

**Marquette-ISM Report on Manufacturing  
December 2018- Final Release**

Contact: Dr. Douglas Fisher  
Director, Center for Supply Chain Management  
Marquette University  
(414) 288-3995  
[douglas.fisher@marquette.edu](mailto:douglas.fisher@marquette.edu)

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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	December 2018	November 2018	October 2018
Seasonally adjusted	52.87	56.63	58.21

(Milwaukee, Wisconsin) – December's Index registered at 52.87, a decrease from 56.63 in November. December's Index continues to indicate positive territory.

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

- We are looking forward to another record year for 2019.
- Slight increases continue in Q1 but clear uncertainty in domestic & China demand thereafter. Export demand to India and Brazil softening.
- All planned 2019 increases from 2018 have been reversed.
- Many issues facing the supply chain continue, despite suddenly sluggish sales. Increasing costs, longer lead times, poor quality, and reduced customer service still are major concerns. Availability of trucking equipment and personnel are also issues.

*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.

<b>MANUFACTURING AT A GLANCE: December 2018*</b>				
<b>Index</b>	<b>Series</b>	<b>Series</b>	<b>Percentage Point Change</b>	<b>Direction</b>
	<b>Index</b>	<b>Index</b>		
	<b>Dec-18</b>	<b>Nov-18</b>		
<b>PMI</b>	52.87	56.63	-3.8	growing
<b>New Orders</b>	36.30	35.39	0.9	declining
<b>Production</b>	46.59	51.28	-4.7	declining
<b>Employment</b>	52.03	64.63	-12.6	growing
<b>Supplier Deliveries</b>	76.30	75.21	1.1	slower
<b>Inventories</b>	53.13	56.67	-3.5	growing
<b>Customers' Inventories *</b>	32.14	30.77	1.4	declining
<b>Prices *</b>	71.88	83.33	-11.5	growing
<b>Backlog of Orders *</b>	53.85	46.15	7.7	growing
<b>Exports *</b>	50.00	50.00	0.0	neutral
<b>Imports *</b>	56.25	72.22	-16.0	growing

#### **What respondents are saying in December 2018:**

- Supplier capacity constraints led to aggressive pricing.
- Customers overbought in response to tariffs.
- Insufficient specialty plastic material inventories will likely continue far into the new year.
- Alternative plastic feedstocks will be developed in response to backorders and high prices.
- Cost constraints were an overall challenge in 2018.
- Continued inflationary conditions have been a major issue for the supply chain.
- Significant price increases for all material inputs.
- Logistics problems continue.
- Rising cost of transportation and shortage of drivers and trucks.
- Prices escalating due to driver and trucking shortages.
- Premium charges are being spent on trucking.

## Blue and White-Collar Employment:

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

	Diffusion Index Oct-18	Diffusion Index Nov-18	Diffusion Index Dec-18	Direction	Comments
Blue Collar	50.7	61.2	52.0	growing	-
White Collar	47.3	57.8	58.5	growing	-

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

## What respondents are saying in December 2018:

- Looking to automate where ever possible as we anticipate a protracted labor shortage
- The largest issue that our industry faces is lack of qualified help. Every link of the chain is constrained by lack of help We could be producing a lot more if we could fill positions. Our forggers are “lemoning” along, not able to add shifts because of no help. Steel production is lagging because of no help.

## Buying Policy

Average commitment lead-time for Capital Expenditures decreased from 137 days to 110 days. Average lead-time for Production Materials decreased from 49 days to 48 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies remained at 24 days.

## Six- Month Outlook on Business Conditions

In this outlook, there is an upward shift in positive expectations compared with November in terms of market conditions. Approximately 38% of respondents expect positive conditions, 31% expect conditions to remain the same and 31% of the respondents expect conditions to worsen within the next six months.

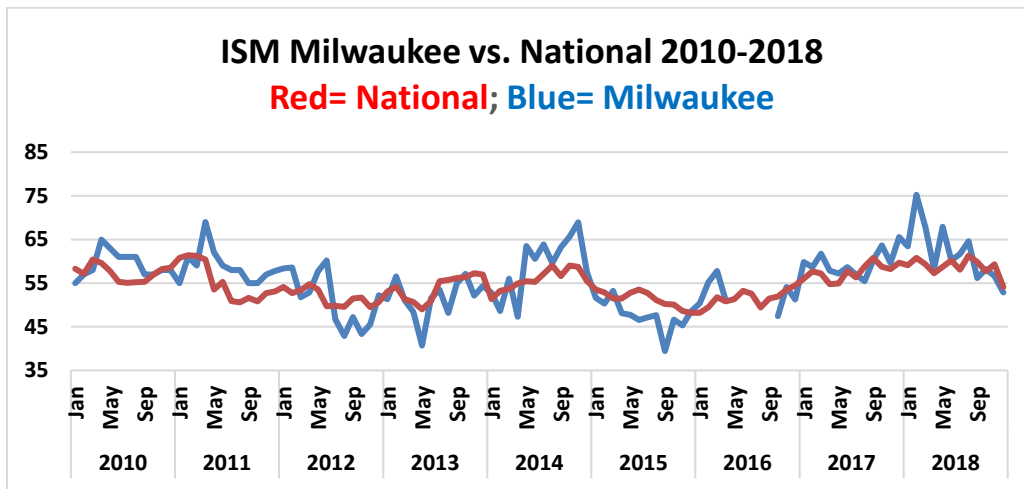
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Dec-18	37.50%	31.25%	31.25%	53.13%
Nov-18	35.71%	28.57%	35.71%	50.00%
Oct-18	33.33%	33.33%	33.33%	50.00%

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

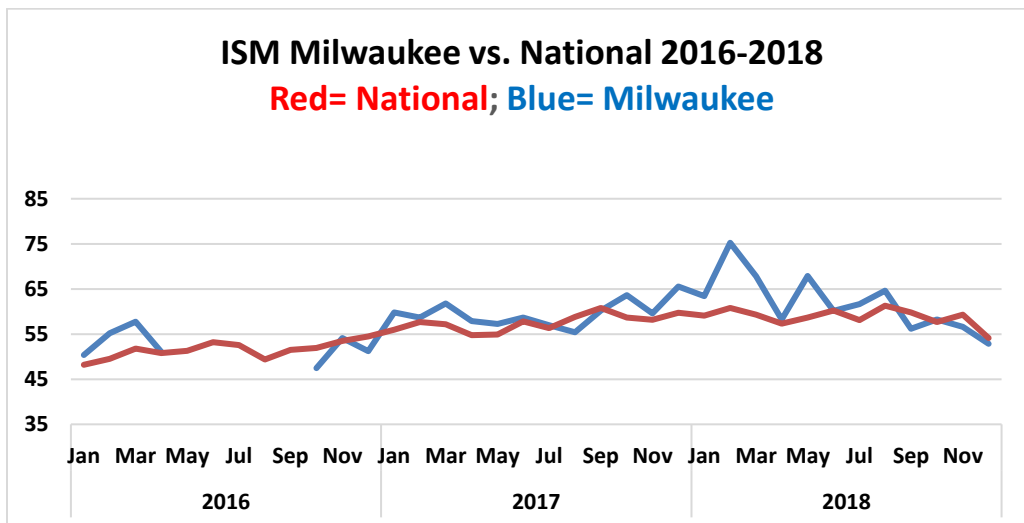
- All of our customers except automotive predict an even better 2019
- Seems to be some doubt in the economy going forward due to political tension and lingering tariff issues

**Milwaukee versus the Nation –**

*January 2010 – December 2018 Graph*



*January 2016- December 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 ( $20\% + [0.50 \times 70\%]$ ). 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>)