

PMI July 2020 Manufacturing ISM® Report On Business®

PMI® at 54.2%

July 2020 Manufacturing ISM® Report On Business®

**New Orders and Production Growing; Employment Contracting
Supplier Deliveries Slowing at Slower Rate; Backlog Growing
Raw Materials Inventories Contracting; Customers' Inventories Too Low
Prices Increasing; Exports and Imports Growing**

(Tempe, Arizona) — Economic activity in the **manufacturing sector grew in July**, with the **overall economy notching a third consecutive month of growth**, 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 July PMI® registered 54.2 percent, up 1.6 percentage points from the June reading of 52.6 percent. This figure indicates expansion in the **overall economy** for the third month in a row after a contraction in April, which ended a period of 131 consecutive months of growth. The New Orders Index registered 61.5 percent, an increase of 5.1 percentage points from the June reading of 56.4 percent. The Production Index registered 62.1 percent, up 4.8 percentage points compared to the June reading of 57.3 percent. The Backlog of Orders Index registered 51.8 percent, an increase of 6.5 percentage points compared to the June reading of 45.3 percent. The Employment Index registered 44.3 percent, an increase of 2.2 percentage points from the June reading of 42.1 percent. The Supplier Deliveries Index registered 55.8 percent, down 1.1 percentage points from the June figure of 56.9 percent.

“The Inventories Index registered 47 percent, 3.5 percentage points lower than the June reading of 50.5 percent. The Prices Index registered 53.2 percent, up 1.9 percentage points compared to the June reading of 51.3 percent. The New Export Orders Index registered 50.4 percent, an increase of 2.8 percentage points compared to the June reading of 47.6 percent. The Imports Index registered 53.1 percent, a 4.3-percentage point increase from the June reading of 48.8 percent.

“In July, manufacturing continued its recovery after the disruption caused by the coronavirus (COVID-19) pandemic. Panel sentiment was generally optimistic (two positive comments for every one cautious comment), continuing a trend from June. **Demand** expanded, with the (1) New Orders Index growing at a strong level, supported by the New Export Orders Index re-entering expansion; (2) Customers' Inventories Index remaining at a level considered a positive for future production, and (3) Backlog of Orders Index returning to expansion for the first time in five months. **Consumption** (measured by the Production and Employment indexes) contributed positively (a combined 7-percentage point increase) to the PMI® calculation, with industries continuing to expand output after May's return-to-work actions.

Inputs — expressed as supplier deliveries, inventories and imports — weakened for the third straight month, due to supplier delivery issues abating and import levels re-entering expansion. Inventory levels contracted due to strong production output, supplier delivery difficulties and inventory minimization. Inputs contributed negatively (a combined 4.6-percentage point decrease) to the PMI® calculation but were more than offset by the demand and consumption improvement, as was the case in June. (The

Supplier Deliveries and Inventories indexes directly factor into the PMI®; the Imports Index does not.) Prices remained in expansion, supporting a positive outlook.

“The growth cycle continues for the second straight month after three prior months of COVID-19 disruptions. Demand and consumption continued to drive expansion growth, with inputs remaining at parity with supply and demand. Among the six biggest industry sectors, Food, Beverage & Tobacco Products remains the best-performing industry sector, with Chemical Products, Computer & Electronic Products and Petroleum & Coal Products growing respectably. Transportation Equipment and Fabricated Metal Products continue to contract, but at soft levels,” says Fiore.

Of the 18 manufacturing industries, 13 reported growth in July, in the following order: Wood Products; Furniture & Related Products; Textile Mills; Printing & Related Support Activities; Food, Beverage & Tobacco Products; Plastics & Rubber Products; Chemical Products; Apparel, Leather & Allied Products; Computer & Electronic Products; Primary Metals; Petroleum & Coal Products; Miscellaneous Manufacturing; and Electrical Equipment, Appliances & Components. The three industries reporting contraction in July are: Transportation Equipment; Machinery; and Fabricated Metal Products.

WHAT RESPONDENTS ARE SAYING

- “Orders starting to pick up. [An] increase of about 35 percent to 40 percent.” (Chemical Products)
- “Overall business remains down almost 70 percent. We are hanging on to as many employees as possible, but we will have to lay off 30 percent or more for at least two to three months until September or October.” (Transportation Equipment)
- “While demand in [the] coming six months is stabilizing, it is at a significant reduction and clear [that] customers have little confidence in the forecasts. Export orders to Brazil, South Africa, [and the] Middle East are largely cancelled for balance of 2020.” (Fabricated Metal Products)
- “Manufacturing outlook has improved greatly in June, as business has resumed at nearly 100 percent. We have implemented a number of safeguards that are costing extra money, but we are running.” (Computer & Electronic Products)
- “Stabilizing demand for refrigerated and frozen beverage and dessert, but still at higher level than a year ago. Uncertainty of school opening in the fall: How much demand will continue or shift will be dictated by students returning to school or not.” (Food, Beverage & Tobacco Products)
- “Uncertainty regarding our industry and business has not improved. We are developing the 2021 budget around multiple scenarios.” (Petroleum & Coal Products)
- “Incoming orders are slow. This is usually our busiest time of the year, but production is reduced due to lack of demand. Additional layoffs expected.” (Furniture & Related Products)
- “General business climate continues to be subdued, driving highly conservative forecasting due to variability in the ongoing pandemic-driven conditions and economic response.” (Machinery)
- “We are still seeing our customers shut down or effected by COVID-19. We are hoping for a bounce back in September.” (Miscellaneous Manufacturing)

- “General business conditions are in a general slowing pattern. Many of the plants are on reduced hours and/or furloughs. About 20 percent to 25 percent of plants are scheduled to be consolidated in the next six months to improve margins and profitability.” (Nonmetallic Mineral Products)

**Manufacturing at a Glance
July 2020**

Index	Series Index Jul	Series Index Jun	Percentage Point Change	Direction	Rate of Change	Trend* (Months)
PMI®	54.2	52.6	+1.6	Growing	Faster	2
New Orders	61.5	56.4	+5.1	Growing	Faster	2
Production	62.1	57.3	+4.8	Growing	Faster	2
Employment	44.3	42.1	+2.2	Contracting	Slower	12
Supplier Deliveries	55.8	56.9	-1.1	Slowing	Slower	9
Inventories	47.0	50.5	-3.5	Contracting	From Growing	1
Customers' Inventories	41.6	44.6	-3.0	Too Low	Faster	46
Prices	53.2	51.3	+1.9	Increasing	Faster	2
Backlog of Orders	51.8	45.3	+6.5	Growing	From Contracting	1
New Export Orders	50.4	47.6	+2.8	Growing	From Contracting	1
Imports	53.1	48.8	+4.3	Growing	From Contracting	1
OVERALL ECONOMY				Growing	Faster	3
Manufacturing Sector				Growing	Faster	2

Manufacturing ISM® Report On Business® data is seasonally adjusted for the New Orders, Production, Employment and Inventories indexes.

***Number of months moving in current direction.**

COMMODITIES REPORTED UP/DOWN IN PRICE AND IN SHORT SUPPLY

Commodities Up in Price

Aluminum (2); Copper (2); Crude Oil (3); Diesel Fuel (2); High-Density Polyethylene; Lumber; Oil-Based Products; Plastic Products; Polypropylene; and Precious Metals.

Commodities Down in Price

Diesel Fuel (5); Steel — Hot Rolled; and Steel Products (4).

Commodities in Short Supply

Alcohols; Personal Protective Equipment (PPE) (3); PPE — Gloves (5); PPE — Masks; and Sanitizers & Disinfectants (2).

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

JULY 2020 MANUFACTURING INDEX SUMMARIES

PMI[®]

Manufacturing grew in July, as the PMI[®] registered 54.2 percent, 1.6 percentage points higher than the June reading of 52.6 percent. “The PMI[®] signaled a continued rebuilding of economic activity in July and reached its highest level of expansion since March 2019, when the index registered 54.6 percent. Four of the big six industry sectors expanded. The New Orders and Production indexes returned to strong expansion levels. The Supplier Deliveries Index remained at a more normal level of tension between supply and demand. Seven of the 10 subindexes registered expansion, up from five in June,” 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 42.8 percent, over a period of time, generally indicates an expansion of the overall economy. Therefore, the July PMI[®] indicates the overall economy grew in July for the third consecutive month following contraction in April. “The past relationship between the PMI[®] and the overall economy indicates that the PMI[®] for July (54.2 percent) corresponds to a 3.3-percent increase in real gross domestic product (GDP) on an annualized basis,” says Fiore.

THE LAST 12 MONTHS

Month **PMI[®]**

Jul 2020 54.2

Jun 2020 52.6

May 2020 43.1

Apr 2020 41.5

Mar 2020 49.1

Feb 2020 50.1

Month **PMI**
°

Jan 2020 50.9

Dec 2019 47.8

Nov 2019 48.1

Oct 2019 48.5

Sep 2019 48.2

Aug 2019 48.8

Average for 12 months - 48.6

High - 54.2

Low - 41.5

New Orders

ISM[®]'s New Orders Index registered 61.5 percent in July, an increase of 5.1 percentage points compared to the 56.4 percent reported in June. This indicates that new orders grew for the second consecutive month. "All of the top six industry sectors (Chemical Products; Food, Beverage & Tobacco Products; Fabricated Metal Products; Petroleum & Coal Products; Transportation Equipment and Computer & Electronic Products) expanded. Demand improved in July, as demonstrated by 13 industry sectors expanding and only two contracting. The index achieved its highest level of performance since September 2018 (61.8 percent)," says Fiore. A New Orders Index above 52.5 percent, over time, is generally consistent with an increase in the Census Bureau's series on manufacturing orders (in constant 2000 dollars).

Of the 18 manufacturing industries, the 13 that reported growth in new orders in July — in the following order — are: Wood Products; Furniture & Related Products; Primary Metals; Plastics & Rubber Products;

Chemical Products; Electrical Equipment, Appliances & Components; Food, Beverage & Tobacco Products; Fabricated Metal Products; Petroleum & Coal Products; Miscellaneous Manufacturing; Transportation Equipment; Computer & Electronic Products; and Machinery. The two industries reporting a decline in new orders in July are: Textile Mills; and Paper Products.

New Orders % Higher % Same % Lower Net Index

Jul 2020	41.1	40.0	18.8	+22.3	61.5
Jun 2020	37.3	38.9	23.9	+13.4	56.4
May 2020	21.2	26.0	52.9	-31.7	31.8
Apr 2020	17.7	22.7	59.7	-42.0	27.1

Production

The Production Index registered 62.1 percent in July, up 4.8 percentage points from 57.3 percent in June, indicating growth for the second consecutive month. “Five of the top six industries expanded strongly and none contracted, a marked improvement from June. The index achieved its highest level of performance since August 2018, when it registered 63.1 percent,” says Fiore. An index above 51.7 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 July — listed in order — are: Primary Metals; Wood Products; Textile Mills; Furniture & Related Products; Printing & Related Support Activities; Plastics & Rubber Products; Chemical Products; Electrical Equipment, Appliances & Components; Food, Beverage & Tobacco Products; Computer & Electronic Products; Nonmetallic Mineral Products; Fabricated Metal Products; Paper Products; Machinery; Transportation Equipment; and Miscellaneous Manufacturing. No industries reported a decrease in production in July.

Production % Higher % Same % Lower Net Index

Jul 2020	41.6	39.9	18.5	+23.1	62.1
Jun 2020	39.2	37.7	23.1	+16.1	57.3
May 2020	20.7	27.8	51.5	-30.8	33.2
Apr 2020	18.6	21.2	60.2	-41.6	27.5

Employment

ISM®’s Employment Index registered 44.3 percent in July, 2.2 percentage points higher than the June reading of 42.1 percent. “This is the 12th consecutive month of employment contraction, at a slower rate compared to June. Only one of the six big industry sectors experienced expansion, as factories were able to achieve significant gains in output with a reduced labor pool. Long-term labor market growth remains uncertain, but strong new-order levels and an expanding backlog signify potential strength for the rest of the third quarter,” 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 five industries to report employment growth in July are: Apparel, Leather & Allied Products; Printing & Related Support Activities; Furniture & Related Products; Plastics & Rubber Products; and Computer & Electronic Products. The 10 industries reporting a decrease in employment in July, in the following order, are: Transportation Equipment; Paper Products; Electrical Equipment, Appliances & Components; Primary Metals; Textile Mills; Petroleum & Coal Products; Chemical Products; Miscellaneous Manufacturing; Fabricated Metal Products; and Machinery.

Employment % Higher % Same % Lower Net Index

Jul 2020	15.3	59.9	24.7	-9.4	44.3
Jun 2020	14.6	58.8	26.6	-12.0	42.1
May 2020	7.6	51.2	41.1	-33.5	32.1
Apr 2020	2.8	50.7	46.6	-43.8	27.5

Supplier Deliveries*

The delivery performance of suppliers to manufacturing organizations was slower in July, as the Supplier Deliveries Index registered 55.8 percent. This is 1.1 percentage points lower than the 56.9 percent reported in June. “Suppliers continue to struggle to deliver, although at a slower rate compared to June. Plant interruptions, transportation challenges and continuing difficulties in supplier labor markets are still factors. The Supplier Delivery Index continues to reflect a healthier supply/demand balance compared to spring and early summer,” says Fiore. A reading below 50 percent indicates faster deliveries, while a reading above 50 percent indicates slower deliveries.

Twelve of 18 industries reported slower supplier deliveries in July, listed in the following order: Textile Mills; Petroleum & Coal Products; Nonmetallic Mineral Products; Wood Products; Miscellaneous Manufacturing; Furniture & Related Products; Paper Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; Machinery; Chemical Products; and Fabricated Metal Products. The two industries reporting faster supplier deliveries in July are: Primary Metals; and Electrical Equipment, Appliances & Components.

Supplier Deliveries % Slower % Same % Faster Net Index

Jul 2020	22.2	67.4	10.5	+11.7	55.8
Jun 2020	22.9	68.1	9.0	+13.9	56.9
May 2020	41.0	54.2	4.9	+36.1	68.0
Apr 2020	55.8	40.3	3.9	+51.9	76.0

Inventories

The Inventories Index registered 47 percent in July, 3.5 percentage points lower than the 50.5 percent reported for June. Inventories contracted after two consecutive months of expansion. “Inventory levels were impacted by increases in production output and restrained by continuing supplier difficulties. Panelists also indicated restraint in increasing inventories due to uncertainty in overall future market demand,” says Fiore. An Inventories Index greater than 44.3 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 three industries reporting higher inventories in July are: Food, Beverage & Tobacco Products; Paper Products; and Miscellaneous Manufacturing. The nine industries reporting a decrease in inventories in July — listed in order — are: Primary Metals; Nonmetallic Mineral Products; Fabricated Metal Products; Machinery; Plastics & Rubber Products; Electrical Equipment, Appliances & Components; Chemical Products; Computer & Electronic Products; and Transportation Equipment. Six industries reported no change in inventories in July compared to June.

Inventories % Higher % Same % Lower Net Index

Jul 2020	21.2	51.6	27.2	-6.0	47.0
Jun 2020	22.9	54.1	23.0	-0.1	50.5
May 2020	29.0	42.0	29.0	0.0	50.4
Apr 2020	31.7	37.2	31.2	+0.5	49.7

Customers' Inventories*

ISM[®]'s Customers' Inventories Index registered 41.6 percent in July, 3 percentage points lower than the 44.6 percent reported for June, indicating that customers' inventory levels were considered too low. “Customers' inventories are too low for the 46th consecutive month and moved further into ‘too low’ territory in July, a positive for future production,” says Fiore.

Of the 18 industries, the two reporting higher customers' inventories in July are: Petroleum & Coal Products; and Furniture & Related Products. The 13 industries reporting customers' inventories as too low during July — listed in order — are: Wood Products; Fabricated Metal Products; Paper Products; Plastics & Rubber Products; Primary Metals; Food, Beverage & Tobacco Products; Machinery; Textile Mills; Electrical Equipment, Appliances & Components; Nonmetallic Mineral Products; Chemical Products; Transportation Equipment; and Computer & Electronic Products.

Customers' Inventories % Reporting % Too High % About Right % Too Low Net Index

Jul 2020	74	12.6	58.0	29.4	-16.8	41.6
Jun 2020	74	15.4	58.4	26.1	-10.7	44.6
May 2020	75	21.8	48.7	29.5	-7.7	46.2
Apr 2020	73	21.7	54.2	24.1	-2.4	48.8

Prices*

The ISM® Prices Index registered 53.2 percent, 1.9 percentage points higher than the June reading of 51.3 percent, indicating raw materials prices increased for the second consecutive month. “Price increases were driven primarily by plastics, lumber, aluminum, copper and petroleum products. Price growth remains at a stable supplier/buyer relationship,” says Fiore. A Prices Index above 52.5 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) Producer Price Index for Intermediate Materials.

The 10 industries reporting paying increased prices for raw materials in July — listed in order — are: Textile Mills; Primary Metals; Wood Products; Plastics & Rubber Products; Paper Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; Chemical Products; Miscellaneous Manufacturing; and Machinery. The two industries reporting a decrease in prices for raw materials in July are: Transportation Equipment; and Fabricated Metal Products. Six industries reported no change in prices in July compared to June.

Prices	% Higher	% Same	% Lower	Net	Index
Jul 2020	22.7	61.2	16.2	+6.5	53.2
Jun 2020	18.5	65.6	15.9	+2.6	51.3
May 2020	13.9	53.8	32.3	-18.4	40.8
Apr 2020	10.0	50.6	39.4	-29.4	35.3

Backlog of Orders*

ISM®’s Backlog of Orders Index registered 51.8 percent in July, a 6.5-percentage point increase compared to the 45.3 percent reported in June, indicating order backlogs expanded after four consecutive months of contraction. “The return of backlog expansion is a positive for the future. Backlog expansion indicates that new-order intake was sufficient to offset production output and grow backlog during the period. Three of the six big industry sectors’ backlogs expanded, an improvement from June. The index achieved its highest level of expansion since April 2019 (53.9 percent),” says Fiore.

The 10 industries reporting growth in order backlogs in July, in the following order, are: Wood Products; Plastics & Rubber Products; Primary Metals; Nonmetallic Mineral Products; Paper Products; Fabricated Metal Products; Food, Beverage & Tobacco Products; Chemical Products; Machinery; and Electrical Equipment, Appliances & Components. In July, four industries reported lower backlogs: Textile Mills; Transportation Equipment; Computer & Electronic Products; and Miscellaneous Manufacturing.

Backlog of Orders	% Reporting	% Higher	% Same	% Lower	Net	Index
Jul 2020	87	20.3	63.0	16.7	+3.6	51.8
Jun 2020	89	19.4	51.9	28.7	-9.3	45.3
May 2020	91	18.2	40.1	41.8	-23.6	38.2

Backlog of Orders % Reporting % Higher % Same % Lower Net Index

Apr 2020	91	20.9	33.7	45.4	-24.5	37.8
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New Export Orders*

ISM[®]'s New Export Orders Index registered 50.4 percent in July, up 2.8 percentage points compared to the June reading of 47.6 percent. "The New Export Orders Index expanded modestly after four straight months of contraction, with two of the six big industry sectors expanding. New export orders were a positive factor to the growth in new orders," says Fiore.

The six industries reporting growth in new export orders in July — in the following order — are: Furniture & Related Products; Wood Products; Computer & Electronic Products; Plastics & Rubber Products; Chemical Products; and Miscellaneous Manufacturing. The four industries reporting a decrease in new export orders in July are: Nonmetallic Mineral Products; Fabricated Metal Products; Paper Products; and Machinery. Seven industries reported no change in new export orders in July compared to June.

New Export Orders % Reporting % Higher % Same % Lower Net Index

Jul 2020	74	14.8	71.4	13.9	+0.9	50.4
Jun 2020	75	13.8	67.7	18.5	-4.7	47.6
May 2020	77	14.3	50.6	35.2	-20.9	39.5
Apr 2020	79	12.0	46.5	41.5	-29.5	35.3

Imports*

ISM[®]'s Imports Index registered 53.1 percent in July, up 4.3 percentage points compared to the 48.8 percent reported for June. "Imports expanded after five consecutive months of contraction, reflecting increased U.S. demand. The index reached its highest level of expansion since February 2019, when it registered 55.3 percent," says Fiore.

The 11 industries reporting growth in imports in July — in the following order — are: Apparel, Leather & Allied Products; Printing & Related Support Activities; Wood Products; Textile Mills; Fabricated Metal Products; Furniture & Related Products; Plastics & Rubber Products; Chemical Products; Electrical Equipment, Appliances & Components; Machinery; and Food, Beverage & Tobacco Products. The two industries reporting a decrease in imports in July are: Primary Metals; and Miscellaneous Manufacturing.

Imports % Reporting % Higher % Same % Lower Net Index

Jul 2020	85	17.4	71.4	11.2	+6.2	53.1
Jun 2020	83	15.3	67.1	17.6	-2.3	48.8
May 2020	84	13.6	55.4	31.0	-17.4	41.3

Imports % Reporting % Higher % Same % Lower Net Index

Apr 2020	86	20.4	44.6	35.1	-14.7	42.7
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***The Supplier Deliveries, 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 by four days in July to 136 days. Average lead time for Production Materials increased by three days to 66 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies decreased by one day to 35 days.

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

Jul 2020	24	7	8	18	24	19	136
Jun 2020	25	7	9	17	24	18	132
May 2020	24	7	10	16	23	20	137
Apr 2020	26	6	11	17	20	20	133

Percent Reporting**Production Materials Hand-to-Mouth 30 Days 60 Days 90 Days 6 Months 1 Year + Average Days**

Jul 2020	10	35	25	20	8	2	66
Jun 2020	11	37	25	18	7	2	63
May 2020	12	34	28	15	9	2	65
Apr 2020	14	33	23	20	8	2	64

Percent Reporting**MRO Supplies Hand-to-Mouth 30 Days 60 Days 90 Days 6 Months 1 Year + Average Days**

Jul 2020	38	35	16	8	3	0	35
Jun 2020	38	37	15	7	2	1	36
May 2020	39	31	17	10	3	0	36
Apr 2020	39	32	14	10	4	1	40

About This Report

DO NOT CONFUSE THIS NATIONAL REPORT with the various regional purchasing reports released across the country. The national report's information reflects the entire U.S., while the regional reports contain primarily regional data from their local vicinities. Also, the information in the regional reports is not used in calculating the results of the national report. The information compiled in this report is for the month of July 2020.

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. According to the BEA estimates for 2018 GDP (released October 29, 2019), the six largest manufacturing sub-sectors are: Computer & Electronic Products; Chemical Products; Transportation Equipment Manufacturing; Food, Beverage & Tobacco Products; Petroleum & Coal Products; and Fabricated Metal Products. Beginning in February 2018 with January 2018 data, 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 Inventories) 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 42.8 percent, over a period of time, indicates that the overall economy, or gross domestic product (GDP), is generally expanding; below 42.8 percent, it is generally declining. The distance from 50 percent or 42.8 percent is indicative of the extent 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 report on information for the current month for U.S. operations only. 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 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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