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June 2018 Manufacturing ISM® Report On Business®

Choose a Section

PMI® at 60.2

New Orders, Production, and Employment Growing

Supplier Deliveries Slowing at Faster Rate; Backlog Growing

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 June, and the **overall economy** grew for the 110th 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 June PMI® registered 60.2 percent, an increase of 1.5 percentage points from the May reading of 58.7 percent. The New Orders Index registered 63.5 percent, a

decrease of 0.2 percentage point from the May reading of 63.7 percent. The Production Index registered 62.3 percent, a 0.8 percentage point increase compared to the May reading of 61.5 percent. The Employment Index registered 56 percent, a decrease of 0.3 percentage point from the May reading of 56.3 percent. The Supplier Deliveries Index registered 68.2 percent, a 6.2 percentage point increase from the May reading of 62 percent. The Inventories Index registered 50.8 percent, an increase of 0.6 percentage point from the May reading of 50.2 percent. The Prices Index registered 76.8 percent in June, a 2.7 percentage point decrease from the May reading of 79.5 percent, indicating higher raw materials prices for the 28th consecutive month.

“Comments from the panel reflect continued expanding business strength. Demand remains strong, with the New Orders Index at 60 percent or above for the 14th straight month, and the Customers’ Inventories Index remaining low. The Backlog of Orders Index continued to expand, reading at 60 percent of higher for the third consecutive month. Consumption, described as production and employment, continues to expand in spite of labor, skill and material shortages. Inputs, expressed as supplier deliveries, inventories and imports, had expansion increases, due primarily to negative supply chain issues. Lead-time extensions, steel and aluminum disruptions, supplier labor issues, and transportation difficulties continue. Export orders expanded at higher rates. Price pressure remains strong, but the index saw its first expansion softening since November 2017. Demand remains robust, but the nation’s employment resources and supply chains continue to struggle. Respondents are overwhelmingly concerned about how tariff related activity is and will continue to affect their business,” says Fiore.

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

WHAT RESPONDENTS ARE SAYING

- “Business is strong in all regions. Materials are tight. Trucking continues to be a major challenge.” (Chemical Products)
- “Strong economic growth continues to put pressure/strain on capacity, lead time, availability and pricing across a broadening array of commodities and components.” (Computer & Electronic Products)
- “U.S. tariff policy and lack of predictability, along with [the] threat of trade wars, [is a] causing general business instability and [is] drag on growth for investments.” (Electrical Equipment, Appliances & Components)
- “Electronic component supply issues continue to disrupt production.” (Transportation Equipment)
- “We export to more than 100 countries. We are preparing to shift some customer responsibilities among manufacturing plants and business units due to trade issues (for example, we’ll shift production for China market from the U.S. to our Canadian plant to avoid higher tariffs). Within our company, there is a sense of uncertainty due to potential trade wars.” (Food, Beverage & Tobacco Products)
- “The Section 232 steel tariffs are now impacting domestic steel prices and capacity. Base steel prices have already increased 20 percent since March.” (Fabricated Metal Products)
- “Transportation costs are going through the roof right now, which definitely impacts the decisions we’re making with regard to quantities we’re bringing in versus truckload and LTL.” (Furniture & Related Products)
- “The economy and product demand still continue to be strong. Having trouble finding people [to fill] blue collar positions. Lead times for parts and materials are moving out, and we are seeing commodity cost pressures increases with the threat of tariffs. Additionally, suppliers are asking for more price increases.” (Machinery)
- “The uncertainty of U.S. tariffs and the Canada/Mexico/E.U. retaliatory tariffs continues to cloud strategic planning efforts. Contingency planning (for tariffs) is consuming large amounts of manpower that could be used for more productive projects. The tariffs are improving margins in our raw material businesses; however, our businesses which are further up the supply chain are seeing significant inflation.” (Miscellaneous Manufacturing)
- “The steel tariffs continue to drive uncertainty. Projects and services using steel have limited days that prices are good for. Trucking is tight, requiring advanced planning and increasing costs.” (Paper Products)

MANUFACTURING AT A GLANCE

JUNE 2018

Index	Series Index Jun	Series Index May	Percentage Point Change	Direction	Rate of Change	Trend* (Months)
PMI®	60.2	58.7	+1.5	Growing	Faster	22
New Orders	63.5	63.7	-0.2	Growing	Slower	30
Production	62.3	61.5	+0.8	Growing	Faster	22
Employment	56.0	56.3	-0.3	Growing	Slower	21
Supplier Deliveries	68.2	62.0	+6.2	Slowing	Faster	21
Inventories	50.8	50.2	+0.6	Growing	Faster	6
Customers' Inventories	39.7	39.6	+0.1	Too Low	Slower	21
Prices	76.8	79.5	-2.7	Increasing	Slower	28
Backlog of Orders	60.1	63.5	-3.4	Growing	Slower	17
New Export Orders	56.3	55.6	+0.7	Growing	Faster	28
Imports	59.0	54.1	+4.9	Growing	Faster	17
OVERALL ECONOMY				Growing	Faster	110
Manufacturing Sector				Growing	Faster	22

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**

Aluminum (20); Aluminum Based Products (2); Butadiene; Capacitors; Caustic Soda (12); Copper (8); Corrugate (21); Corrugated Boxes; Diesel; Freight (5); Hydraulic

Hoses/Fittings; Hydraulic Valves; Isopropyl Alcohol; Natural Gas; Nylon; Packaging Materials; Paper (2); Phosphoric Acid; Plastic Components; Plastic Resins; Polypropylene; Resistors (2); Rubber; Solvents; Steel — Cold Rolled; Steel — Galvanized; Steel — Hot Rolled (19); Steel — Stainless (3); Steel Based Products (2); Steel Tubing; and Wood Pallets.

Commodities Down in Price

None.

Commodities in Short Supply

Aluminum (2); Capacitors (12); Electrical Components (3); Electronic Components (2); Freight (2); Resistors (8); Steel Based Products (2); and Steel — Hot Rolled (3).

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

JUNE MANUFACTURING INDEX SUMMARIES

PMI®

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Manufacturing expanded in June as the PMI® registered 60.2 percent, an increase of 1.5 percentage points from the May reading of 58.7 percent. “This indicates strong growth in manufacturing for the 22nd consecutive month, led by continued expansion in new orders, production and employment. The PMI® reached its highest level since February 2018, when it reached 60.8 points. However, inventories continue to struggle to maintain expansion levels as a result of supplier deliveries slowing further,” 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 June PMI® indicates growth for the 110th consecutive month in the overall economy and the 22nd straight month of growth in the manufacturing sector. “The past relationship between the PMI® and the overall economy indicates that the PMI® for June (60.2 percent) corresponds to a 5.2 percent increase in real gross domestic product (GDP) on an annualized basis.”

THE LAST 12 MONTHS

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
Month	PMI®
Dec 2017	59.3
Nov 2017	58.2
Oct 2017	58.5
Sep 2017	60.2
Aug 2017	59.3
Jul 2017	56.5

Average for 12 months - 59.0

High - 60.8

Low - 56.5

NEW ORDERS

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ISM®'s New Orders Index registered 63.5 percent in June, which is a decrease of 0.2 percentage point when compared to the 63.7 percent reported for May, indicating growth in new orders for the 30th consecutive month. “New orders expansion continued at high levels, with the index at or above 60 percent for the 14th straight

month and the rolling three month average gaining 0.5 point. Customer inventories remain too low, and the Backlog of Orders Index is at 60 percent of higher for the third consecutive month,” 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).

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

New Orders	% Higher	% Same	% Lower	Net	Index
Jun 2018	39.7	53.0	7.3	+32.5	63.5
May 2018	37.5	56.3	6.2	+31.3	63.7
Apr 2018	42.4	49.5	8.1	+34.3	61.2
Mar 2018	43.3	48.0	8.6	+34.7	61.9

PRODUCTION

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ISM®’s Production Index registered 62.3 percent in June, which is an increase of 0.8 percentage point when compared to the 61.5 percent reported for May, indicating growth in production for the 22nd consecutive month. “Production expansion continues, with the index recording the second straight month of expansion growth at 60 percent or above. Labor constraints and, more significantly, supply chain disruptions continue to limit full production potential,” 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 16 industries reporting growth in production during the month of June — listed in order — are: Textile Mills; Furniture & Related Products; Nonmetallic Mineral

Products; Printing & Related Support Activities; Wood Products; Chemical Products; Electrical Equipment, Appliances & Components; Fabricated Metal Products; Food, Beverage & Tobacco Products; Primary Metals; Transportation Equipment; Computer & Electronic Products; Petroleum & Coal Products; Miscellaneous Manufacturing; Machinery; and Paper Products. The only industry reporting a decrease in production in June compared to May is Apparel, Leather & Allied Products.

Production	% Higher	% Same	% Lower	Net	Index
Jun 2018	38.7	51.0	10.3	+28.4	62.3
May 2018	35.8	55.2	8.9	+26.9	61.5
Apr 2018	33.6	58.5	8.0	+25.6	57.2
Mar 2018	36.1	55.7	8.2	+27.9	61.0

EMPLOYMENT

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ISM®'s Employment Index registered 56 percent in June, a decrease of 0.3 percentage point when compared to the May reading of 56.3 percent. This indicates growth in employment in June for the 21st consecutive month. "Employment maintained a modestly strong level of expansion and supported production growth during the month. Respondents noted labor market issues as a constraint to their production and their suppliers' production capacity," 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 13 reporting employment growth in June — listed in order — are: Textile Mills; Paper Products; Computer & Electronic Products; Transportation Equipment; Petroleum & Coal Products; Primary Metals; Machinery; Food, Beverage & Tobacco Products; Plastics & Rubber Products; Fabricated Metal Products; Nonmetallic Mineral Products; Miscellaneous Manufacturing; and Chemical Products. No industry reported a decrease in employment in June compared to May.

Employment	% Higher	% Same	% Lower	Net	Index
Jun 2018	29.0	59.6	11.3	+17.7	56.0

Employment	% Higher	% Same	% Lower	Net	Index
May 2018	27.6	61.2	11.3	+16.3	56.3
Apr 2018	23.1	66.8	10.2	+12.9	54.2
Mar 2018	22.9	66.3	10.8	+12.2	57.3

SUPPLIER DELIVERIES

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The delivery performance of suppliers to manufacturing organizations was markedly slower in June, as the Supplier Deliveries Index registered 68.2 percent. This is 6.2 percentage points higher than the 62 percent reported for May. “This is the 21st straight month of slowing supplier deliveries that continue to constrain production growth and inventory expansion. Lead-time extensions for production materials, transportation delays, and ongoing uncertainty in the steel and aluminum markets continue to restrict production output. The index recorded its highest reading since May 2004, when it reached 68.3 percent,” says Fiore. A reading below 50 percent indicates faster deliveries, while a reading above 50 percent indicates slower deliveries.

The 15 industries reporting slower supplier deliveries in June — listed in order — are: Wood Products; Textile Mills; Computer & Electronic Products; Fabricated Metal Products; Machinery; Apparel, Leather & Allied Products; Paper Products; Petroleum & Coal Products; Transportation Equipment; Food, Beverage & Tobacco Products; Miscellaneous Manufacturing; Electrical Equipment, Appliances & Components; Nonmetallic Mineral Products; Chemical Products; and Primary Metals. No industries reported faster supplier deliveries in June compared to May.

Supplier Deliveries	% Slower	% Same	% Faster	Net	Index
Jun 2018	38.7	58.9	2.4	+36.3	68.2
May 2018	29.9	65.7	4.4	+25.5	62.0
Apr 2018	25.6	71.3	3.2	+22.4	61.1
Mar 2018	28.4	65.9	5.7	+22.7	60.6

INVENTORIES*

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The Inventories Index registered 50.8 percent in June, which is an increase of 0.6 percentage point when compared to the 50.2 percent reported for May, indicating raw materials inventories grew in June. “Suppliers were not able to maintain desired inventory expansion levels consistent with production demands for the fourth straight month. Volatile supplier lead times and freight disruptions continue to impact inventory accounts,” 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 10 industries reporting higher inventories in June — listed in order — are: Apparel, Leather & Allied Products; Printing & Related Support Activities; Wood Products; Electrical Equipment, Appliances & Components; Nonmetallic Mineral Products; Food, Beverage & Tobacco Products; Paper Products; Miscellaneous Manufacturing; Primary Metals; and Machinery. The three industries reporting lower inventories in June are: Transportation Equipment; Chemical Products; and Computer & Electronic Products.

Inventories	% Higher	% Same	% Lower	Net	Index
Jun 2018	20.7	60.2	19.1	+1.6	50.8
May 2018	17.7	65.1	17.3	+0.4	50.2
Apr 2018	20.4	65.0	14.6	+5.8	52.9
Mar 2018	22.1	66.7	11.1	+11.0	55.5

CUSTOMERS' INVENTORIES*[arrow_drop_up_Top](#)

ISM®'s Customers' Inventories Index registered 39.7 percent in June, which is 0.1 percentage point higher than the 39.6 percent reported for May, indicating that customers' inventory levels were still considered too low in June. “Customers' inventory levels are too low for the 21st consecutive month, which continues to support an overall positive environment for production output growth in the near term,” says Fiore.

No manufacturing industries reported customers' inventories as too high during the month of June. The 14 industries reporting customers' inventories as too low during June — listed in order — are: Wood Products; Apparel, Leather & Allied Products; Plastics & Rubber Products; Petroleum & Coal Products; Nonmetallic Mineral Products; Electrical Equipment, Appliances & Components; Transportation Equipment; Machinery; Miscellaneous Manufacturing; Fabricated Metal Products; Computer & Electronic Products; Paper Products; Food, Beverage & Tobacco Products; and Chemical Products.

Customers' Inventories	% Reporting	% Too High	% About Right	% Too Low	Net	Index
Jun 2018	79	5.3	68.9	25.8	-20.6	39.7
May 2018	80	7.3	64.5	28.2	-20.9	39.6
Apr 2018	87	9.7	69.2	21.1	-11.4	44.3
Mar 2018	80	7.8	68.5	23.7	-16.0	42.0

PRICES*

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The ISM® Prices Index registered 76.8 percent in June, a decrease of 2.7 percentage points from the May level of 79.5 percent, indicating an increase in raw materials prices for the 28th consecutive month. In June, 56.9 percent of respondents reported paying higher prices, 3.3 percent reported paying lower prices, and 39.9 percent of supply executives reported paying the same prices as in May. “The price increases across all industry sectors continue. The Business Survey Committee noted price increases in metals (all steels, steel components, aluminum and copper), chemicals, corrugate, freight, electronic components, fuels, plastics and wood products. Shortages continue in aluminum, electronics components, steels, steel-based products, electrical components and freight,” 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.

All 18 industries reported paying increased prices for raw materials in June, in the following order: Apparel, Leather & Allied Products; Textile Mills; Printing & Related Support Activities; Fabricated Metal Products; Furniture & Related Products; Paper Products; Machinery; Chemical Products; Electrical Equipment, Appliances &

Components; Computer & Electronic Products; Nonmetallic Mineral Products; Primary Metals; Wood Products; Miscellaneous Manufacturing; Transportation Equipment; Food, Beverage & Tobacco Products; Petroleum & Coal Products; and Plastics & Rubber Products.

Prices	% Higher	% Same	% Lower	Net	Index
Jun 2018	56.9	39.9	3.3	+53.6	76.8
May 2018	62.2	34.7	3.1	+59.1	79.5
Apr 2018	61.2	36.2	2.6	+58.6	79.3
Mar 2018	57.1	42.1	0.8	+56.2	78.1

BACKLOG OF ORDERS*

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ISM's Backlog of Orders Index registered 60.1 percent in June, which is 3.4 percentage points lower than the 63.5 percent reported in May, indicating growth in order backlogs for the 17th consecutive month. "Backlog expansion continued during the period, as the index recorded the third straight month at over 60 percent. Strong backlog, extremely low levels of customer inventory and continued strong new order expansion indicate that production requirements should remain robust into Q3," says Fiore.

The 12 industries reporting growth in order backlogs in June — listed in order — are: Printing & Related Support Activities; Computer & Electronic Products; Textile Mills; Petroleum & Coal Products; Paper Products; Fabricated Metal Products; Transportation Equipment; Machinery; Primary Metals; Furniture & Related Products; Chemical Products; and Plastics & Rubber Products. The two industries reporting a decrease in order backlogs during June are: Apparel, Leather & Allied Products; and Food, Beverage & Tobacco Products.

Backlog of Orders*	% Reporting	% Higher	% Same	% Lower	Net	Index
Jun 2018	90	32.8	54.6	12.6	+20.2	60.1
May 2018	89	34.8	57.5	7.7	+27.1	63.5
Apr 2018	88	32.3	59.3	8.3	+24.0	62.0

Backlog of Orders*	% Reporting	% Higher	% Same	% Lower	Net	Index
Mar 2018	87	32.1	55.4	12.5	+19.7	59.8

NEW EXPORT ORDERS*

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ISM®'s New Export Orders Index registered 56.3 percent in June, an increase of 0.7 percentage point when compared to the 55.6 percent reported for May, indicating growth in new export orders for the 28th consecutive month. "All six big industry sectors continued to expand export activity during the period, in spite of comments related to reciprocal tariff activity," says Fiore.

The 10 industries reporting growth in new export orders in June — listed in order — are: Furniture & Related Products; Fabricated Metal Products; Chemical Products; Paper Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; Plastics & Rubber Products; Miscellaneous Manufacturing; Machinery; and Transportation Equipment. The two industries reporting a decrease in new export orders in June as compared to May are: Primary Metals; and Electrical Equipment, Appliances & Components. Six industries reported no change in new export orders in June compared to May.

New Export Orders*	% Reporting	% Higher	% Same	% Lower	Net	Index
Jun 2018	79	15.8	81.1	3.1	+12.6	56.3
May 2018	79	17.3	76.5	6.2	+11.2	55.6
Apr 2018	79	18.6	78.2	3.2	+15.4	57.7
Mar 2018	80	22.6	72.0	5.3	+17.3	58.7

IMPORTS*

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ISM®'s Imports Index registered 59 percent in June, an increase of 4.9 percentage points when compared to the 54.1 percent reported for May, indicating that imports grew in June for the 17th consecutive month. "Imports continued to expand to support

production demand. Several panelists commented that import pace has increased due to tariff-related concerns,” says Fiore.

The 14 industries reporting growth in imports during the month of June — listed in order — are: Printing & Related Support Activities; Nonmetallic Mineral Products; Electrical Equipment, Appliances & Components; Fabricated Metal Products; Computer & Electronic Products; Primary Metals; Miscellaneous Manufacturing; Petroleum & Coal Products; Furniture & Related Products; Chemical Products; Transportation Equipment; Food, Beverage & Tobacco Products; Plastics & Rubber Products; and Machinery. The only industry that reported a decrease in imports during June compared to May is Apparel, Leather & Allied Products.

Imports	% Reporting	% Higher	% Same	% Lower	Net	Index
Jun 2018	85	24.3	69.3	6.4	+17.9	59.0
May 2018	85	17.1	74.0	8.9	+8.2	54.1
Apr 2018	86	21.6	72.4	6.0	+15.6	57.8
Mar 2018	84	26.1	67.1	6.7	+19.4	59.7

*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

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Average commitment lead time for Capital Expenditures was unchanged in June at 143 days. Average lead time for Production Materials decreased by one day, to 69 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies decreased by two days, to 31 days.

Percent Reporting

Capital Expenditures	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days
Jun 2018	21	7	9	17	26	20	143
May 2018	19	6	10	19	27	19	143

Capital Expenditures	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days
Apr 2018	21	5	10	21	21	22	145
Mar 2018	22	5	12	15	29	17	139
Production Materials	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days
Jun 2018	11	33	29	16	7	4	69
May 2018	13	30	26	20	7	4	70
Apr 2018	10	35	28	17	7	3	67
Mar 2018	13	37	23	18	6	3	63
MRO Supplies	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days
Jun 2018	36	43	14	5	2	0	31
May 2018	32	44	16	7	1	0	33
Apr 2018	35	41	15	7	2	0	35
Mar 2018	39	37	17	4	3	0	34

ABOUT THIS REPORT

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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 June 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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