

Marquette ISM® Report on Manufacturing
February 2021- Revised

Contact: Dr. Manoj Babu
Director, Center for Supply Chain Management
Marquette University
(414) 288-6587
Manoj.Babu@marquette.edu

Released: February 26th, 2021

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 Dr. 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	February 2021	January 2021	December 2020
Seasonally adjusted	61.07	*	56.87

(Milwaukee, Wisconsin) – February Index registered at 61.07, an increase from 56.87 in December. February's index indicates positive territory.

**(N/A): This observation has been omitted due to insufficient sample size (surveys returned)*

What respondents are saying in February 2021:

- Some normally inventoried items are at full lead times, while expedited fees are stacking up with freight delays
- There appears to be congestion at port(s), as well as hiccups and issues along the rest of the supply chain
- Quoting products heavily, expecting more orders and ordering more soon
- There is a drastic shortage of raw materials creating production flow stops and resulting work in process (WIP) inventory

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

MANUFACTURING AT A GLANCE: February 2021*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Feb-21	Dec-20		
PMI	61.07	56.87	4.2	growing
New Orders	66.67	68.16	-1.5	growing
Production	65.66	44.90	20.8	growing
Employment	50.92	49.98	0.9	growing
Supplier Deliveries	88.27	91.48	-3.2	declining
Inventories	33.85	29.84	4.0	declining
Customers' Inventories *	20.59	33.33	-12.7	declining
Prices *	85.00	80.95	4.0	growing
Backlog of Orders *	68.42	57.50	10.9	growing
Exports *	57.69	72.73	-15.0	growing
Imports *	53.57	57.69	-4.1	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.

In this index we are observing the calculations from December of 2020 to February of 2021. January was omitted due to insufficient sample selection (survey responses)

What respondents are saying in February 2021:

- The backlog is increasing through the supply chain – more people need to be hired and trained – orders are only going to continue to increase
- JIT (Amazon Effect), no matter what the quantity
- Demand is more than mills can produce
- Appears to have turned the corner – many consumers are looking to order in late Q1
- Lead times are increasing for raw materials creating a shortage in finished goods resulting in missed deliveries and price increases
- Labor needs proportionately increasing with production costs
- Work expectations show a positive direction with post pandemic measures and hiring practices.

Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for February 2021, January 2021, and December 2020.

	Diffusion Index Feb-21	Diffusion Index Jan-21	Diffusion Index Dec-20	Direction	Comments
Blue Collar	53.5	*	50.5	growing	-
White Collar	45.8	*	41.7	declining	-

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

*(N/A): This observation has been omitted due to insufficient sample size (surveys returned)

What respondents are saying in February 2021:

- Capital Expenditures: Some lead times appear to be up to 6 months out
- Production Materials: Some items are pushing 80-day lead times – we have several supplier agreements that are being tested due to constraints at the manufacturing level
- Quoting is up, lead times are up – we need to hire but costs are skyrocketing

Buying Policy

This section was removed entirely as we are unable to accurately interpret this data without the data from the month of January, the raw data for this section is below:

Lead Times

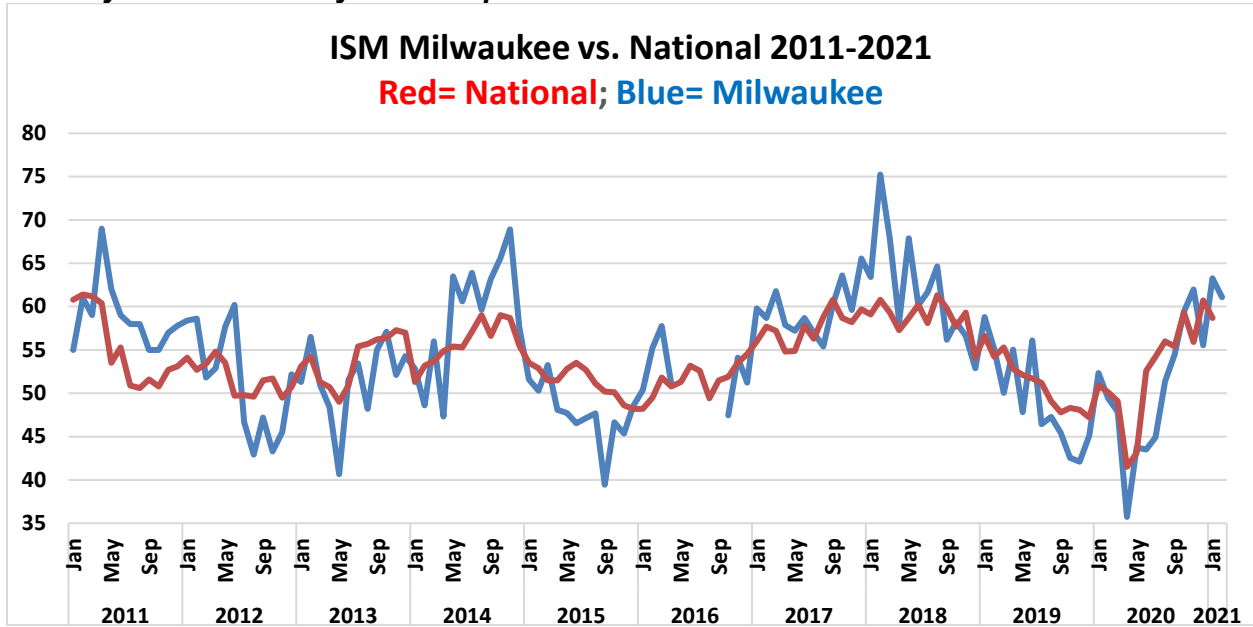
- **Capital Expenditures:** 128 days
- **Production Materials:** 48 days
- **Maintenance, Repair, and Operating (MRO):** 32 days

Six- Month Outlook on Business Conditions

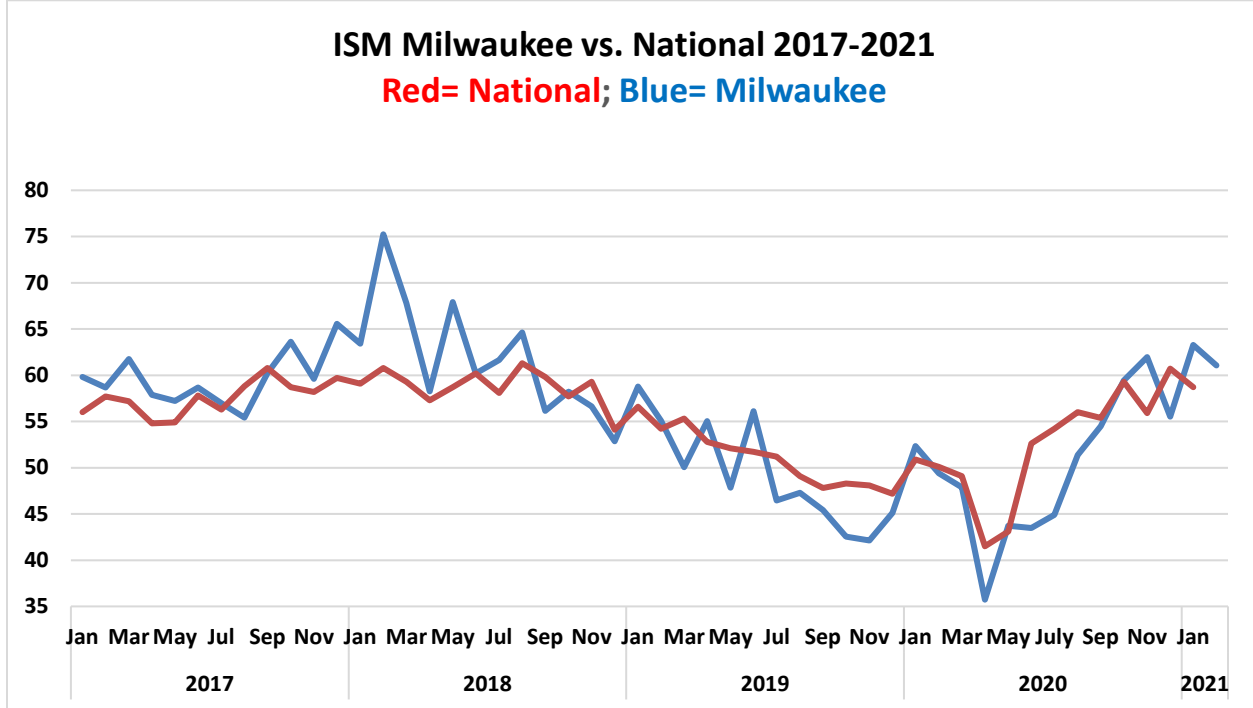
In this outlook, there is a downward shift in negative expectations compared with December and November in terms of market conditions. Approximately 40% of respondents expect positive conditions, 50% expect conditions to remain the same and 10% of the respondents expect conditions to worsen within the next six months.

	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
21-Feb	40.00%	50.00%	10.00%	65.00%
20-Dec	50.00%	36.36%	13.64%	68.18%
20-Nov	38.89%	44.44%	16.67%	61.11%

**Milwaukee versus the Nation –
January 2011 – February 2021 Graph**



January 2017 – February 2021 Graph



Please note that these graphs do contain our estimate of the PMI to continue with this time trend 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.

<https://www.ismworld.org/supply-management-news-and-reports/reports/ism-report-on-business/>