

Manufacturing PMI[®] at 58.7%

December 2021 Manufacturing ISM[®] *Report On Business*[®]

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

(Tempe, Arizona) — Economic activity in the **manufacturing sector grew in December**, with the **overall economy achieving a 19th 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 December Manufacturing PMI[®] registered 58.7 percent, a decrease of 2.4 percentage points from the November reading of 61.1 percent. This figure indicates expansion in the overall economy for the 19th month in a row after a contraction in April 2020. The New Orders Index registered 60.4 percent, down 1.1 percentage points compared to the November reading of 61.5 percent. The Production Index registered 59.2 percent, a decrease of 2.3 percentage points compared to the November reading of 61.5 percent. The Prices Index registered 68.2 percent, down 14.2 percentage points compared to the November figure of 82.4 percent. The Backlog of Orders Index registered 62.8 percent, 0.9 percentage point higher than the November reading of 61.9 percent. The Employment Index registered 54.2 percent, 0.9 percentage point higher compared to the November reading of 53.3 percent. The Supplier Deliveries Index registered 64.9 percent, down 7.3 percentage points from the November figure of 72.2 percent. The Inventories Index registered 54.7 percent, 2.1 percentage points lower than the November reading of 56.8 percent. The New Export Orders Index registered 53.6 percent, a decrease of 0.4 percentage point compared to the November reading of 54 percent. The Imports Index registered 53.8 percent, a 1.2-percentage point increase from the November reading of 52.6 percent.”

Fiore continues, “The U.S. manufacturing sector remains in a demand-driven, supply chain-constrained environment, with indications of improvements in labor resources and supplier delivery performance. Shortages of critical lowest-tier materials, high commodity prices and difficulties in transporting products continue to plague reliable consumption. Coronavirus pandemic-related global issues — worker absenteeism,

short-term shutdowns due to parts shortages, employee turnover and overseas supply chain problems — continue to impact manufacturing. However, panel sentiment remains strongly optimistic, with six positive growth comments for every cautious comment, down slightly from November. ISM's *Semiannual Economic Forecast*, released in December, indicates a strong 2022 performance expectation in terms of revenue growth and profitability. **Demand** expanded, with the (1) New Orders Index growing, supported by continued expansion of new export orders, (2) Customers' Inventories Index remaining at a very low level and (3) Backlog of Orders Index staying at a very high level. **Consumption** (measured by the Production and Employment indexes) grew during the period, with a combined negative 1.4-percentage point change to the Manufacturing PMI[®] calculation. The Employment Index expanded for a fourth straight month, with some indications that ability to hire is improving, though somewhat offset by the continued challenges of turnover and backfilling. **Inputs** — expressed as supplier deliveries, inventories, and imports — continued to constrain production expansion, but there are clear signs of improved delivery performance. The Supplier Deliveries Index again slowed while the Inventories Index expanded, both at a slower rate. In December, the Prices Index increased for the 19th consecutive month, at a slower rate (a decrease of 14.2 percentage points), indicating that supplier pricing power continues to rise, but to a lesser degree.

“All of the six biggest manufacturing industries — Chemical Products; Fabricated Metal Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; Transportation Equipment; and Petroleum & Coal Products, in that order — registered moderate-to-strong growth in December.

“Manufacturing performed well for the 19th straight month, with demand and consumption registering month-over-month growth. Meeting demand will remain a challenge, due to hiring difficulties and a clear cycle of labor turnover at all tiers. For the second month in a row, Business Survey Committee panelists' comments suggest month-over-month improvement on hiring, offset by backfilling required to address employee turnover. Supplier delivery rate improvement was indicated by the Supplier Deliveries Index softening in December. Transportation networks, a harbinger of future supplier delivery performance, are still performing erratically; however, there are signs of improvement,” says Fiore.

The 15 manufacturing industries reporting growth in December — in the following order — are: Apparel, Leather & Allied Products; Furniture & Related Products; Textile Mills; Plastics & Rubber Products; Machinery; Nonmetallic Mineral Products; Miscellaneous Manufacturing; Chemical Products; Electrical Equipment, Appliances & Components; Fabricated Metal Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; Transportation Equipment; Primary Metals; and Petroleum & Coal Products. The three industries reporting a decrease in December compared to November are: Wood Products; Printing & Related Support Activities; and Paper Products.

WHAT RESPONDENTS ARE SAYING

- “Chemical supply chains are filling very slowly. Still not full, but (my) gut feeling says it’s getting easier to source chemical raw materials.” [Chemical Products]
- “Continued strong demand has our production facilities producing as many vehicles as we have materials for; however, capacity is limited due to the global chip shortage.” [Transportation Equipment]
- “Lowered oil prices due to (the) omicron variant has caused concern around production and capital spend in 2022.” [Petroleum & Coal Products]
- “Labor is still tight, and turnover continues. Supply chain issues are still causing customer order cuts. Trucks are scarce, and the teams are burned out from working long hours and dealing with supply constraints daily.” [Food, Beverage & Tobacco Products]
- “Price increases appear to be slowing. Lead times are shrinking slowly, and inventories are growing. I hope we have reached the top of the hill to start down a gentle slope that lets us get back to something that resembles normal.” [Fabricated Metal Products]
- “Business continues to be good, with strong incoming orders from customers. Continue to battle labor, material and transportation pressures.” [Furniture & Related Products]
- “Construction projects for 2022 and 2023 look very strong for us.” [Nonmetallic Mineral Products]
- “Costs for steel seem to be coming down some. We have seen a little relief on steel prices, but they are still very high. Overall performance by suppliers has improved. On-time deliveries have improved.” [Machinery]
- “Supply chain interruptions have dramatically increased in the fourth quarter. Many of our suppliers are unable to deliver product until January or February 2022 or later.” [Miscellaneous Manufacturing]
- “Very robust order activity. Backlog increased. Plastic raw material shortages impact orders.” [Plastics & Rubber Products]

Manufacturing at a Glance

December 2021

Index	Series Index Dec	Series Index Nov	Percentage Point Change	Direction	Rate of Change	Trend* (Months)
Manufacturing PMI[®]	58.7	61.1	-2.4	Growing	Slower	19
New Orders	60.4	61.5	-1.1	Growing	Slower	19
Production	59.2	61.5	-2.3	Growing	Slower	19
Employment	54.2	53.3	+0.9	Growing	Faster	4
Supplier Deliveries	64.9	72.2	-7.3	Slowing	Slower	70
Inventories	54.7	56.8	-2.1	Growing	Slower	5
Customers' Inventories	31.7	25.1	+6.6	Too Low	Slower	63
Prices	68.2	82.4	-14.2	Increasing	Slower	19
Backlog of Orders	62.8	61.9	+0.9	Growing	Faster	18
New Export Orders	53.6	54.0	-0.4	Growing	Slower	18
Imports	53.8	52.6	+1.2	Growing	Faster	2
OVERALL ECONOMY				Growing	Slower	19
Manufacturing Sector				Growing	Slower	19

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

Adhesives and Paint; Aluminum* (19); Capacitors; Corrugate (15); Corrugated Packaging (14); Diesel Fuel (12); Electrical Components (13); Electronic Components (13); Freight (14); Labor — Services; Labor — Temporary (8); Logistics Services; Lubricants; Lumber; Natural Gas* (6); Nylon (3); Ocean Freight (13); Packaging Supplies (13); Printed Circuit Boards (PCBs); Resin Based Products (11); Resistors; Rubber Based Products (5); Semiconductors (11); Silicone (2); Steel* (17); Steel — Galvanized; Steel — Stainless (14); and Steel Products* (16).

Commodities Down in Price

Aluminum* (2); Crude Oil; Ethylene; Natural Gas*; Polyethylene; Propylene; Steel* (2); and Steel — Hot Rolled (2).

Commodities in Short Supply

Aluminum (2); Copper Products; Electrical Cables; Electrical Components (15); Electronic Components (13); Labor — Temporary (8); Plastic Resins — Other (10); Rubber Based Products; Semiconductors (13); and Steel (13).

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

*Indicates those commodities both up and down in price.

DECEMBER 2021 MANUFACTURING INDEX SUMMARIES

MANUFACTURING PMI®

Manufacturing grew in December, as the Manufacturing PMI® registered 58.7 percent, 2.4 percentage points lower than the November reading of 61.1 percent. “The Manufacturing PMI® continued to indicate strong sector expansion and U.S. economic growth in December. All five subindexes that directly factor into the Manufacturing PMI® were in growth territory. All of the six biggest manufacturing industries expanded, in the following order: Chemical Products; Fabricated Metal Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; Transportation Equipment; and Petroleum & Coal Products. The New Orders and Production indexes remained at strong levels. The Supplier Deliveries Index softened but continued to reflect suppliers’ difficulties in maintaining delivery rates. All 10 of the subindexes were positive for the period; a reading of ‘too low’ for the Customers’ Inventories Index is considered a positive for future production,” 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 Manufacturing PMI® above 43.1 percent, over a period of time, generally indicates an expansion of the overall economy. Therefore, the December Manufacturing PMI® indicates the overall economy grew in December for the 19th consecutive month following contraction in April 2020. “The past relationship between the Manufacturing PMI® and the overall economy indicates that the Manufacturing PMI® for December (58.7 percent) corresponds to a 4.4-percent increase in real gross domestic product (GDP) on an annualized basis,” says Fiore.

THE LAST 12 MONTHS

Month	Manufacturing PMI®
Dec 2021	58.7
Nov 2021	61.1
Oct 2021	60.8
Sep 2021	61.1
Aug 2021	59.9

Month	Manufacturing PMI®
Jul 2021	59.5
Month	Manufacturing PMI®
Jun 2021	60.6
May 2021	61.2
Apr 2021	60.7
Mar 2021	64.7
Feb 2021	60.8
Jan 2021	58.7

Average for 12 months - 60.7
High - 64.7
Low - 58.7

NEW ORDERS

ISM®’s New Orders Index registered 60.4 percent in December, a decrease of 1.1 percentage points compared to the 61.5 percent reported in November. This indicates that new orders grew for the 19th consecutive month. “All of the six largest manufacturing sectors — Food, Beverage & Tobacco Products; Petroleum & Coal Products; Chemical Products; Fabricated Metal Products; Transportation Equipment; and Computer & Electronic Products, in that order — expanded at moderate-to-strong levels, up from just three the previous month,” says Fiore. A New Orders Index above 52.8 percent, over time, is generally consistent with an increase in the Census Bureau’s series on manufacturing orders (in constant 2000 dollars).

Thirteen of 18 manufacturing industries reported growth in new orders in December, in the following order: Textile Mills; Furniture & Related Products; Electrical Equipment, Appliances & Components; Food, Beverage & Tobacco Products; Miscellaneous Manufacturing; Petroleum & Coal Products; Primary Metals; Machinery; Chemical Products; Fabricated Metal Products; Transportation Equipment; Plastics & Rubber Products; and Computer & Electronic Products. The two industries reporting a decline in new orders in December are: Wood Products; and Paper Products.

New Orders	% Higher	% Same	% Lower	Net	Index
------------	----------	--------	---------	-----	-------

New Orders	% Higher	% Same	% Lower	Net	Index
Dec 2021	24.6	64.6	10.8	+13.8	60.4
Nov 2021	23.4	66.0	10.6	+12.8	61.5
Oct 2021	29.7	58.3	12.0	+17.7	59.8
Sep 2021	36.6	54.3	9.1	+27.5	66.7

PRODUCTION

The Production Index registered 59.2 percent in December, 2.3 percentage points lower than the November reading of 61.5 percent, indicating growth for the 19th consecutive month. “Four of the top six industries — Chemical Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; and Transportation Equipment — expanded at moderate-to-strong levels. Raw material and labor shortages remain a constraint to production growth, as suppliers continue to struggle. Panelist sentiment on labor and material shortages improved for a second month, albeit at a low level,” says Fiore. An index above 52.1 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: Furniture & Related Products; Plastics & Rubber Products; Textile Mills; Paper Products; Chemical Products; Machinery; Computer & Electronic Products; Food, Beverage & Tobacco Products; Transportation Equipment; and Miscellaneous Manufacturing. The four industries reporting a decrease in December are: Apparel, Leather & Allied Products; Wood Products; Fabricated Metal Products; and Primary Metals.

Production	% Higher	% Same	% Lower	Net	Index
Dec 2021	25.6	57.0	17.4	+8.2	59.2
Nov 2021	30.3	57.3	12.4	+17.9	61.5
Oct 2021	31.3	54.3	14.4	+16.9	59.3
Sep 2021	31.6	53.1	15.3	+16.3	59.4

EMPLOYMENT

ISM[®]'s Employment Index registered 54.2 percent in December, 0.9 percentage point above the November reading of 53.3 percent. “The index reported a fourth consecutive month of expansion. Of the six big manufacturing sectors, three (Fabricated Metal Products; Chemical Products; and Computer & Electronic Products) expanded. Survey panelists’ companies are still struggling to meet labor-management plans, but for a fourth month, there were modest signs of progress: A stable share of comments (7 percent in both December and November, compared to 5 percent in October) noted greater hiring ease. An overwhelming majority of panelists indicate their companies are hiring or attempting to hire, as 85 percent of Employment Index comments were hiring focused. Among those respondents, 37 percent expressed difficulty in filling positions, a decrease from November. A high level of comments regarding turnover rates (backfills and retirements) in December continued a trend that began in August,” says Fiore. An Employment Index above 50.6 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) data on manufacturing employment.

Of 18 manufacturing industries, eight industries reported employment growth in December, in the following order: Apparel, Leather & Allied Products; Nonmetallic Mineral Products; Electrical Equipment, Appliances & Components; Plastics & Rubber Products; Machinery; Fabricated Metal Products; Chemical Products; and Computer & Electronic Products. The five industries reporting a decrease in employment in December are: Textile Mills; Wood Products; Paper Products; Food, Beverage & Tobacco Products; and Miscellaneous Manufacturing.

Employment	% Higher	% Same	% Lower	Net	Index
Dec 2021	15.5	72.2	12.3	+3.2	54.2
Nov 2021	20.5	64.6	14.9	+5.6	53.3
Oct 2021	21.3	62.8	15.9	+5.4	52.0
Sep 2021	17.0	65.7	17.3	-0.3	50.2

SUPPLIER DELIVERIES*

The delivery performance of suppliers to manufacturing organizations was slower in December, as the Supplier Deliveries Index registered 64.9 percent, 7.3 percentage points lower than the 72.2 percent reported in November. Five of the six top manufacturing industries — Fabricated Metal Products; Food, Beverage & Tobacco Products; Computer & Electronic Products; Chemical Products; and Transportation Equipment — reported slowing deliveries. “Deliveries slowed at a slower rate compared to the previous month. The index continues to reflect suppliers’ difficulties in meeting panelist companies’ demand, but for the second straight month, supply chain performance is moving toward a more appropriate balance

with demand. Capital expenditure lead times continue at modern-era records. Production materials lead times registered a 5-percent improvement from the prior month but remain at near-record levels. The Supplier Deliveries Index, Prices Index and material lead times softening in November and December indicate progress against the supply/demand imbalance,” says Fiore. A reading below 50 percent indicates faster deliveries, while a reading above 50 percent indicates slower deliveries.

Fourteen of 18 industries reported slower supplier deliveries in December, in the following order: Apparel, Leather & Allied Products; Textile Mills; Nonmetallic Mineral Products; Furniture & Related Products; Miscellaneous Manufacturing; Paper Products; Plastics & Rubber Products; Fabricated Metal Products; Primary Metals; Food, Beverage & Tobacco Products; Machinery; Computer & Electronic Products; Chemical Products; and Transportation Equipment. The two industries reporting faster supplier deliveries in December as compared to November are: Wood Products; and Electrical Equipment, Appliances & Components.

Supplier Deliveries	% Slower	% Same	% Faster	Net	Index
Dec 2021	34.7	60.5	4.8	+29.7	64.9
Nov 2021	48.2	48.1	3.7	+44.5	72.2
Oct 2021	52.5	46.1	1.4	+51.1	75.6
Sep 2021	50.0	46.8	3.2	+46.8	73.4

INVENTORIES

The Inventories Index registered 54.7 percent in December, 2.1 percentage points lower than the 56.8 percent reported for November. “Manufacturing inventories continued to expand but at lower levels, as end-of-year working capital targets are likely a cause of softening in the index. Also, the index somewhat reflects an improved flow of raw materials to factories,” says Fiore. An Inventories Index greater than 44.5 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 December — in the following order — are: Apparel, Leather & Allied Products; Machinery; Miscellaneous Manufacturing; Chemical Products; Furniture & Related Products; Electrical Equipment, Appliances & Components; Fabricated Metal Products; Plastics & Rubber Products; Transportation Equipment; and Computer & Electronic Products. The four industries reporting a decrease in inventories in December are: Printing & Related Support Activities; Paper Products; Food, Beverage & Tobacco Products; and Primary Metals.

Inventories	% Higher	% Same	% Lower	Net	Index
Dec 2021	21.6	61.7	16.7	+4.9	54.7
Nov 2021	26.2	58.1	15.7	+10.5	56.8
Oct 2021	28.0	57.8	14.2	+13.8	57.0
Sep 2021	29.7	51.4	18.9	+10.8	55.6

CUSTOMERS' INVENTORIES*

ISM[®]'s Customers' Inventories Index registered 31.7 percent in December, 6.6 percentage points higher than the 25.1 percent reported for November, indicating that customers' inventory levels were considered too low. "Customers' inventories are too low for the 63rd consecutive month, a positive for future production growth. For 17 straight months, the Customers' Inventories Index has been at historically low levels," says Fiore.

No industries reported higher customers' inventories in December. The 14 industries reporting customers' inventories as too low during December — listed in order — are: Printing & Related Support Activities; Nonmetallic Mineral Products; Textile Mills; Paper Products; Fabricated Metal Products; Machinery; Electrical Equipment, Appliances & Components; Transportation Equipment; Miscellaneous Manufacturing; Computer & Electronic Products; Chemical Products; Wood Products; Furniture & Related Products; and Food, Beverage & Tobacco Products.

Customers' Inventories	% Reporting	% Too High	% About Right	% Too Low	Net	Index
Dec 2021	77	8.7	46.1	45.2	-36.5	31.7
Nov 2021	77	5.4	39.3	55.3	-49.9	25.1
Oct 2021	78	6.7	50.1	43.2	-36.5	31.7
Sep 2021	73	11.9	39.6	48.5	-36.6	31.7

PRICES*

The ISM[®] Prices Index registered 68.2 percent, a decrease of 14.2 percentage points compared to the November reading of 82.4 percent, indicating raw materials prices increased for the 19th consecutive month, at a slower rate in December. This is the 16th month in a row that the index has been

above 60 percent. “Aluminum; corrugate and packaging materials; electrical and electronic components; energy; lumber; freight; and some steels continue to remain at elevated prices due to product scarcity amongst high demand,” says Fiore. A Prices Index above 52.7 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) Producer Price Index for Intermediate Materials.

In December, 16 industries reported paying increased prices for raw materials, in the following order: Apparel, Leather & Allied Products; Textile Mills; Furniture & Related Products; Paper Products; Primary Metals; Miscellaneous Manufacturing; Machinery; Computer & Electronic Products; Chemical Products; Food, Beverage & Tobacco Products; Nonmetallic Mineral Products; Fabricated Metal Products; Transportation Equipment; Wood Products; Electrical Equipment, Appliances & Components; and Plastics & Rubber Products. Only one industry, Petroleum & Coal Products, reported paying decreased prices for raw materials.

Prices	% Higher	% Same	% Lower	Net	Index
Dec 2021	47.4	41.6	11.0	+36.4	68.2
Nov 2021	67.9	29.0	3.1	+64.8	82.4
Oct 2021	72.3	26.7	1.0	+71.3	85.7
Sep 2021	69.5	23.4	7.1	+62.4	81.2

BACKLOG OF ORDERS*

ISM[®]'s Backlog of Orders Index registered 62.8 percent in December, a 0.9-percentage point increase compared to the 61.9 percent reported in November, indicating order backlogs expanded for the 18th straight month. This is the 11th consecutive month with a reading above 60 percent. “Backlogs expanded at a slightly faster rate in December, indicating incoming business remains high. All six big industry sectors (Petroleum & Coal Products; Transportation Equipment; Fabricated Metal Products; Chemical Products; Food, Beverage & Tobacco Products; and Computer & Electronic Products, in that order), reported that backlogs expanded strongly,” says Fiore.

The 11 industries reporting growth in order backlogs in December, in the following order, are: Apparel, Leather & Allied Products; Textile Mills; Petroleum & Coal Products; Transportation Equipment; Machinery; Fabricated Metal Products; Chemical Products; Miscellaneous Manufacturing; Primary Metals; Food, Beverage & Tobacco Products; and Computer & Electronic Products. The only industry reporting lower backlogs in December is Furniture & Related Products. Six industries reported no change in backlogs of orders when comparing December's levels to November.

Backlog of Orders	% Reporting	% Higher	% Same	% Lower	Net	Index
Dec 2021	90	38.0	49.7	12.3	+25.7	62.8
Nov 2021	92	35.2	53.3	11.5	+23.7	61.9
Oct 2021	91	36.4	54.4	9.2	+27.2	63.6
Sep 2021	90	39.0	51.6	9.4	+29.6	64.8

NEW EXPORT ORDERS*

ISM[®]'s New Export Orders Index registered 53.6 percent in December, down 0.4 percentage point compared to the November reading of 54 percent. “The New Export Orders Index grew for the 18th consecutive month, at a slightly slower rate. Of the six big industry sectors, four (Food, Beverage & Tobacco Products; Computer & Electronic Products; Chemical Products; and Transportation Equipment) expanded. New export orders activity was a contributor to the New Orders Index continuing in strong expansion territory,” says Fiore.

The six industries reporting growth in new export orders in December — in the following order — are: Plastics & Rubber Products; Food, Beverage & Tobacco Products; Computer & Electronic Products; Miscellaneous Manufacturing; Chemical Products; and Transportation Equipment. The three industries reporting a decrease in new export orders in December are: Textile Mills; Paper Products; and Machinery. Seven industries reported no change in exports in December as compared to November.

New Export Orders	% Reporting	% Higher	% Same	% Lower	Net	Index
Dec 2021	75	10.8	85.5	3.7	+7.1	53.6
Nov 2021	76	11.3	85.5	3.2	+8.1	54.0
Oct 2021	75	12.7	83.9	3.4	+9.3	54.6
Sep 2021	75	14.1	78.6	7.3	+6.8	53.4

IMPORTS*

ISM[®]'s Imports Index registered 53.8 percent in December, an increase of 1.2 percentage points compared to November's figure of 52.6 percent. “Imports expanded in December for the second consecutive month, in spite of continuing challenges with throughput at U.S. ports of entry. Overland transport challenges and container shortages continue to persist across the global supply chain, causing instability with import-level projections. Imports will continue to be challenged through the first half of 2022,” says Fiore.

The six industries reporting growth in imports in December — in the following order — are: Furniture & Related Products; Petroleum & Coal Products; Computer & Electronic Products; Food, Beverage & Tobacco Products; Machinery; and Chemical Products. The five industries reporting a decrease in imports in December are: Nonmetallic Mineral Products; Fabricated Metal Products; Plastics & Rubber Products; Transportation Equipment; and Miscellaneous Manufacturing. Seven industries reported no change in imports in December as compared to November.

Imports	% Reporting	% Higher	% Same	% Lower	Net	Index
Dec 2021	83	17.9	71.8	10.3	+7.6	53.8
Nov 2021	87	14.1	77.0	8.9	+5.2	52.6
Oct 2021	86	12.5	73.3	14.2	-1.7	49.1
Sep 2021	87	20.0	69.8	10.2	+9.8	54.9

*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 in December was 161 days, an increase of one day compared to November. Capital Expenditures lead times have increased in 10 of the last 12 months for a net increase of 20 days since January 2021 (141 days). Average lead time in December for Production Materials decreased by five days to 91 days. Average lead time for Maintenance, Repair and Operating (MRO) Supplies was 48 days, up four days compared to November.

Percent Reporting

Capital Expenditures	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days
Dec 2021	21	3	11	11	29	25	161
Nov 2021	19	4	10	15	27	25	160
Oct 2021	19	5	9	15	29	23	156
Sep 2021	20	5	8	15	30	22	154

Percent Reporting

Production Materials	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days
Dec 2021	10	21	24	24	15	6	91
Nov 2021	10	21	22	26	13	8	96
Oct 2021	10	19	25	23	16	7	96
Sep 2021	10	20	29	22	11	8	92

Percent Reporting

MRO Supplies	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year +	Average Days
Dec 2021	26	34	21	14	4	1	48
Nov 2021	29	34	21	12	3	1	44
Oct 2021	25	35	20	14	5	1	49
Sep 2021	26	38	20	11	4	1	45

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 2021.

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 2019 GDP (released December 22, 2020), the six largest manufacturing subsectors 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 (Manufacturing 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 Manufacturing 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 Manufacturing PMI[®] reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50

percent indicates that it is generally declining. A Manufacturing PMI[®] above 43.1 percent, over a period of time, indicates that the overall economy, or gross domestic product (GDP), is generally expanding; below 43.1 percent, it is generally declining. The distance from 50 percent or 43.1 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

The Institute for Supply Management[®] ("ISM") *Report On Business[®]* (both Manufacturing and Non-Manufacturing) ("ISM ROB") contains information, text, files, images, video, sounds, musical works, works of authorship, applications, and any other materials or content (collectively, "Content") of ISM ("ISM ROB Content"). ISM ROB Content is protected by copyright, trademark, trade secret, and other laws, and as between you and ISM, ISM owns and retains all rights in the ISM ROB Content. ISM hereby grants you a limited, revocable, nonsublicensable license to access and display on your individual device the ISM ROB Content (excluding any software code) solely for your personal, non-commercial use. The ISM ROB Content shall also contain Content of users and other ISM licensors. Except as provided herein or as explicitly allowed in writing by ISM, you shall not copy, download, stream, capture, reproduce, duplicate, archive, upload, modify, translate, publish, broadcast, transmit, retransmit, distribute, perform, display, sell, or otherwise use any ISM ROB Content.

Except as explicitly and expressly permitted by ISM, you are strictly prohibited from creating works or materials (including but not limited to tables, charts, data streams, time series variables, fonts, icons, link buttons, wallpaper, desktop themes, online postcards, montages, mashups and similar videos, greeting cards, and unlicensed merchandise) that derive from or are based on the ISM ROB Content. This prohibition applies regardless of whether the derivative works or materials are sold, bartered, or given away. You shall not either directly or through the use of any device, software, internet site, web-based service, or other means remove, alter, bypass, avoid, interfere with, or circumvent any copyright, trademark, or other proprietary notices marked on the Content or any digital rights management mechanism, device, or other content protection or access control measure associated with the Content including geo-filtering mechanisms. Without prior written authorization from ISM, you shall not build a business utilizing the Content, whether or not for profit.

You shall not create, recreate, distribute, incorporate in other work, or advertise an index of any portion of the Content unless you receive prior written authorization from ISM. Requests for permission to reproduce or distribute ISM ROB Content can be made by contacting in writing at: ISM Research, Institute for Supply Management, 309 West Elliot Road, Suite 113, Tempe, Arizona 85284-1556, or by emailing kcahill@ismworld.org. Subject: Content Request.

ISM shall not have any liability, duty, or obligation for or relating to the ISM ROB Content or other information contained herein, any errors, inaccuracies, omissions or delays in providing any ISM ROB Content, or for any actions taken in reliance thereon. In no event shall ISM be liable for any special, incidental, or consequential damages, arising out of the use of the ISM ROB. *Report On Business*[®], PMI[®], and NMI[®] are registered trademarks of Institute for Supply Management[®]. Institute for Supply Management[®] and ISM[®] are registered trademarks of Institute for Supply Management, Inc.

About Institute for Supply Management[®]

Institute for Supply Management[®] (ISM[®]) serves supply management professionals in more than 90 countries. Its 50,000 members around the world manage about US\$1 trillion in corporate and government supply chain procurement annually. Founded in 1915 as the first supply management institute in the world, ISM is committed to advancing the practice of supply management to drive value and competitive advantage for its members, contributing to a prosperous and sustainable world. ISM leads the profession through the *ISM Report On Business*[®], its highly regarded certification programs and the ISM Advance[™] Digital Platform. This report has been issued by the association since 1931, except for a four-year interruption during World War II.

The full text version of the **Manufacturing ISM[®] Report On Business[®]** is posted on ISM[®]'s website at www.ismrob.org on the first business day* of every month after 10:00 a.m. ET.

The next **Manufacturing ISM[®] Report On Business[®]** featuring January 2022 data will be released at 10:00 a.m. ET on Tuesday, February 1, 2022.

*Unless the New York Stock Exchange is closed.