

Marquette ISM® Report on Manufacturing  
April 2020- Early Release

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*The Marquette-ISM Report on Manufacturing was prepared by **Katie Ozanich**, 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 Bill Lee.*

*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	April 2020	March 2020	February 2020
Seasonally adjusted	35.73	47.86	49.41

(Milwaukee, Wisconsin) – April’s Index registered at 35.73, a decrease from 47.86 in March. April’s index indicates negative territory.

**What respondents are saying in April 2020:**

- COVID-19 and shutdowns has caused business to slow
- Customer demand has decreased by over 35% and do not expect to recover until fall
- COVID-19 has caused great challenges to the supply chain
- The closing of iron ore mines is leading to a large loss in summer sales
- COVID-19 has caused food manufacturing sales to skyrocket, but is also causing stress on the supply chain and employees
- Many customers are deferring forecasts which will lead to a future gap in business

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

MANUFACTURING AT A GLANCE: April 2020*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Apr-20	Mar-20		
PMI	35.73	47.86	-12.1	declining
New Orders	25.88	44.00	-18.1	declining
Production	22.84	41.11	-18.3	declining
Employment	24.68	41.95	-17.3	declining
Supplier Deliveries	71.93	67.23	4.7	slower
Inventories	33.33	45.00	-11.7	declining
Customers' Inventories *	46.43	37.50	8.9	declining
Prices *	52.78	52.50	0.3	growing
Backlog of Orders *	34.38	50.00	-15.6	declining
Exports *	18.75	29.17	-10.4	declining
Imports *	50.00	31.82	18.2	neutral

(\* ) 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 April 2020:

- COVID-19 has led to increased demand in some products but lower demand in others
- Reduced capacity due to coronavirus
- All new orders are for small machine parts; there has been a drop in large capital machine orders
- No longer producing stock products for inventory
- Global government shutdowns and freight issues have affected supplier deliveries
- Reduced lead times due to fewer customers being open
- Imported components are delayed 3 to 4 weeks
- Increase in Research and Development projects

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for April 2020, March 2020, and February 2020.

	Diffusion Index Apr-20	Diffusion Index Mar-20	Diffusion Index Feb-20	Direction	Comments
Blue Collar	32.9	41.6	43.2	declining	-
White Collar	30.2	44.2	43.6	declining	-

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

## What respondents are saying in April 2020:

- Small Business Administration programs are helping to maintain employment levels
- Working from home implemented for all white-collar employees
- Shifted manufacturing to one first shift, closed second shift, and furloughed employees
- Reduced inventory and alternated shifts
- Cancelled overtime due to COVID-19

## Buying Policy

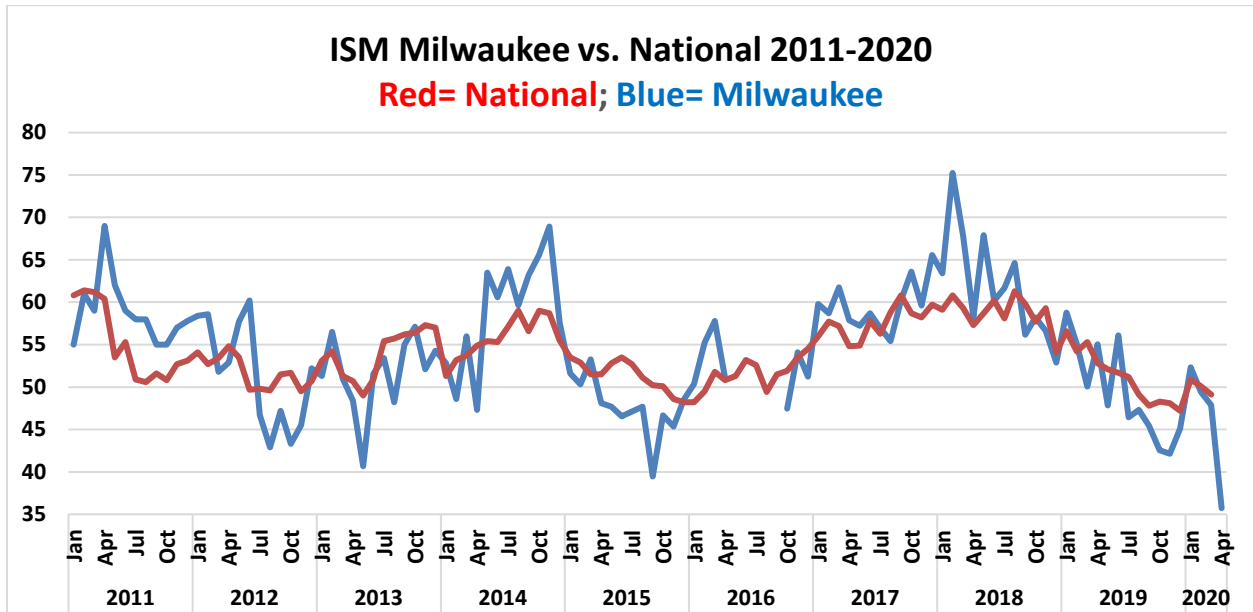
Average commitment lead-time for Capital Expenditures decreased from 116 to 104 days. Average lead-time for Production Materials decreased from 53 to 47 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies increased from 18 to 23 days.

## Six- Month Outlook on Business Conditions

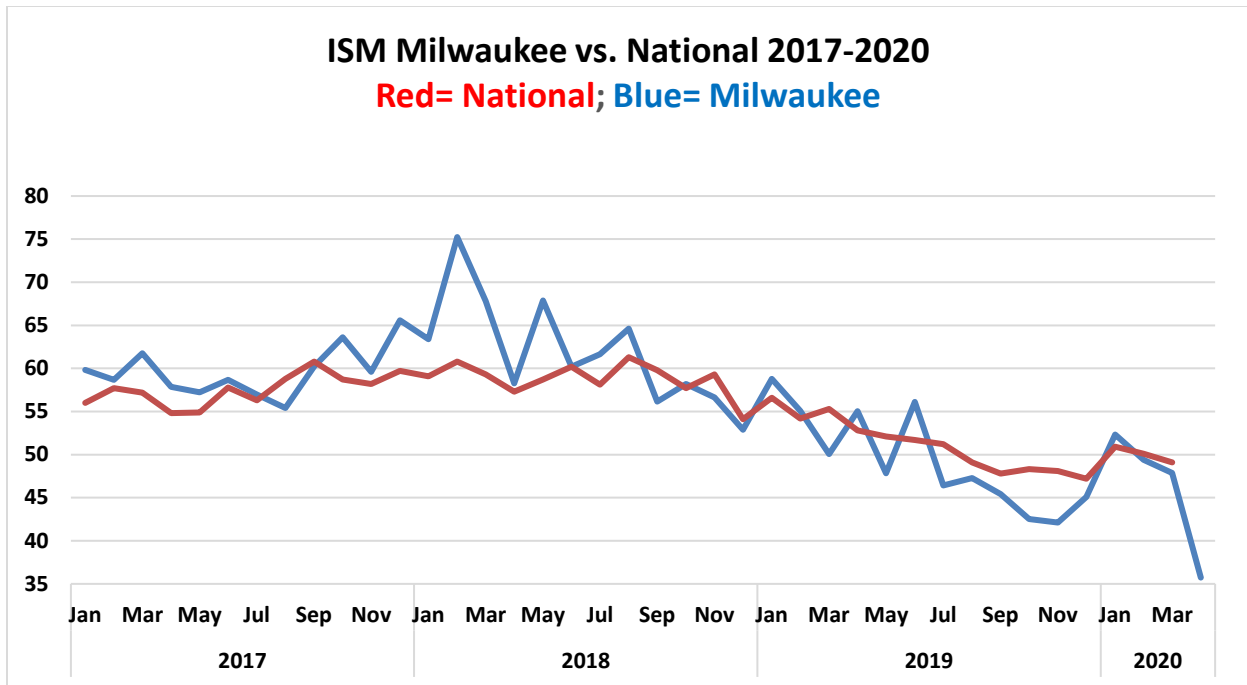
In this outlook, there is a slight upward shift in positive expectations compared with March in terms of market conditions. Approximately 24% of respondents expect positive conditions, 29% expect conditions to remain the same and 47% of the respondents expect conditions to worsen within the next six months.

	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Apr-20	23.53%	29.41%	47.06%	38.24%
Mar-20	22.22%	44.44%	33.33%	44.44%
Feb-20	41.18%	41.18%	17.65%	61.76%

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



**January 2017 – April 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.**

<https://www.instituteforsupplymanagement.org/files/ISMREPORT/ROBBroch08.pdf>