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Final Version (includes ISM National Results for November 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	November 2017	October 2017	September 2017
Seasonally adjusted	59.62	63.61	60.24

(Milwaukee, Wisconsin) – November's Index registered at 59.62, a slight decrease from the 63.61 in October. November's Index firmly indicates positive territory.

What respondents are saying in November 2017:

- Q4 Year over Year up 60-%, but customers are toning down expectations for 2018 - fear they are under-planning at the moment.
- Customer demand is growing for the holidays
- Short to medium term- many suppliers, especially "local" steel fabricators, are running into capacity issues - orders are exceeding capability to meet demand, on time
- Major manufacturers are extending lead times

- Our greatest supply chain issue continues to be hydraulic seal components. The lead-times from major manufacturers continue to be extended and minimum buy requirements increased. As a manufacturer of custom cylinders, this is making deliveries to our customers increase as well as increasing costs due to these mins.
- Suppliers' minimum buying requirements have increased

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

MANUFACTURING AT A GLANCE: November 2017*				
Index	Series Index Nov-17	Series Index Oct-17	Percentage Point Change	Direction
PMI	59.62	63.61	-4.0	growing
New Orders	66.46	63.27	3.2	growing
Production	57.94	66.82	-8.9	growing
Employment	61.73	55.12	6.6	growing
Supplier Deliveries	75.29	80.67	-5.4	slower
Inventories	36.67	52.17	-15.5	declining
Customers' Inventories *	19.23	28.95	-9.7	declining
Prices *	73.33	71.74	1.6	growing
Backlog of Orders *	60.00	57.50	2.5	growing
Exports *	59.09	60.71	-1.6	growing
Imports *	66.67	67.86	-1.2	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 November 2017:

- Production levels are falling due to seasonal demand
- Reducing number of overdue orders
- Ethylene shortages are increasing lead times
- Slowing export orders from India and Brazil

Blue and White-Collar Employment:

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

	Diffusion Index Sep-17	Diffusion Index Oct-17	Diffusion Index Nov-17	Direction	Comments
Blue Collar	61.2	57.3	58.3	growing	-
White Collar	60.6	50.7	58.3	growing	-

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

What respondents are saying in November 2017:

- High employee turnover
- Difficulty with labor availability
- Orders are exceeding capability to meet demand

Buying Policy

Average commitment lead-time for Capital Expenditures decreased from 130 days to 100 days. Average lead-time for Production Materials decreased from 50 days to 47 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies increased from 18 days to 24 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 46.67% of respondents expect positive conditions, 53.33% expect conditions to remain the same and 0% of the respondents expect conditions to worsen within the next six months.

	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Nov-17	46.67%	53.33%	0.00%	73.33%
Oct-17	43.48%	43.48%	13.04%	65.22%
Sep-17	35.29%	47.06%	17.65%	58.82%

Milwaukee versus the Nation –

2017 Graph

ISM - National versus Milwaukee 2017
Red = Milwaukee; Blue = National
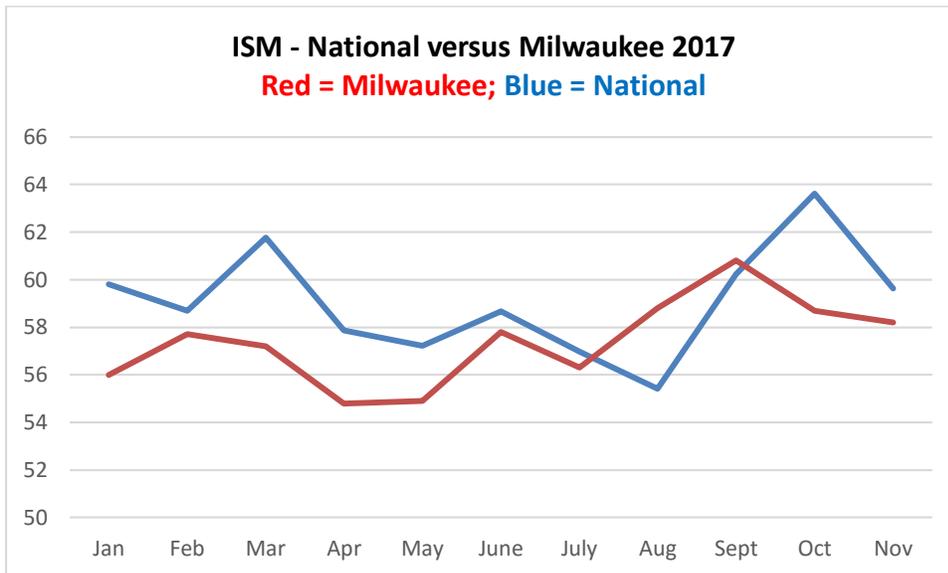
Insights on the ISM PMI from the National Organization:

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 ± .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)