

Marquette ISM® Report on Manufacturing
December 2020- Revised

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The Marquette-ISM Report on Manufacturing was prepared by Owen Liebelt, a graduate student in Applied Economics at Marquette University, and distributed by Kelly Wesolowski, Associate Director of the Center for Supply Chain Management.

Please direct data questions and requests for media commentary to Manoj Babu.

This report should not be confused with the Report On Business®, PMI®, NMI®, published by the Institute of Supply Management® (ISM®). While a reasonable attempt has been made to remain consistent with the national report, the contents of this report reflect only information pertinent to the southeast Wisconsin and northern Illinois region. This report is not used in the calculation of the national report.

Summary

Milwaukee-area PMI	December 2020	November 2020	October 2020
Seasonally adjusted	56.87	61.96	59.42

(Milwaukee, Wisconsin) – December Index registered at 56.87, a decrease from 61.96 in November. December's index still indicates positive territory.

What respondents are saying in December 2020:

- Raw materials pricing - One supplier quoting 24 Hour pricing.
- One supplier had a boat in queue for 20 day to get unloaded - delaying parts arrival. Suppliers are seeing lead times extending at year end.
- The shortage of containers from Asia is having a big impact on us getting material from offshore suppliers.
- Extended lead times on raw materials and pricing pressure on raw materials - specifically steel and plastics
- Bottle neck issues in the supply chain process due to shipping dock delays caused by container shortages, manpower, etc.

Important: See explanatory notes on the survey and diffusion index at the end of this report.

MANUFACTURING AT A GLANCE: December 2020*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Dec-20	Nov-20		
PMI	56.87	61.96	-5.1	growing
New Orders	68.16	77.08	-8.9	growing
Production	44.90	53.75	-8.8	declining
Employment	49.98	53.26	-3.3	declining
Supplier Deliveries	91.48	77.88	13.6	declining
Inventories	29.84	47.84	-18.0	declining
Customers' Inventories *	33.33	25.00	8.3	declining
Prices *	80.95	72.22	8.7	growing
Backlog of Orders *	57.50	69.44	-11.9	growing
Exports *	72.73	68.18	4.5	growing
Imports *	57.69	62.50	-4.8	growing

(*) The indices are seasonally adjusted *except for* the Customers' Inventories, Prices, Backlog of Orders, Exports, and Imports Indexes, which do not meet the accepted criteria for seasonal adjustments.

What respondents are saying in December 2020:

- PPE (gloves specifically) are in very tight supply, and prices have almost doubled since the start of the Pandemic.
- Order rates remain very, very strong. Steel shortages are beginning to impact us on a daily basis, which could cause economic recovery to falter.

Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **December 2020, November 2020, and October 2020.**

	Diffusion Index Dec-20	Diffusion Index Nov-20	Diffusion Index Oct-20	Direction	Comments
Blue Collar	50.5	56.1	54.1	growing	-
White Collar	41.7	47.7	43.3	declining	-

Note: These have been calculated based on the seasonally adjusted (SA) Blue and White Collar indices.

What respondents are saying in December 2020:

- COVID continues to be a challenge, especially surrounding the holidays with individuals being sick – causing delays and labor issues
- We expect to see things get a little worse with labor as we round out the holidays

Buying Policy

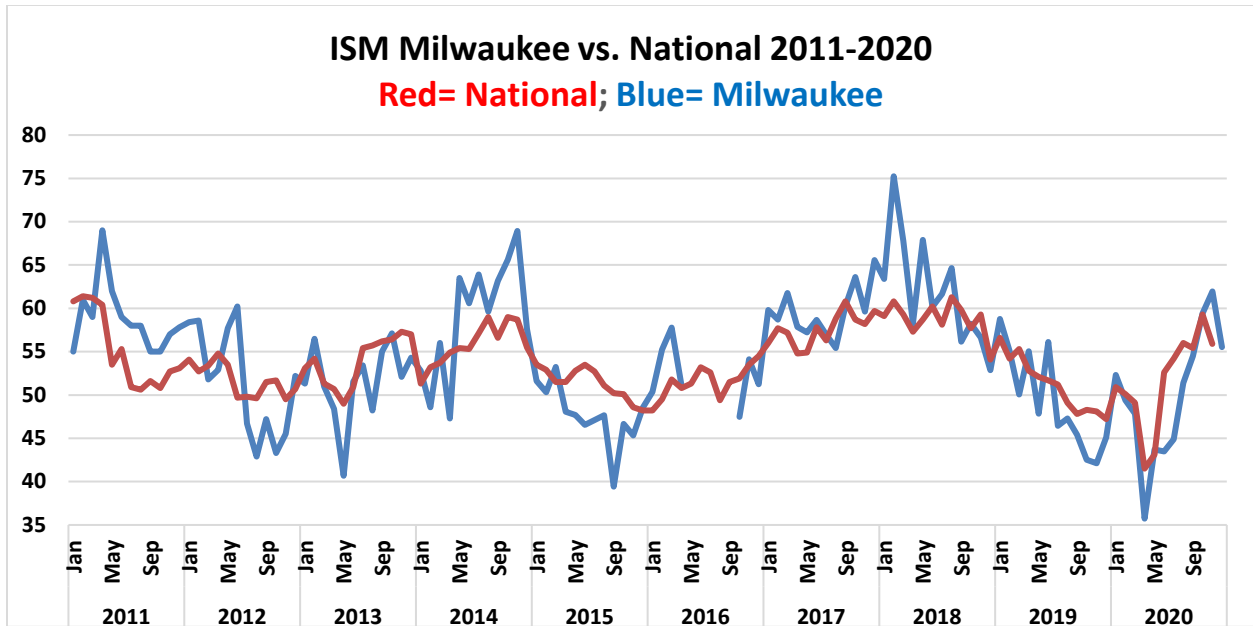
Average commitment lead-time for Capital Expenditures increased from 93 to 110 days. Average lead-time for Production Materials decreased from 52 to 51 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies decreased from 25 to 19 days.

Six- Month Outlook on Business Conditions

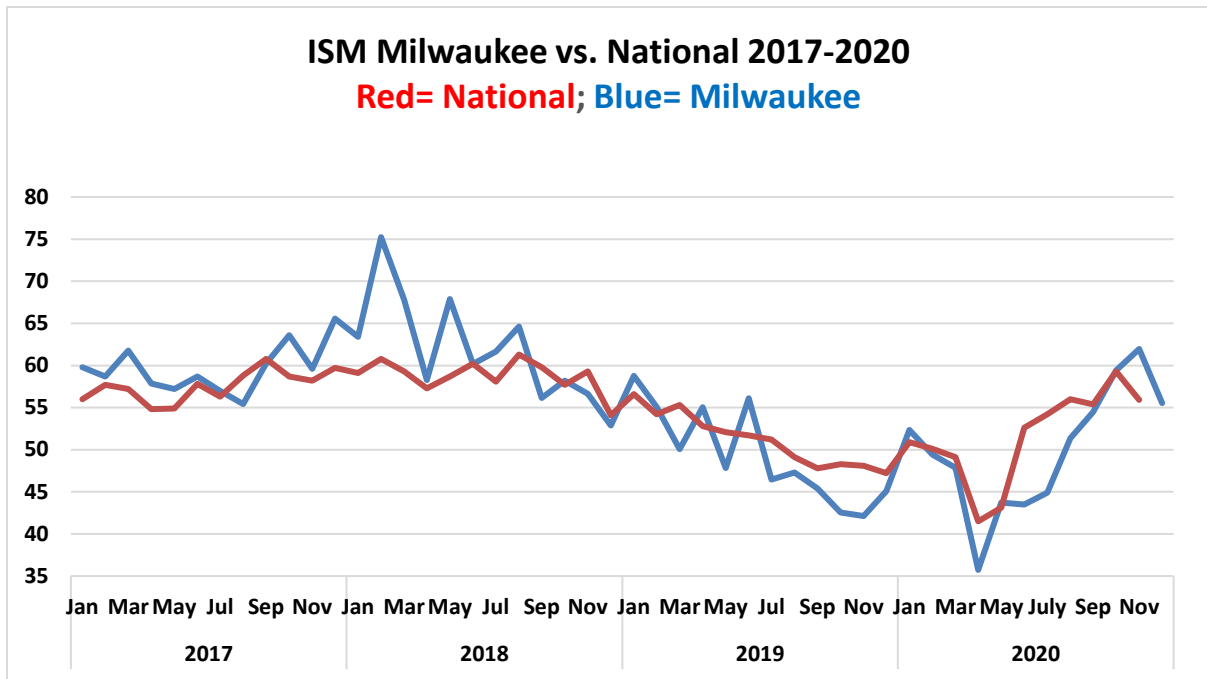
In this outlook, there is an upward shift in positive expectations compared with November and October in terms of market conditions. Approximately 50% of respondents expect positive conditions, 36% expect conditions to remain the same and 14% of the respondents expect conditions to worsen within the next six months.

	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Dec-20	50.00%	36.36%	13.64%	68.18%
Nov-20	38.89%	44.44%	16.67%	61.11%
Oct-20	50.00%	35.71%	14.29%	67.86%

**Milwaukee versus the Nation –
January 2011 – December 2020 Graph**



January 2017 – December 2020 Graph



Insights on the ISM® PMI® from Institute for Supply Management®:

ISM® Manufacturing Report On Business® Background

In February 1982, the PMI® was developed by the U.S. Department of Commerce (DOC) and ISM. The index, based on analytical work by the DOC, adjusts five components of the Institute's monthly survey — new orders, production, employment, supplier deliveries and inventories — for normal seasonal variations, applies equal weights to each and then calculates them into a single monthly index number.

An update of research originally done by Theodore S. Torda, the late economist for the DOC, shows a close parallel between growth in real Gross Domestic Product (GDP) and the PMI®. The index can explain about 60 percent of the annual variation in GDP, with a margin of error that averaged $\pm .48$ percent during the last ten years. George McKittrick, an economist at the DOC, said "Not only does the PMI® track well with the overall economy, but the indication provided by ISM data about how widespread changes are, complements analogous government series that show size and direction of change."

In January 1989, the Supplier Deliveries Index from the Report became a standard element of the DOC's Bureau of Economic Analysis Index of Leading Economic Indicators. The data was incorporated into the index from June 1976 forward. In January 1996, The Conference Board began compiling this index.

What Is a Diffusion Index?

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change. The percent response to the "Better," "Same" or "Worse" question is difficult to compare to prior periods. Therefore, the percentages are "diffused" for this purpose. A diffusion index takes those indicating "Better" and half of those indicating "Same" and adds the percentages. This effectively measures the bias toward a positive (above 50 percent) or negative index (below 50 percent). For example, if the response is 20 percent "Better," 70 percent "Same," and 10 percent "Worse," then the diffusion index would be 55 percent ($20\% + [0.50 \times 70\%]$). The data for each question is converted to a diffusion index and then seasonally adjusted.

For each index, a reading above 50 percent indicates expansion of an index, while a reading below 50 percent indicates it is generally declining. And a reading of 50 percent indicates "no change" from the previous month. Supplier Deliveries is an exception. A Supplier Deliveries Index above 50 percent indicates slower deliveries, and below 50 percent indicates faster deliveries.