

**Marquette-ISM Report on Manufacturing
December 2017- Final Release**

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Final Version (includes ISM National Results for December 2017)

*The Marquette-ISM Report on Manufacturing was prepared by **Gwendolyn Davis**, a graduate student in Applied Economics at Marquette University, and distributed by **Beth Krey**, 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 2017	November 2017	October 2017
Seasonally adjusted	65.57	59.62	63.61

(Milwaukee, Wisconsin) – December’s Index registered at 65.57, an increase from 59.62 in November. December’s Index firmly indicates positive territory.

What respondents are saying in December 2017:

- Long lead times for electronics is disrupting short term supply
- Customer demand continues to increase, exceeding forecasts. Supply base investments coming online cannot keep up and now facing delayed delivery of specific types of equipment from manufacturers to our suppliers
- Deliveries from manufacturers have been delayed, hurting suppliers
- Supplier deliveries – were nearly caught up, but falling behind again.

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

MANUFACTURING AT A GLANCE: December 2017*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Dec-17	Nov-17		
PMI	65.57	59.62	6.0	growing
New Orders	88.33	66.46	21.9	growing
Production	72.65	57.94	14.7	growing
Employment	58.67	61.73	-3.1	growing
Supplier Deliveries	65.33	75.29	-10.0	slower
Inventories	42.86	36.67	6.2	declining
Customers' Inventories *	32.14	19.23	12.9	declining
Prices *	82.14	73.33	8.8	growing
Backlog of Orders *	73.08	60.00	13.1	growing
Exports *	62.50	59.09	3.4	growing
Imports *	68.75	66.67	2.1	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.

What respondents are saying in December 2017:

- Lead times are increasing to 25-30 weeks
- Additional order capacity is hindered by long lead times
- Customers are anticipating increases in demand
- We have additional capacity on order but lead times are increasing....26-30 weeks
- Some suppliers (are) feeling they have pricing power
- Most of our 400 customers are predicting increases over 2017

Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **October 2017, November 2017, and December 2017.**

	Diffusion Index Oct-17	Diffusion Index Nov-17	Diffusion Index Dec-17	Direction	Comments
Blue Collar	57.3	58.3	58.7	growing	-
White Collar	50.7	58.3	51.3	growing	-

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

What respondents are saying in December 2017:

- Labor is the primary constraint for suppliers and customers
- Low labor supply cannot keep up with the increasing volume
- Most sectors expect increases in order volume but labor shortages will hurt business
- The greatest supply chain issue that we are facing is the labor shortage. It is the same for most of our customers. This is THE constraint in the manufacturing chain. Everyone could be increasing volume but cannot find enough people to run. Energy sectors continue to predict 20% increases over current volumes. Truck manufacturers are also increasing volume to us. Predicting 10% increase in first quarter

Buying Policy

Average commitment lead-time for Capital Expenditures decreased from 100 days to 99 days. Average lead-time for Production Materials increased from 47 days to 52 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies decreased from 24 days to 23 days.

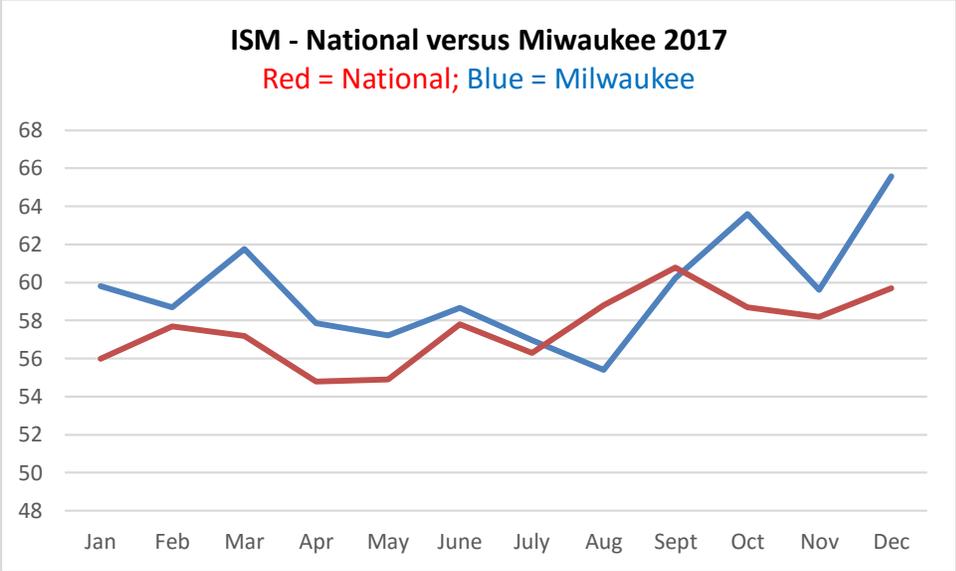
Six- Month Outlook on Business Conditions

In this outlook, there is an upward shift in positive expectations compared with November in terms of market conditions. Approximately 50% of respondents expect positive conditions, 42.86% expect conditions to remain the same and 7.14% of the respondents expect conditions to worsen within the next six months.

	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Dec-17	50.00%	42.86%	7.14%	71.43%
Nov-17	46.67%	53.33%	0.00%	73.33%
Oct-17	43.48%	43.48%	13.04%	65.22%

Milwaukee versus the Nation –

2017 Graph



Insights on the ISM PMI from the National Organization:

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 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>