

**Marquette-ISM Report on Manufacturing  
November 2018- Early Release**

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*The Marquette-ISM Report on Manufacturing was prepared by **Gwendolyn Davis**, a graduate student in Applied Economics at Marquette University, and distributed by **Melanie Roepke**, Associate Director of the Center for Supply Chain Management.*

*Please direct data questions and requests for media commentary to Dr. Fisher.*

*This report should not be confused with the ISM National Report published by the Institute of Supply Management. 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	November 2018	October 2018	September 2018
Seasonally adjusted	56.63	58.21	56.16

(Milwaukee, Wisconsin) – November's Index registered at 56.63, an increase from 58.21 in October. November's Index continues to indicate positive territory.

**What respondents are saying in November 2018:**

- Advancing inflationary conditions and significant price increases
- Growth projections for 2019 have been reversed
- Prices rising due to equipment shortages
- Supplier capacity constrains led to more aggressive pricing

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

(\*) 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.

MANUFACTURING AT A GLANCE: November 2018*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Nov-18	Oct-18		
PMI	56.63	58.21	-1.6	growing
New Orders	35.39	52.69	-17.3	declining
Production	51.28	47.77	3.5	growing
Employment	64.63	50.66	14.0	growing
Supplier Deliveries	75.21	73.26	2.0	slower
Inventories	56.67	66.67	-10.0	growing
Customers' Inventories *	30.77	37.50	-6.7	declining
Prices *	83.33	80.00	3.3	growing
Backlog of Orders *	46.15	50.00	-3.8	declining
Exports *	50.00	31.25	18.8	neutral
Imports *	72.22	62.50	9.7	growing

#### What respondents are saying in November 2018:

- Customers overbought in response to tariffs
- Cost constraints have been a challenge with electronic components
- Reductions in plastic production are causing backorders and higher prices
- Insufficient plastic material inventories will drive the development of new technologies

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **September 2018, October 2018, and November 2018.**

	Diffusion Index Sep-18	Diffusion Index Oct-18	Diffusion Index Nov-18	Direction	Comments
Blue Collar	54.3	50.7	61.2	growing	-
White Collar	54.3	47.3	57.8	declining	-

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

## What respondents are saying in November 2018:

- Prices are escalating due to driver shortages
- Premium charges on trucking
- Customers not confident in 2019 forecasts and reducing plans

## Buying Policy

Average commitment lead-time for Capital Expenditures increased from 82 days to 137 days. Average lead-time for Production Materials decreased from 53 days to 49 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies increased from 24 days to 25 days.

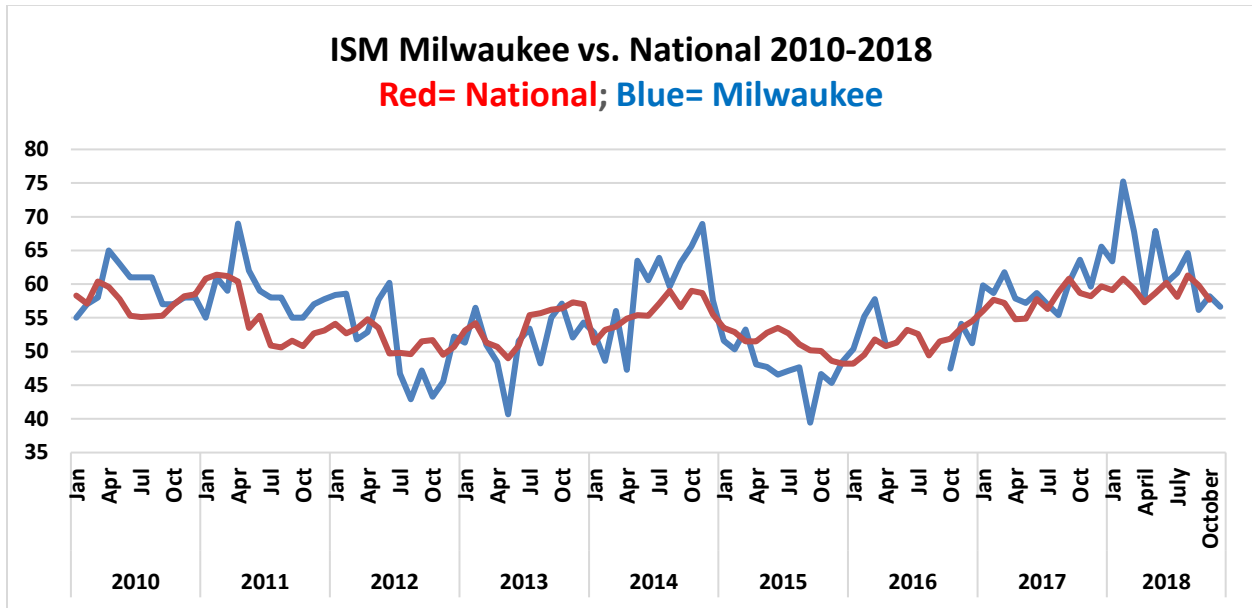
## Six- Month Outlook on Business Conditions

In this outlook, there is an upward shift in positive expectations compared with October in terms of market conditions. Approximately 36% of respondents expect positive conditions, 29% expect conditions to remain the same and 36% of the respondents expect conditions to worsen within the next six months.

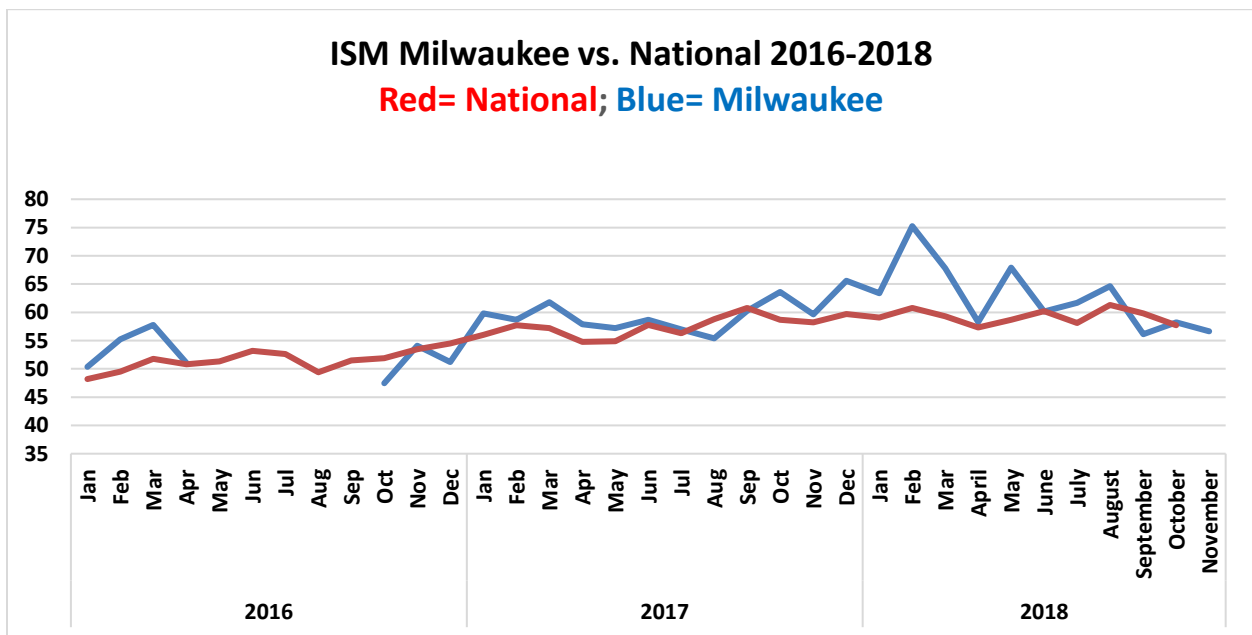
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Nov-18	35.71%	28.57%	35.71%	50.00%
Oct-18	33.33%	33.33%	33.33%	50.00%
Sep-18	22.22%	55.56%	22.22%	50.00%

**Milwaukee versus the Nation –**

*January 2010 – November 2018 Graph*



*January 2016- November 2018 Graph*



## Insights on the ISM PMI from the National Organization:

### ISM *Manufacturing Report On Business*<sup>®</sup> 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 x 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>)