

December 2018 Manufacturing ISM® Report On Business®

Choose a Section

PMI® at 54.1%

New Orders, Production, and Employment Growing

Supplier Deliveries Slowing at Slower Rate; Backlog Unchanged

Raw Materials Inventories Growing; Customers' Inventories Too Low

Prices Increasing at Slower Rate; Exports and Imports Growing

(Tempe, Arizona) — Economic activity in the manufacturing sector expanded in December, and the overall economy grew for the 116th consecutive month, say the nation's supply executives in the latest Manufacturing ISM® Report On Business® .

The report was issued today by Timothy R. Fiore, CPSM, C.P.M., Chair of the Institute for Supply Management® (ISM®) Manufacturing Business Survey Committee: "The December PMI® registered 54.1 percent, a decrease of 5.2 percentage points from the November reading of 59.3 percent. The New Orders Index registered 51.1 percent, a decrease of 11 percentage points from the November reading of 62.1 percent. The Production Index registered 54.3 percent, 6.3-percentage point decrease compared to the November reading of 60.6 percent. The Employment Index registered 56.2 percent, a decrease of 2.2 percentage points from the November reading of 58.4 percent. The Supplier Deliveries Index registered 57.5 percent, a 5-percentage point decrease from the November reading of 62.5 percent. The Inventories Index registered 51.2 percent, a decrease of 1.7 percentage points from the November reading of 52.9 percent. The Prices Index registered 54.9 percent, a 5.8-percentage point decrease from the November reading of 60.7 percent, indicating higher raw materials prices for the 34th consecutive month.

"Comments from the panel reflect continued expanding business strength, but at much lower levels. Demand softened, with the New Orders Index retreating to recent low levels, the Customers' Inventories Index remaining too low — a positive heading into the first quarter of 2019 — and the Backlog of Orders declining to a zero-expansion level. Consumption continued to strengthen, with production and employment still expanding, but at much lower levels compared to prior periods. Inputs — expressed as supplier deliveries, inventories and imports — softened as well, with suppliers improving delivery performance, and inventories and imports declining.

Exports continue to expand, but at low levels consistent with November. Price increases relaxed to levels not seen since June 2017, when the index registered 53 percent. The manufacturing community continues to expand, but at much lower levels and at a sharp decline from November," says Fiore.

Of the 18 manufacturing industries, 11 reported growth in December, in the following order: Textile Mills; Apparel, Leather & Allied Products; Machinery; Transportation Equipment; Computer & Electronic Products; Wood Products; Chemical Products; Food, Beverage & Tobacco Products; Miscellaneous Manufacturing; Electrical Equipment, Appliances & Components; and Primary Metals. The six industries reporting contraction in December — in the following order — are: Printing & Related Support Activities; Fabricated Metal Products; Nonmetallic Mineral Products; Petroleum & Coal Products; Paper Products; and Plastics & Rubber Products.

WHAT RESPONDENTS ARE SAYING

“Growth appears to have stopped. Resources still focused on re-sourcing for U.S. tariff mitigation out of China.” (Computer & Electronic Products)

“Brexit has become a problem due to labeling changes.” (Chemical Products)

“Customer demand continues to decrease [due to] concerns about the economy and tariffs.” (Transportation Equipment)

“Starting to see more and more inflationary increases for raw materials. Also, suppliers [are] forcing price increases due to tariffs.” (Food, Beverage & Tobacco Products)

“The ongoing open issues with tariffs between U.S. and China are causing longer-term concerns about costs and sourcing strategies for our manufacturing operations. We were anticipating more clarity [regarding] tariffs at the end of 2018.” (Machinery)

“Business is steady, but pace of incoming orders are slowing.” (Furniture & Related Products)

“Business is robust for certain sectors [aerospace] and flat to downward for others [energy]. Tariffs continue to impact business direction and profit.” (Miscellaneous Manufacturing)

“Caution seems to be the outlook. Are we in a correction, or is the market getting ready to slow over time?” (Fabricated Metal Products)

“No major change in business operations towards the end of 2018; however, we are carefully monitoring oil prices and outside influence from market conditions to better understand our 2019 outlook and capital plans.” (Petroleum & Coal Products)

“Customers are hedge buying in December as a result of announced price increases starting in January.” (Textile Mills)

MANUFACTURING AT A GLANCE

December 2018

| Index | Series Index Dec | Series Index Nov | Percentage Point Change | Direction | Rate of Change | Trend* (Months) |
|---------------------------|---------------------|---------------------|----------------------------|------------|-------------------|--------------------|
| PMI® | 54.1 | 59.3 | -5.2 | Growing | Slower | 28 |
| New Orders | 51.1 | 62.1 | -11.0 | Growing | Slower | 36 |
| Production | 54.3 | 60.6 | -6.3 | Growing | Slower | 28 |
| Employment | 56.2 | 58.4 | -2.2 | Growing | Slower | 27 |
| Supplier Deliveries | 57.5 | 62.5 | -5.0 | Slowing | Slower | 27 |
| Inventories | 51.2 | 52.9 | -1.7 | Growing | Slower | 12 |
| Customers' Inventories | 41.7 | 41.5 | +0.2 | Too Low | Slower | 27 |
| Prices | 54.9 | 60.7 | -5.8 | Increasing | Slower | 34 |
| Backlog of Orders | 50.0 | 56.4 | -6.4 | Unchanged | Slower | 1 |
| New Export Orders | 52.8 | 52.2 | +0.6 | Growing | Faster | 34 |
| Imports | 52.7 | 53.6 | -0.9 | Growing | Slower | 23 |
| OVERALL ECONOMY | | | | Growing | Slower | 116 |
| Manufacturing Sector | | | | Growing | Slower | 28 |

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

*Number of months moving in current direction.

Commodities reported up/down in price and in short supply

Commodities Up in Price

Chemicals; Electrical Components (2); Electronic Components (5); Freight; Labor — Construction; Metal-Based Products; Natural Gas; PET Resin; Printed Circuit Boards; Steel* (4); and Steel-Based Products (8).

Commodities Down in Price

Aluminum (3); Caustic Soda (3); Crude Oil; Gasoline; Steel* (4); and Steel — Hot Rolled (4).

Commodities in Short Supply

Capacitors (18); Electronic Components (8); Hardwood; Labor; Resistors (14); Steel; and Steel-Based Products (3).

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

*Indicates both up and down in price.

Manufacturing Index Summaries

PMI®

Manufacturing expanded in December, as the PMI® registered 54.1 percent, a decrease of 5.2 percentage points from the November reading of 59.3 percent. “This indicates growth in manufacturing for the 28th consecutive month. The PMI® recorded a substantial softening in December and retreated to a level not seen since November 2016, when it registered 53.4 percent,” says Fiore. A reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally contracting.

A PMI® above 43.2 percent, over a period of time, generally indicates an expansion of the overall economy. Therefore, the December PMI® indicates growth for the 116th consecutive month in the overall economy and the 28th straight month of growth in the manufacturing sector. “The past relationship between the PMI® and the overall economy indicates that the PMI® for December (54.1 percent) corresponds to a 3.4-percent increase in real gross domestic product (GDP) on an annualized basis.”

The Last 12 Months

| Month | PMI® |
|----------|------|
| Dec 2018 | 54.1 |
| Nov 2018 | 59.3 |
| Oct 2018 | 57.7 |
| Sep 2018 | 59.8 |

| Month | PMI® |
|------------------------------|------|
| Aug 2018 | 61.3 |
| Jul 2018 | 58.1 |
| Month | PMI® |
| Jun 2018 | 60.2 |
| May 2018 | 58.7 |
| Apr 2018 | 57.3 |
| Mar 2018 | 59.3 |
| Feb 2018 | 60.8 |
| Jan 2018 | 59.1 |
| Average for 12 months - 58.8 | |
| High - 61.3 | |
| Low - 54.1 | |

New Orders

ISM®'s New Orders Index registered 51.1 percent in December, which is a decrease of 11 percentage points when compared to the 62.1 percent reported for November, indicating growth in new orders for the 36th consecutive month. "Customer demand expansion softened quite notably in December, as the index retreated to an expansion level not seen since August 2016, when it registered 50.5 percent," says Fiore. A New Orders Index above 52.4 percent, over time, is generally consistent with an increase in the Census Bureau's series on manufacturing orders (in constant 2000 dollars).

Six of 18 industries reported growth in new orders in December, in the following order: Machinery; Electrical Equipment, Appliances & Components; Primary Metals; Food, Beverage & Tobacco Products; Computer & Electronic Products; and Transportation Equipment. The five industries reporting a decrease in new orders in December are: Petroleum & Coal Products; Fabricated Metal Products; Nonmetallic Mineral Products; Paper Products; and Plastics & Rubber Products. Seven industries reported no change in new orders in December compared to November.

| New Orders | % Higher | % Same | % Lower | Net | Index |
|------------|----------|--------|---------|------|-------|
| Dec 2018 | 19.7 | 57.5 | 22.9 | -3.2 | 51.1 |

| New Orders | % Higher | % Same | % Lower | Net | Index |
|------------|----------|--------|---------|-------|-------|
| Nov 2018 | 31.0 | 55.0 | 14.0 | +17.0 | 62.1 |
| Oct 2018 | 27.2 | 54.5 | 18.3 | +8.9 | 57.4 |
| Sep 2018 | 31.4 | 57.7 | 10.9 | +20.5 | 61.8 |

Production

ISM®'s Production Index registered 54.3 percent in December, which is a decrease of 6.3 percentage points when compared to the 60.6 percent reported for November, indicating growth in production for the 28th consecutive month. "Production expansion continued in December, but at lower expansion rates compared to prior periods. December expansion was the weakest since October 2016, when the index recorded 54.2 percent," says Fiore. An index above 51.5 percent, over time, is generally consistent with an increase in the Federal Reserve Board's Industrial Production figures.

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

| Production | % Higher | % Same | % Lower | Net | Index |
|------------|----------|--------|---------|-------|-------|
| Dec 2018 | 21.6 | 58.8 | 19.5 | +2.1 | 54.3 |
| Nov 2018 | 30.6 | 56.8 | 12.6 | +18.0 | 60.6 |
| Oct 2018 | 28.2 | 60.7 | 11.2 | +17.0 | 59.9 |
| Sep 2018 | 33.6 | 56.7 | 9.6 | +24.0 | 63.9 |

Employment

ISM®'s Employment Index registered 56.2 percent in December, a decrease of 2.2 percentage points when compared to the November reading of 58.4 percent. This indicates growth in employment in December for the 27th consecutive month. "Employment continued to expand, supporting production growth, but at the lowest expansion levels since June 2018, when the index registered 56 percent," says Fiore. An Employment Index above 50.8 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) data on manufacturing employment.

Of the 18 manufacturing industries, the nine that reported employment growth in December — listed in order — are: Textile Mills; Paper Products; Transportation Equipment; Food, Beverage & Tobacco Products; Chemical Products; Electrical Equipment, Appliances & Components; Computer & Electronic Products; Machinery; and Miscellaneous Manufacturing. The three industries reporting a decrease in employment in December are: Printing & Related Support Activities; Nonmetallic Mineral Products; and Fabricated Metal Products. Six industries reported no change in employment in December compared to November.

| Employment | % Higher | % Same | % Lower | Net | Index |
|------------|----------|--------|---------|-------|-------|
| Dec 2018 | 18.6 | 70.7 | 10.7 | +7.9 | 56.2 |
| Nov 2018 | 22.7 | 69.1 | 8.2 | +14.5 | 58.4 |
| Oct 2018 | 22.5 | 67.2 | 10.3 | +12.2 | 56.8 |
| Sep 2018 | 26.1 | 62.9 | 11.0 | +15.1 | 58.8 |

Supplier Deliveries

The delivery performance of suppliers to manufacturing organizations slowed in December, as the Supplier Deliveries Index registered 57.5 percent. This is 5 percentage points lower than the 62.5 percent reported for November. “This is the 27th straight month of slowing supplier deliveries, but at levels that are more manageable than in prior periods. Respondents continue to note transportation difficulties and lead-time extensions, but fewer respondents are reporting slowing deliveries compared to prior months,” 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 December — listed in order — are: Apparel, Leather & Allied Products; Textile Mills; Paper Products; Chemical Products; Computer & Electronic Products; Machinery; Nonmetallic Mineral Products; Miscellaneous Manufacturing; Fabricated Metal Products; Electrical Equipment, Appliances & Components; Transportation Equipment; and Plastics & Rubber Products. The only industry reporting faster supplier deliveries in December is Primary Metals.

| Supplier Deliveries | % Slower | % Same | % Faster | Net | Index |
|---------------------|----------|--------|----------|-------|-------|
| Dec 2018 | 17.6 | 78.0 | 4.4 | +13.2 | 57.5 |
| Nov 2018 | 25.9 | 70.2 | 3.9 | +22.0 | 62.5 |
| Oct 2018 | 30.4 | 66.9 | 2.7 | +27.7 | 63.8 |
| Sep 2018 | 28.3 | 67.1 | 4.6 | +23.7 | 61.1 |

Inventories*

The Inventories Index registered 51.2 percent in December, a decrease of 1.7 percentage points from the 52.9 percent reported for November. “Inventories expanded for the 12th consecutive month, but at a slower rate than the prior month. They will likely grow in January due to improved supplier delivery performance,” says Fiore. An Inventories Index greater than 43 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 December — listed in order — are: Textile Mills; Wood Products; Petroleum & Coal Products; Food, Beverage & Tobacco Products; Transportation Equipment; Computer & Electronic Products; Machinery; Miscellaneous Manufacturing; and Chemical Products. The seven industries reporting a decrease in inventories in December — listed in order — are: Paper Products; Printing & Related Support Activities; Furniture & Related Products; Fabricated Metal Products; Nonmetallic Mineral Products; Electrical Equipment, Appliances & Components; and Primary Metals.

| Inventories | % Higher | % Same | % Lower | Net | Index |
|-------------|----------|--------|---------|------|-------|
| Dec 2018 | 20.9 | 60.6 | 18.4 | +2.5 | 51.2 |
| Nov 2018 | 23.4 | 59.0 | 17.6 | +5.8 | 52.9 |
| Oct 2018 | 18.8 | 63.6 | 17.5 | +1.3 | 50.7 |
| Sep 2018 | 20.6 | 65.4 | 14.0 | +6.6 | 53.3 |

Customers' Inventories*

ISM®'s Customers' Inventories Index registered 41.7 percent in December, which is 0.2 percentage point higher than the 41.5 percent reported for November, indicating that customers' inventory levels were considered too low. “Customers' inventory levels are too low for the 27th consecutive month, and when reviewed with the other elements of demand, new orders and backlog, reflect the only positive sentiment to future production growth,” says Fiore.

No industry reported customers' inventories as too high during the month of December. The 13 industries reporting customers' inventories as too low during December — listed in order — are: Textile Mills; Wood Products; Machinery; Electrical Equipment, Appliances & Components; Nonmetallic Mineral Products; Primary Metals; Chemical Products; Food, Beverage & Tobacco Products; Computer & Electronic Products; Plastics & Rubber Products; Fabricated Metal Products; Miscellaneous Manufacturing; and Transportation Equipment.

| Customers' Inventories | % Reporting | % Too High | % About Right | % Too Low | Net | Index |
|------------------------|-------------|------------|---------------|-----------|-------|-------|
| Dec 2018 | 82 | 4.3 | 74.7 | 21.0 | -16.7 | 41.7 |
| Nov 2018 | 79 | 8.9 | 65.1 | 26.0 | -17.1 | 41.5 |
| Oct 2018 | 79 | 10.1 | 66.4 | 23.5 | -13.4 | 43.3 |
| Sep 2018 | 79 | 6.0 | 69.0 | 25.0 | -19.0 | 40.5 |

Prices*

The ISM® Prices Index registered 54.9 percent in December, a decrease of 5.8 percentage points from the November reading of 60.7 percent, indicating an increase in raw materials prices for the 34th consecutive month. “The price increases across all industry sectors continue, but at sharply lower levels compared to prior months. This is the lowest month of price expansion since June 2017, when the index registered 53 points. The Business Survey Committee noted that price increases are continuing to soften and/or decline in metals (steel and aluminum). Increases continue for freight, labor, electrical and electronic components, printed circuit board assemblies and products manufactured primarily from steel. Shortages continue for electrical and most electronic components. Aluminum, steel and caustic soda prices are down,” 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.

Eight of the 18 industries reported paying increased prices for raw materials in December, in the following order: Apparel, Leather & Allied Products; Paper Products; Miscellaneous Manufacturing; Food, Beverage & Tobacco Products; Transportation Equipment; Computer & Electronic Products; Machinery; and Primary Metals. The five industries reporting a decrease in prices for raw materials in December are: Textile Mills; Furniture & Related Products; Plastics & Rubber Products; Petroleum & Coal Products; and Fabricated Metal Products.

| Prices | % Higher | % Same | % Lower | Net | Index |
|----------|----------|--------|---------|-------|-------|
| Dec 2018 | 26.8 | 56.1 | 17.1 | +9.7 | 54.9 |
| Nov 2018 | 32.0 | 57.3 | 10.7 | +21.3 | 60.7 |
| Oct 2018 | 51.1 | 41.0 | 7.9 | +43.2 | 71.6 |
| Sep 2018 | 42.3 | 49.1 | 8.6 | +33.7 | 66.9 |

Backlog of Orders*

ISM®'s Backlog of Orders Index registered 50 percent in December, which is 6.4 percentage points lower than the 56.4 percent reported in November, indicating order backlogs were unchanged for the month. "Backlogs did not grow during December, with only three of the big six industries recording expansion," says Fiore.

The six industries reporting growth in order backlogs in December — listed in order — are: Textile Mills; Apparel, Leather & Allied Products; Plastics & Rubber Products; Computer & Electronic Products; Chemical Products; and Transportation Equipment. The five industries reporting a decrease in order backlogs during December are: Printing & Related Support Activities; Nonmetallic Mineral Products; Furniture & Related Products; Fabricated Metal Products; and Miscellaneous Manufacturing. Six industries reported no change in backlog of orders in December compared to November.

| Backlog of Orders* | % Reporting | % Higher | % Same | % Lower | Net | Index |
|--------------------|-------------|----------|--------|---------|-------|-------|
| Dec 2018 | 89 | 19.8 | 60.3 | 19.9 | -0.1 | 50.0 |
| Nov 2018 | 88 | 27.7 | 57.5 | 14.9 | +12.8 | 56.4 |
| Oct 2018 | 89 | 26.9 | 57.8 | 15.3 | +11.6 | 55.8 |
| Sep 2018 | 89 | 26.7 | 57.9 | 15.4 | +11.3 | 55.7 |

New Export Orders*

ISM®'s New Export Orders Index registered 52.8 percent in December, 0.6 percentage point higher compared to the November reading of 52.2 percent, indicating growth in new export orders for the 34th consecutive month. "Exports remained relatively constant with the prior two months and are at low expansion levels not seen since late 2016. Five of the six big industry sectors contributed to the expansion," says Fiore.

The six industries reporting growth in new export orders in December — listed in order — are: Chemical Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; Machinery; Transportation Equipment; and Miscellaneous Manufacturing. The four industries reporting a decrease in new export orders in December are: Printing & Related Support Activities; Nonmetallic Mineral Products; Paper Products; and Fabricated Metal Products. Seven industries reported no change in new export orders in December.

| New Export Orders* | % Reporting | % Higher | % Same | % Lower | Net | Index |
|--------------------|-------------|----------|--------|---------|------|-------|
| Dec 2018 | 80 | 13.9 | 77.7 | 8.4 | +5.5 | 52.8 |
| Nov 2018 | 81 | 12.9 | 78.6 | 8.4 | +4.5 | 52.2 |

| New Export Orders* | % Reporting | % Higher | % Same | % Lower | Net | Index |
|--------------------|-------------|----------|--------|---------|-------|-------|
| Oct 2018 | 80 | 12.3 | 79.7 | 8.0 | +4.3 | 52.2 |
| Sep 2018 | 80 | 19.4 | 73.3 | 7.3 | +12.1 | 56.0 |

Imports*

ISM®'s Imports Index registered 52.7 percent in December, a decrease of 0.9 percentage point when compared to the 53.6 percent reported for November, indicating that imports grew in December for the 23rd consecutive month. "Imports expansion softened further for the third consecutive month. The index achieved its lowest rate of expansion since May 2017, when it registered 52.3 percent," says Fiore.

The 10 industries reporting growth in imports during the month of December — listed in order — are: Textile Mills; Wood Products; Furniture & Related Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; Plastics & Rubber Products; Transportation Equipment; Fabricated Metal Products; Machinery; and Chemical Products. The four industries reporting a decrease in imports during December are: Petroleum & Coal Products; Primary Metals; Paper Products; and Miscellaneous Manufacturing.

| Imports | % Reporting | % Higher | % Same | % Lower | Net | Index |
|----------|-------------|----------|--------|---------|------|-------|
| Dec 2018 | 86 | 16.7 | 72.0 | 11.3 | +5.4 | 52.7 |
| Nov 2018 | 83 | 18.7 | 69.8 | 11.5 | +7.2 | 53.6 |
| Oct 2018 | 86 | 17.6 | 73.5 | 8.9 | +8.7 | 54.3 |
| Sep 2018 | 85 | 19.4 | 70.2 | 10.4 | +9.0 | 54.5 |

*The Inventories, Customers' Inventories, Prices, Backlog of Orders, New Export Orders and Imports Indexes do not meet the accepted criteria for seasonal adjustments.

Buying Policy

Average commitment lead time for Capital Expenditures decreased by eight days in December to 142 days. Average lead time for Production Materials was unchanged at 68 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies decreased by one day to 32 days.

Percent Reporting

Capital Expenditures Hand-to-Mouth 30 Days 60 Days 90 Days 6 Months 1 Year + Average Days

| Capital Expenditures | Hand-to-Mouth | 30 Days | 60 Days | 90 Days | 6 Months | 1 Year + | Average Days |
|----------------------|---------------|---------|---------|---------|----------|----------|--------------|
| Dec 2018 | 19 | 5 | 11 | 22 | 23 | 20 | 142 |
| Nov 2018 | 19 | 5 | 9 | 22 | 22 | 23 | 150 |
| Oct 2018 | 20 | 5 | 8 | 19 | 25 | 23 | 152 |
| Sep 2018 | 19 | 7 | 10 | 19 | 23 | 22 | 147 |

| Production Materials | Hand-to-Mouth | 30 Days | 60 Days | 90 Days | 6 Months | 1 Year + | Average Days |
|----------------------|---------------|---------|---------|---------|----------|----------|--------------|
| Dec 2018 | 11 | 35 | 27 | 17 | 6 | 4 | 68 |
| Nov 2018 | 9 | 35 | 30 | 15 | 8 | 3 | 68 |
| Oct 2018 | 13 | 32 | 26 | 18 | 8 | 3 | 67 |
| Sep 2018 | 12 | 34 | 28 | 15 | 7 | 4 | 68 |

| MRO Supplies | Hand-to-Mouth | 30 Days | 60 Days | 90 Days | 6 Months | 1 Year + | Average Days |
|--------------|---------------|---------|---------|---------|----------|----------|--------------|
| Dec 2018 | 37 | 41 | 14 | 5 | 3 | 0 | 32 |
| Nov 2018 | 37 | 39 | 15 | 6 | 3 | 0 | 33 |
| Oct 2018 | 37 | 39 | 14 | 7 | 2 | 1 | 35 |
| Sep 2018 | 38 | 36 | 16 | 7 | 3 | 0 | 34 |

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 December 2018.

The data presented herein is obtained from a survey of manufacturing supply executives based on information they have collected within their respective organizations. ISM® makes no representation, other than that stated within this release, regarding the individual company data collection procedures. The data should be compared to all other economic data sources when used in decision-making.

Data and Method of Presentation

The Manufacturing ISM® Report On Business® is based on data compiled from purchasing and supply executives nationwide. The composition of the Manufacturing Business Survey Committee is stratified according to the North American Industry Classification System (NAICS) and each of the following NAICS-based industry's contribution to gross domestic product (GDP): Food, Beverage & Tobacco Products; Textile Mills; Apparel, Leather & Allied Products; Wood Products; Paper Products; Printing & Related Support Activities; Petroleum & Coal Products; Chemical Products; Plastics & Rubber Products; Nonmetallic Mineral Products; Primary Metals; Fabricated Metal Products; Machinery; Computer & Electronic Products; Electrical Equipment, Appliances & Components; Transportation Equipment; Furniture & Related Products; and Miscellaneous Manufacturing (products such as medical equipment and supplies, jewelry, sporting goods, toys and office supplies). The data are weighted based on each industry's contribution to GDP. Beginning in January 2018, computation of the indexes is accomplished utilizing unrounded numbers.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, Backlog of Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Customers' Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries) and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index. Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive).

The resulting single index number for those meeting the criteria for seasonal adjustments (PMI®, New Orders, Production, Employment and Supplier Deliveries) is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements, and differences attributable to non-moveable holidays. All seasonal adjustment factors are subject annually to relatively minor changes when conditions warrant them. The PMI® is a composite index based on the diffusion indexes of five of the indexes with equal weights: New Orders (seasonally adjusted), Production (seasonally adjusted), Employment (seasonally adjusted), Supplier Deliveries (seasonally adjusted), and Inventories.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. A PMI® reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally declining. A PMI® above 43.2 percent, over a period of time, indicates that the overall economy, or gross domestic product (GDP), is generally expanding; below 43.2 percent, it is generally declining. The distance from 50 percent or 43.2 percent is indicative of the strength of the expansion or decline. With some of the indicators within this report, ISM® has indicated the departure point between expansion and decline of comparable government series, as determined by regression analysis. The Manufacturing ISM® Report On Business® survey is sent out to Manufacturing Business Survey Committee respondents the first part of each month. Respondents are asked to ONLY report on

information for the current month. ISM® receives survey responses throughout most of any given month, with the majority of respondents generally waiting until late in the month to submit responses in order to give the most accurate picture of current business activity. ISM® then compiles the report for release on the first business day of the following month.

The industries reporting growth, as indicated in the Manufacturing ISM® Report On Business® monthly report, are listed in the order of most growth to least growth. For the industries reporting contraction or decreases, those are listed in the order of the highest level of contraction/decrease to the least level of contraction/decrease.

Responses to Buying Policy reflect the percent reporting the current month's lead time, the approximate weighted number of days ahead for which commitments are made for Capital Expenditures; Production Materials; and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (five days), 30 days, 60 days, 90 days, six months (180 days), a year or more (360 days), and the weighted average number of days. These responses are raw data, never revised, and not seasonally adjusted since there is no significant seasonal pattern.

ISM ROB Content

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