent in October, the same level of expansion when compared to the 54 percent reported for September, indicating that imports are growing in October for the ninth consecutive month.

The 11 industries reporting growth in imports during the month of October — listed in order — are: Textile Mills; Apparel, Leather \& Allied Products; Paper Products; Petroleum \& Coal Products; Electrical Equipment, Appliances \& Components; Furniture \& Related Products; Machinery; Food, Beverage \& Tobacco Products; Computer \& Electronic Products; Transportation Equipment; and Miscellaneous Manufacturing. Four industries — Nonmetallic Mineral Products; Primary Metals; Chemical Products; and Fabricated Metal Products - reported a decrease in imports during October compared to September.

| Imports | $\%$ <br> Reporting | $\%$ <br> Higher | $\%$ <br> Same | Lower <br> Oct 2017 | 80 | 16 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 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 increased in October to 145 days from 142 days. Average lead time for Production Materials decreased by 2 days to 60 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies decreased by 2 days to 33 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 |
| Oct 2017 | 20 | 5 | 13 | 18 | 22 | 22 | 145 |
| 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 |


| 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 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Oct 2017 | 13 | 36 | 26 | 17 | 6 | 2 | 60 |  |
| 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 |  |
| MRO | Hand- <br> to- <br> Mouth | 30 | 60 | Days | Days | Days | Months | Year+ |
| Avays |  |  |  |  |  |  |  |  |
| Duplies | 34 | 40 | 19 | 5 | 2 | 0 | 33 |  |
| Oct 2017 | 34 |  |  |  |  |  |  |  |
| Sep 2017 | 33 | 39 | 19 | 7 | 2 | 0 | 35 |  |
| Aug 2017 | 31 | 42 | 18 | 6 | 3 | 0 | 36 |  |
| Jul 2017 | 32 | 43 | 14 | 9 | 2 | 0 | 35 |  |

## About This Report

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

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The next Manufacturing ISM ${ }^{\circledR}$ Report On Business ${ }^{\circledR}$ featuring November 2017 data will be released at 10:00 a.m. ET on Friday, December 1, 2017.
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