

**Marquette-ISM Report on Manufacturing  
January 2019- Early Release**

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Released: January 31<sup>st</sup>, 2019

*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.*

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**Summary**

Milwaukee-area PMI	January 2019	December 2018	November 2018
Seasonally adjusted	58.78	52.87	56.63

(Milwaukee, Wisconsin) – January’s Index registered at 58.78, an increase from 52.87 in December. January’s index continues to indicate positive territory.

**What respondents are saying in January 2019:**

- Uncertainty around tariffs continues into the new year.
- Orders are slowing as prices escalate.
- Market conditions are fluctuating due to political instability.

*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: January 2019*</b>				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Jan-19	Dec-18		
PMI	58.78	52.87	5.9	growing
New Orders	44.16	36.30	7.9	declining
Production	57.84	46.59	11.2	growing
Employment	56.32	52.03	4.3	growing
Supplier Deliveries	74.04	76.30	-2.3	slower
Inventories	61.54	53.13	8.4	growing
Customers' Inventories *	36.36	32.14	4.2	declining
Prices *	69.23	71.88	-2.6	growing
Backlog of Orders *	36.36	53.85	-17.5	declining
Exports *	38.89	50.00	-11.1	declining
Imports *	68.75	56.25	12.5	growing

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

- Lead times are extending for many items.
- Product delivery times are slowing.

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **November 2018, December 2018, and January 2019.**

	Diffusion Index Nov-18	Diffusion Index Dec-18	Diffusion Index Jan-19	Direction	Comments
Blue Collar	61.2	52.0	56.3	growing	-
White Collar	57.8	58.5	56.3	growing	-

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

## What respondents are saying in January 2019:

- Suppliers are experiencing labor shortages.

## Buying Policy

Average commitment lead-time for Capital Expenditures increased from 110 days to 151 days. Average lead-time for Production Materials increased from 48 days to 58 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies increased from 24 days to 30 days.

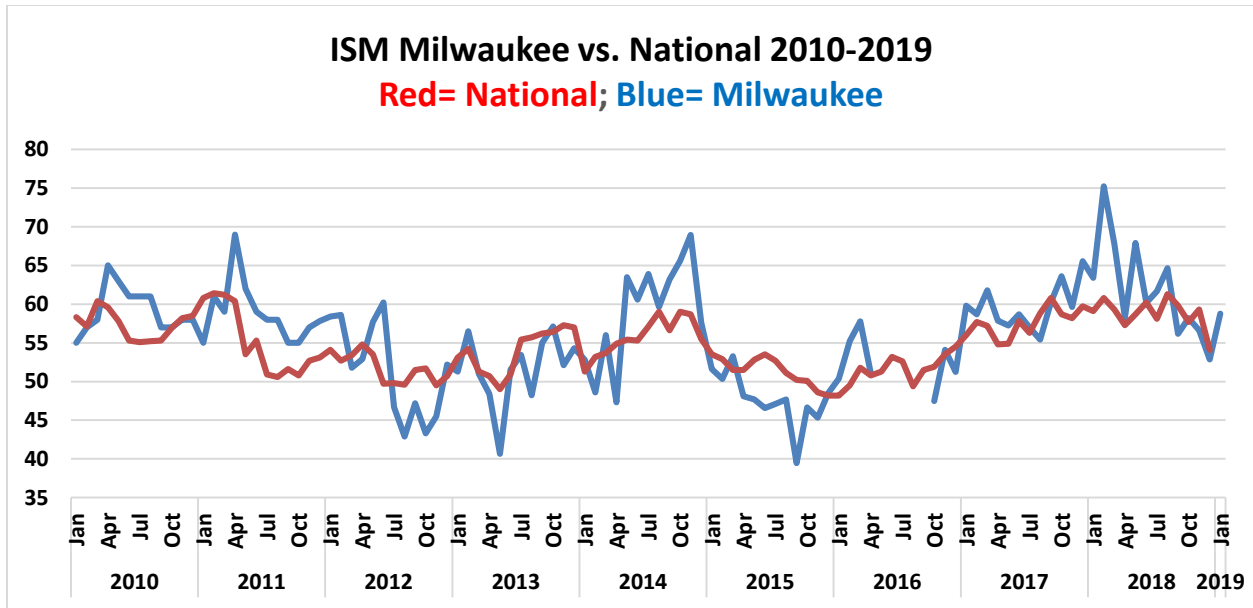
## Six- Month Outlook on Business Conditions

In this outlook, there is an upward shift in positive expectations compared with December in terms of market conditions. Approximately 41.67% of respondents expect positive conditions, 41.67% expect conditions to remain the same and 16.67% of the respondents expect conditions to worsen within the next six months.

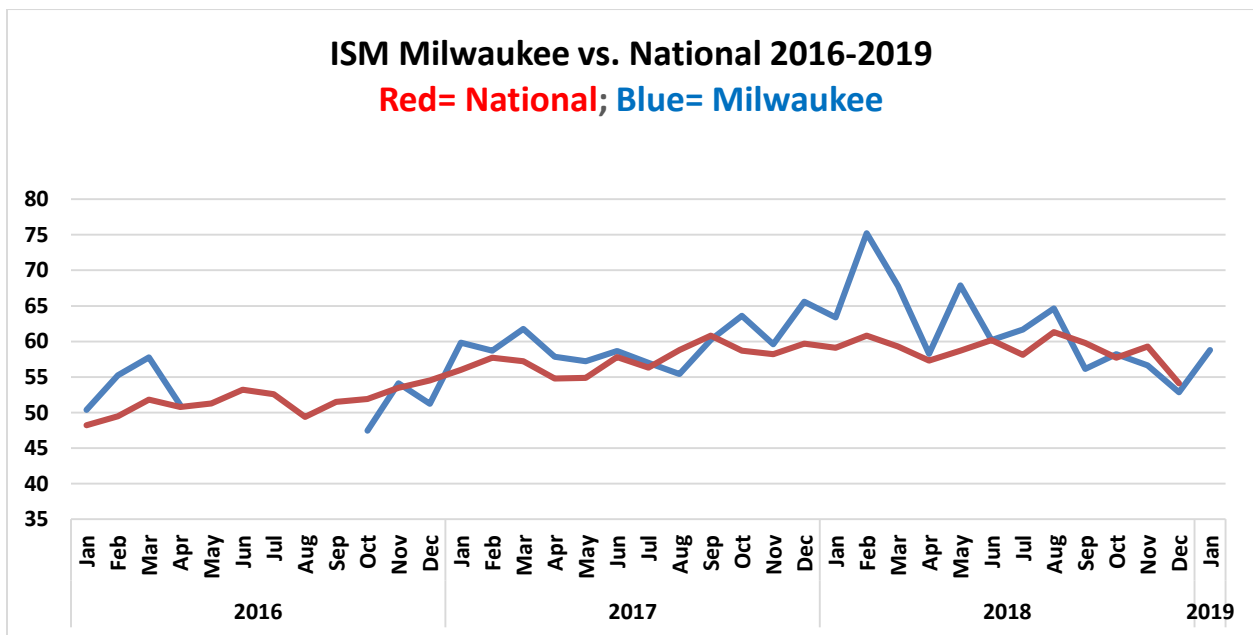
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Jan-19	41.67%	41.67%	16.67%	62.50%
Dec-18	37.50%	31.25%	31.25%	53.13%
Nov-18	35.71%	28.57%	35.71%	50.00%

**Milwaukee versus the Nation –**

**January 2010 – January 2019 Graph**



**January 2016- January 2019 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>)

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February 2019- Early Release**

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Released: February 28<sup>th</sup>, 2019

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**Summary**

Milwaukee-area PMI	February 2019	January 2019	December 2018
Seasonally adjusted	55.09	58.78	52.87

(Milwaukee, Wisconsin) – February’s Index registered at 55.09, a decline from 58.78 in January. February’s index continues to indicate positive territory.

**What respondents are saying in February 2019:**

- Demand reductions which may be pushed into long-term demand planning.
- Supply issues including allocation, long lead times, and rising prices.
- New orders are improving from late 2018, but still slower than Q2 and Q3 of 2018.
- Major pushouts of demand into next quarter - unclear if this is really just delaying demand reductions long term.
- Vendor deliveries are starting to improve and price increases are beginning to level off.

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

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<b>MANUFACTURING AT A GLANCE: February 2019*</b>				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Feb-19	Jan-19		
PMI	55.09	58.78	-3.7	growing
New Orders	42.52	44.16	-1.6	declining
Production	55.31	57.84	-2.5	growing
Employment	49.80	56.32	-6.5	declining
Supplier Deliveries	65.30	74.04	-8.7	slower
Inventories	62.50	61.54	1.0	growing
Customers' Inventories *	46.43	36.36	10.1	declining
Prices *	68.75	69.23	-0.5	growing
Backlog of Orders *	46.43	36.36	10.1	declining
Exports *	45.45	38.89	6.6	declining
Imports *	61.11	68.75	-7.6	growing

#### **What respondents are saying in February 2019:**

- Lead times and supplier deliveries are improving due to lower backlogs.
- Implementations of new business initiatives are improving lead times.
- Opening up capacity to receive stock from off-shore sources.
- Some projects that were quoted awhile back are finally turning into orders.
- New export orders (units) - Brazil, Turkey, EU down

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **December 2018, January 2019, and February 2019.**

	Diffusion Index Dec-18	Diffusion Index Jan-19	Diffusion Index Feb-19	Direction	Comments
Blue Collar	52.0	56.3	49.8	-	-
White Collar	58.5	56.3	52.9	growing	-

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

## What respondents are saying in February 2019:

- Seems as though the economy is cooling after a peak.
- Running production at high levels.

## Buying Policy

Average commitment lead-time for Capital Expenditures decreased from 151 days to 111 days. Average lead-time for Production Materials decreased from 58 days to 46 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies decreased from 30 days to 20 days.

## Six- Month Outlook on Business Conditions

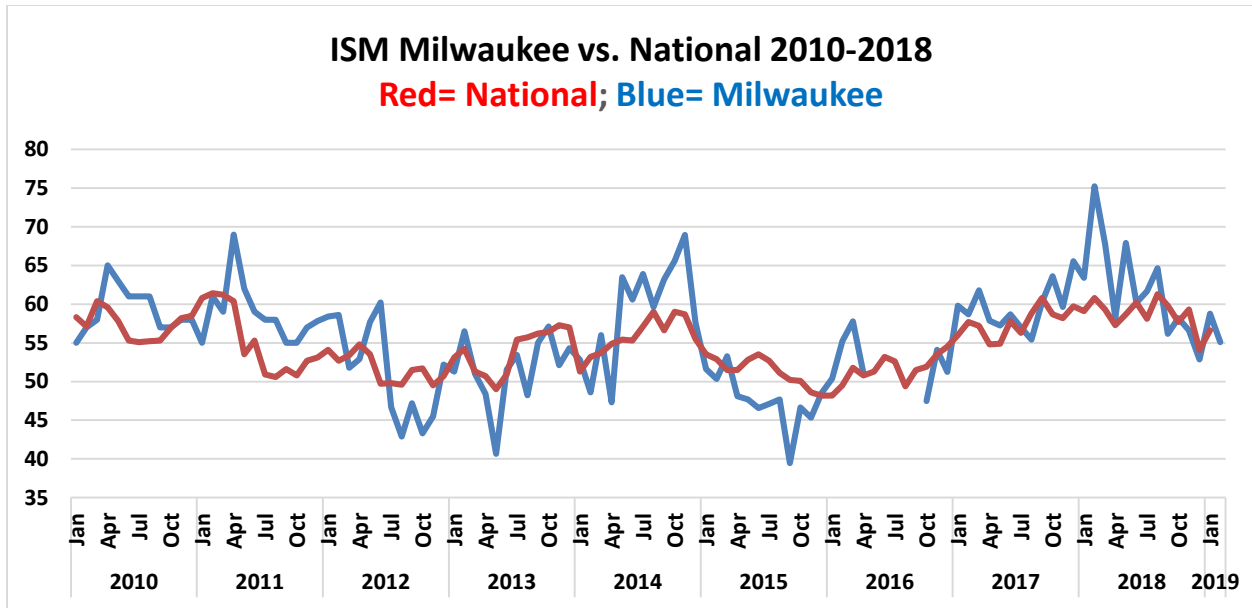
In this outlook, there is an downward shift in positive expectations compared with January in terms of market conditions. Approximately 31.25% of respondents expect positive conditions, 43.75% expect conditions to remain the same and 25% of the respondents expect conditions to worsen within the next six months.

	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Feb-19	31.25%	43.75%	25.00%	53.13%
Jan-19	41.67%	41.67%	16.67%	62.50%
Dec-18	37.50%	31.25%	31.25%	53.13%

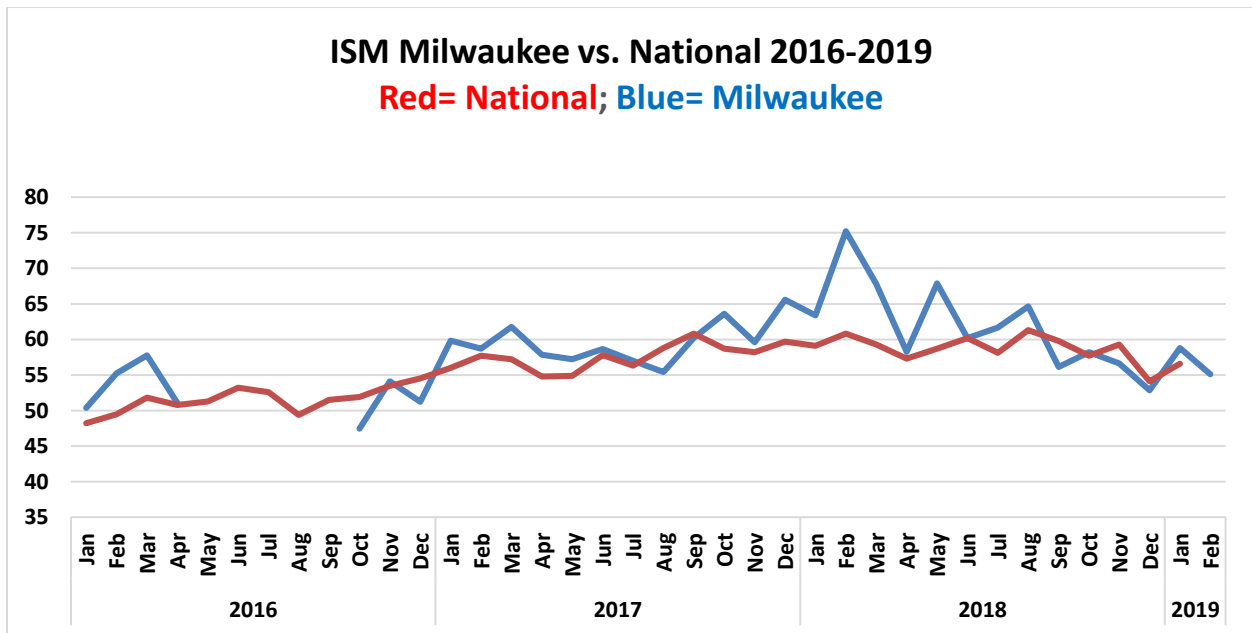


**Milwaukee versus the Nation –**

*January 2010 – February 2019 Graph*



*January 2016- February 2019 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.**

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**March 2019- Early Release**

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Released: March 29<sup>th</sup>, 2019

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**Summary**

Milwaukee-area PMI	March 2019	February 2019	January 2019
Seasonally adjusted	50.05	55.09	58.78

(Milwaukee, Wisconsin) – March's Index registered at 50.05, a decline from 55.09 in February. March's index continues to indicate positive territory.

**What respondents are saying in March 2019:**

- Pricing is stabilizing and lead times are falling, but economy seems to be cooling.
- Orders are slowing considerably.
- Tariffs are expected to cause long-term impacts and require renegotiation of pricing.

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

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<b>MANUFACTURING AT A GLANCE: March 2019*</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>Mar-19</b>	<b>Feb-19</b>		
<b>PMI</b>	50.05	55.09	-5.0	growing
<b>New Orders</b>	46.25	42.52	3.7	declining
<b>Production</b>	51.13	55.31	-4.2	growing
<b>Employment</b>	50.71	49.80	0.9	growing
<b>Supplier Deliveries</b>	59.29	65.30	-6.0	slower
<b>Inventories</b>	42.86	62.50	-19.6	declining
<b>Customers' Inventories *</b>	46.43	46.43	0.0	declining
<b>Prices *</b>	53.33	68.75	-15.4	growing
<b>Backlog of Orders *</b>	34.62	46.43	-11.8	declining
<b>Exports *</b>	45.45	45.45	0.0	declining
<b>Imports *</b>	50.00	61.11	-11.1	neutral

#### **What respondents are saying in March 2019:**

- Good R&D outlook and customer counts.
- Some products experiencing increased demand and some experiencing decreased demand, causing uncertainty in business.
- Supplier orders are steady but increases in volumes.
- Some suppliers appear to be expanding and reinvesting.
- Mixed messages from customers on demand and forecasts. Some increases, but more postponements and reductions.

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **January 2019, February 2019, and March 2019.**

	Diffusion Index Jan-19	Diffusion Index Feb-19	Diffusion Index Mar-19	Direction	Comments
Blue Collar	56.3	49.8	47.3	growing	-
White Collar	56.3	52.9	50.7	growing	-

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

## What respondents are saying in March 2019:

- Outsourcing suppliers due to issues hiring qualified workers.
- Shortage of skilled machinists and tooling engineers.

## Buying Policy

Average commitment lead-time for Capital Expenditures decreased from 111 days to 82 days. Average lead-time for Production Materials increased from 46 days to 54 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies increased from 20 days to 28 days.

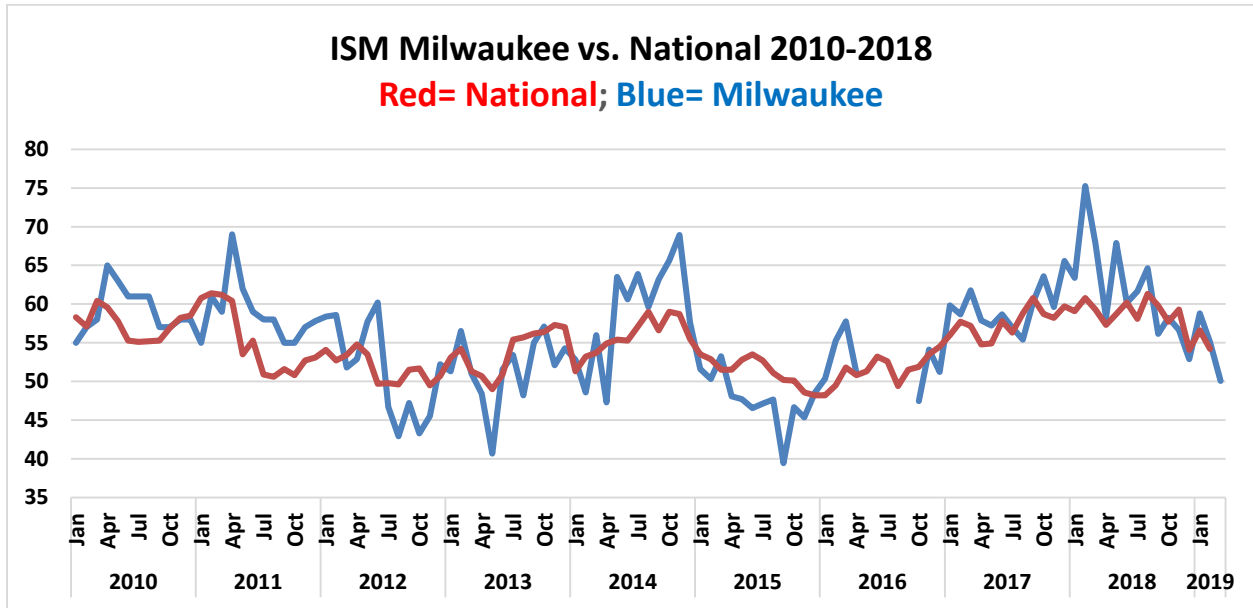
## Six- Month Outlook on Business Conditions

In this outlook, there is an upward shift in positive expectations compared with February in terms of market conditions. Approximately 40% of respondents expect positive conditions, 27% expect conditions to remain the same and 33% of the respondents expect conditions to worsen within the next six months.

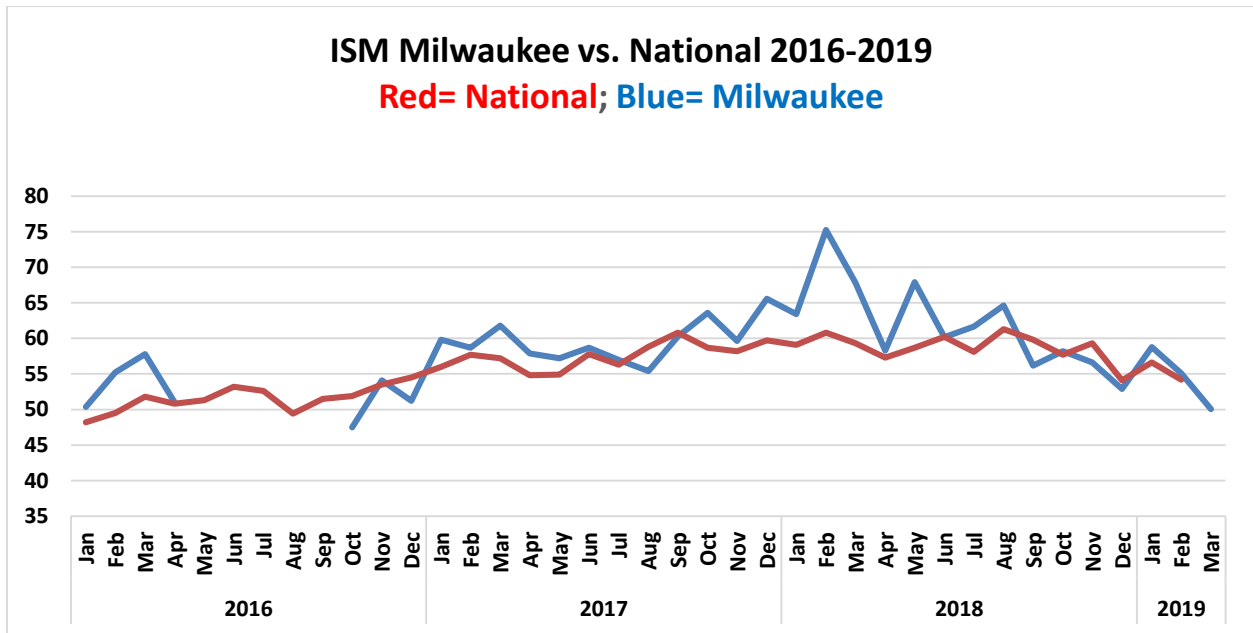
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Mar-18	40.00%	26.67%	33.33%	53.33%
Feb-18	31.25%	43.75%	25.00%	53.13%
Jan-19	41.67%	41.67%	16.67%	62.50%

**Milwaukee versus the Nation –**

*January 2010 – March 2019 Graph*



*January 2016- March 2019 Graph*



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

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**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.**

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April 2019- Early Release**

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Released: April 30<sup>th</sup>, 2019

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**Summary**

Milwaukee-area PMI	April 2019	March 2019	February 2019
Seasonally adjusted	55.04	50.05	55.09

(Milwaukee, Wisconsin) – April's Index registered at 55.04, an increase from 50.05 in March. April's index continues to indicate positive territory.

**What respondents are saying in April 2019:**

- Unexpectedly strong demand has continued.
- Ambiguous market movement and demand drivers



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<b>MANUFACTURING AT A GLANCE: April 2019*</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>Apr-19</b>	<b>Mar-19</b>		
<b>PMI</b>	55.04	50.05	5.0	growing
<b>New Orders</b>	46.04	46.25	-0.2	declining
<b>Production</b>	54.36	51.13	3.2	growing
<b>Employment</b>	53.00	50.71	2.3	growing
<b>Supplier Deliveries</b>	63.45	59.29	4.2	slower
<b>Inventories</b>	58.33	42.86	15.5	growing
<b>Customers' Inventories *</b>	44.44	46.43	-2.0	declining
<b>Prices *</b>	59.09	53.33	5.8	growing
<b>Backlog of Orders *</b>	38.89	34.62	4.3	declining
<b>Exports *</b>	50.00	45.45	4.5	neutral
<b>Imports *</b>	60.00	50.00	10.0	growing

**What respondents are saying in April 2019:**

- Delays in customer demand of seasonal product.
- Forecasts holding but experiencing longer lead times.

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for February 2019, March 2019, and April 2019.

	Diffusion Index Feb-19	Diffusion Index Mar-19	Diffusion Index Apr-19	Direction	Comments
Blue Collar	49.8	47.3	53.0	growing	-
White Collar	52.9	50.7	48.9	declining	-

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

## What respondents are saying in April 2019:

- Continued lack of qualified labor.

## Buying Policy

Average commitment lead-time for Capital Expenditures increased from 82 days to 109 days. Average lead-time for Production Materials decreased from 54 days to 53 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies decreased from 28 days to 22 days.

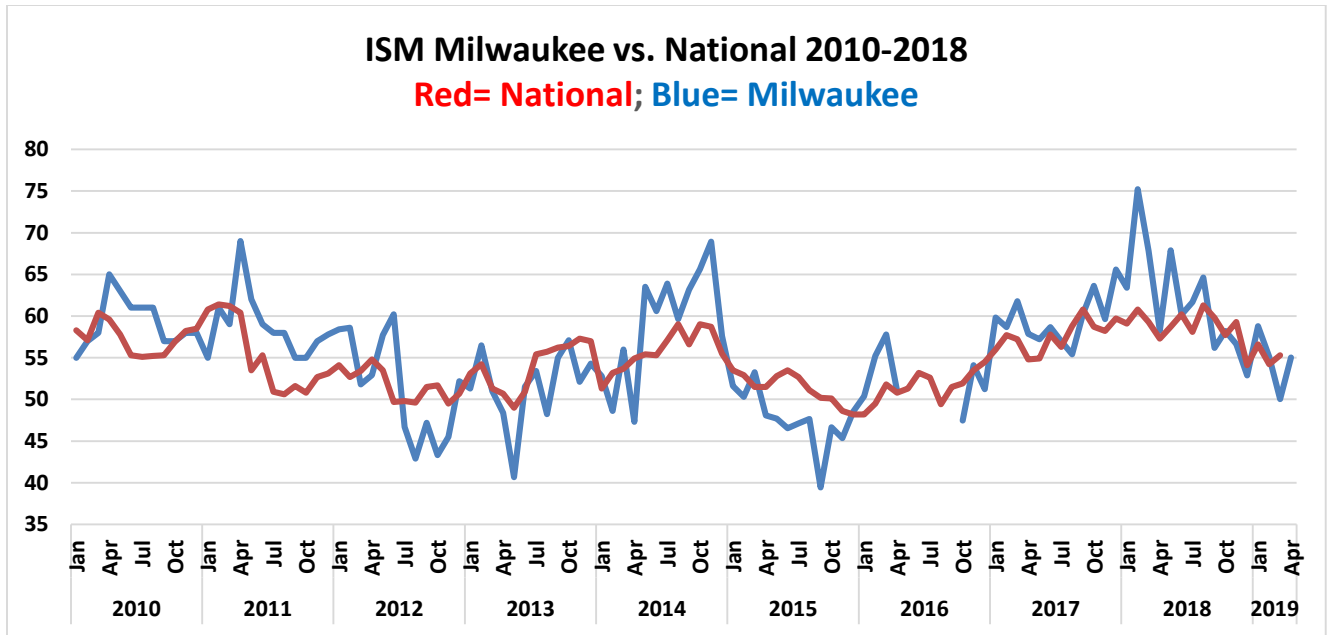
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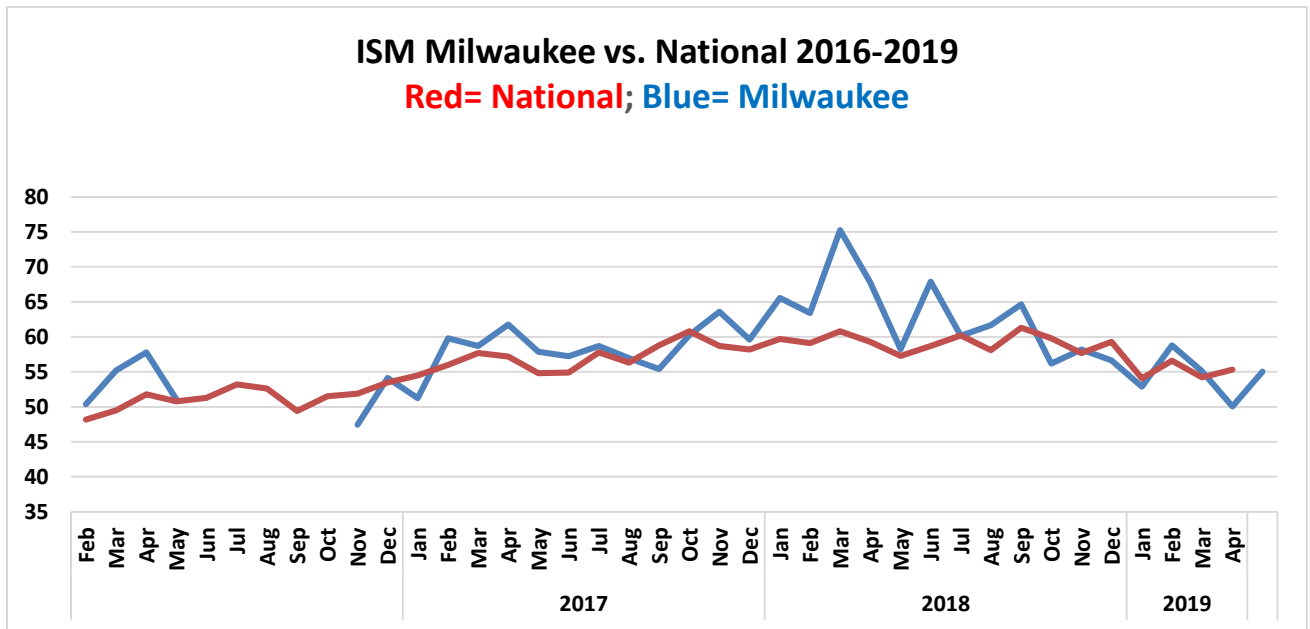
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Apr-18	16.67%	66.67%	16.67%	50.00%
Mar-18	40.00%	26.67%	33.33%	53.33%
Feb-18	31.25%	43.75%	25.00%	53.13%

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*January 2010 – April 2019 Graph*



*January 2016- April 2019 Graph*



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Contact: Bill Lee  
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Released: May 31<sup>st</sup>, 2019

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

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**Summary**

Milwaukee-area PMI	May 2019	April 2019	March 2019
Seasonally adjusted	47.83	55.04	50.05

(Milwaukee, Wisconsin) – May’s Index registered at 47.83, a decrease from 55.04 in April. May’s index indicates negative territory.

**What respondents are saying in May 2019:**

- Continued stable demand but summer forecasts are higher than seasonal patterns
- Long term forecasts from customers suggest market increases
- Ambiguous market movement and demand drivers

*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: May 2019*</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>May-19</b>	<b>Apr-19</b>		
<b>PMI</b>	47.83	55.04	-7.2	declining
<b>New Orders</b>	47.71	46.04	1.7	declining
<b>Production</b>	44.46	54.36	-9.9	declining
<b>Employment</b>	61.04	53.00	8.0	growing
<b>Supplier Deliveries</b>	49.60	63.45	-13.8	faster
<b>Inventories</b>	36.36	58.33	-22.0	declining
<b>Customers' Inventories *</b>	35.00	44.44	-9.4	declining
<b>Prices *</b>	62.50	59.09	3.4	growing
<b>Backlog of Orders *</b>	50.00	38.89	11.1	neutral
<b>Exports *</b>	50.00	50.00	0.0	neutral
<b>Imports *</b>	41.67	60.00	-18.3	declining

**What respondents are saying in May 2019:**

- Long term forecasts suggest market increases that are not supported by economic indicators and other key trends
- Additional tariffs on goods out of China will impact costs.

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **March 2019, April 2019, and May 2019.**

	Diffusion Index Mar-19	Diffusion Index Apr-19	Diffusion Index May-19	Direction	Comments
Blue Collar	47.3	53.0	52.9	growing	-
White Collar	50.7	48.9	57.0	growing	-

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

## What respondents are saying in May 2019:

- Continued lack of qualified labor.

## Buying Policy

Average commitment lead-time for Capital Expenditures decreased from 109 days to 101 days. Average lead-time for Production Materials increased from 53 days to 61 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies decreased from 22 days to 18 days.

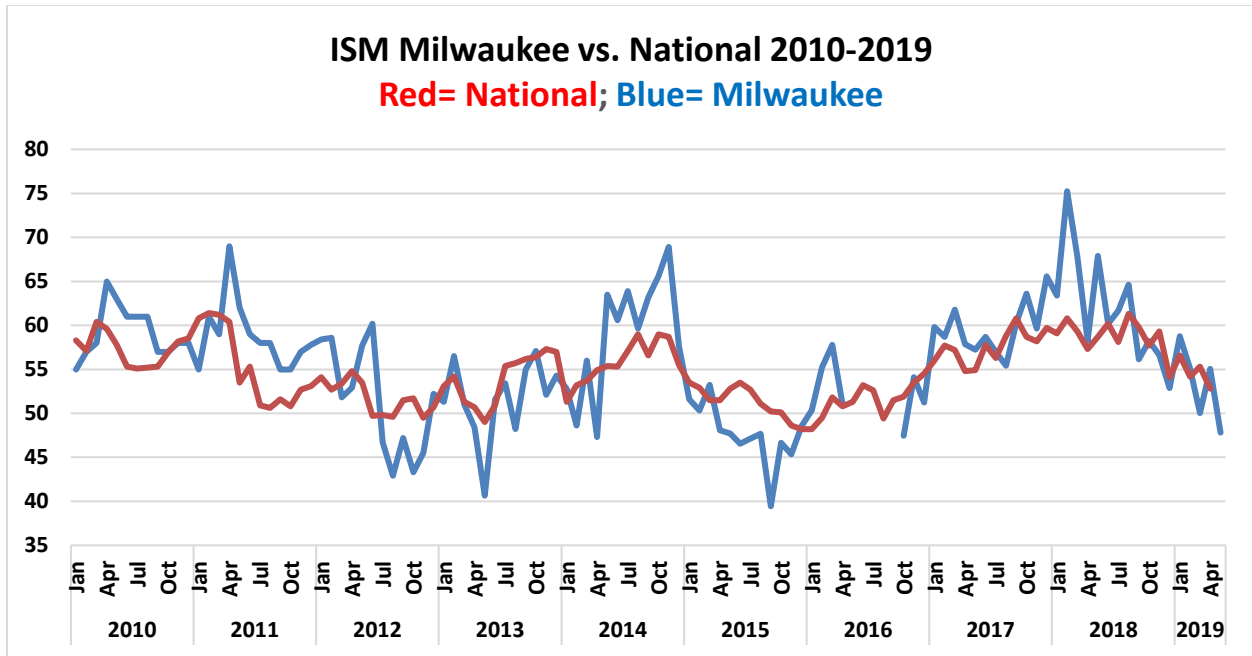
## Six- Month Outlook on Business Conditions

In this outlook, there is an upward shift in positive expectations compared with April in terms of market conditions. Approximately 46% of respondents expect positive conditions, 39% expect conditions to remain the same and 15% of the respondents expect conditions to worsen within the next six months.

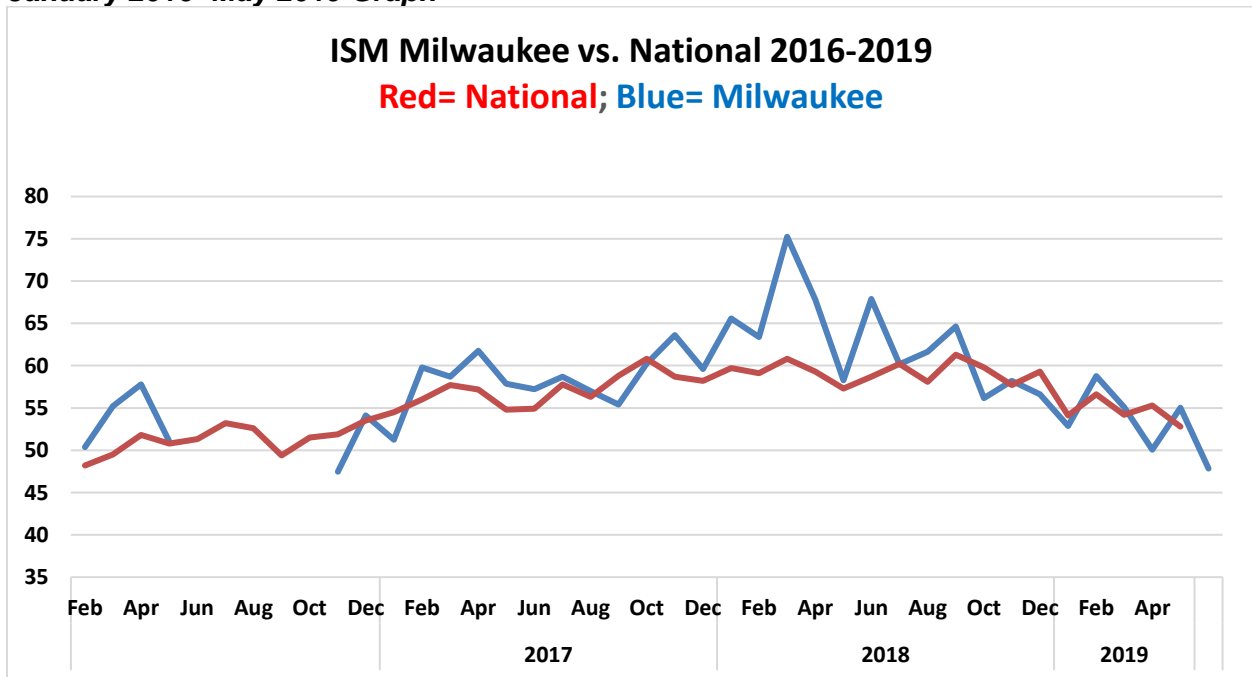
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
May-19	46.15%	38.46%	15.38%	65.38%
Apr-19	16.67%	66.67%	16.67%	50.00%
Mar-19	40.00%	26.67%	33.33%	53.33%

**Milwaukee versus the Nation –**

**January 2010 – May 2019 Graph**



**January 2016- May 2019 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 ( $20\% + [0.50 \times 70\%]$ ). 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>

**Marquette-ISM Report on Manufacturing  
June 2019- Early Release**

Contact: Bill Lee  
Director, Center for Supply Chain Management  
Marquette University  
(414) 288-6587  
[bill.lee@marquette.edu](mailto:bill.lee@marquette.edu)

Released: June 28<sup>th</sup>, 2019

*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.*

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**Summary**

Milwaukee-area PMI	June 2019	May 2019	April 2019
Seasonally adjusted	56.11	47.83	55.04

(Milwaukee, Wisconsin) – June’s Index registered at 56.11, an increase from 47.83 in May. June’s index indicates positive territory.

**What respondents are saying in June 2019:**

- Poor weather and tight capacity in the trucking industry (driven by driver shortage) has hindered on-time delivery of raw materials.
- Production has decreased in line with Seasonality
- A continued shortage of qualified labor for suppliers has led to significant supply chain 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: June 2019*</b>				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Jun-19	May-19		
PMI	56.11	47.83	8.3	growing
New Orders	51.23	47.71	3.5	growing
Production	48.26	44.46	3.8	declining
Employment	66.38	61.04	5.3	growing
Supplier Deliveries	68.55	49.60	18.9	slower
Inventories	46.15	36.36	9.8	declining
Customers' Inventories *	40.91	35.00	5.9	declining
Prices *	69.23	62.50	6.7	growing
Backlog of Orders *	45.45	50.00	-4.5	declining
Exports *	56.25	50.00	6.3	growing
Imports *	42.86	41.67	1.2	declining

**What respondents are saying in June 2019:**

- Long term forecasts suggest market increases that are not supported by economic indicators and other key trends.
- Customer sales are steady for most products.

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **June 2019, May 2019, and April 2019.**

	Diffusion Index Jun-19	Diffusion Index May-19	Diffusion Index Apr-19	Direction	Comments
Blue Collar	62.3	52.9	53.0	growing	-
White Collar	51.6	57.0	48.9	growing	-

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

## What respondents are saying in June 2019:

- The shortage of qualified labor continues.

## Buying Policy

Average commitment lead-time for Capital Expenditures increased from 101 days to 108 days. Average lead-time for Production Materials decreased from 54 days to 53 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies increased from 18 days to 24 days.

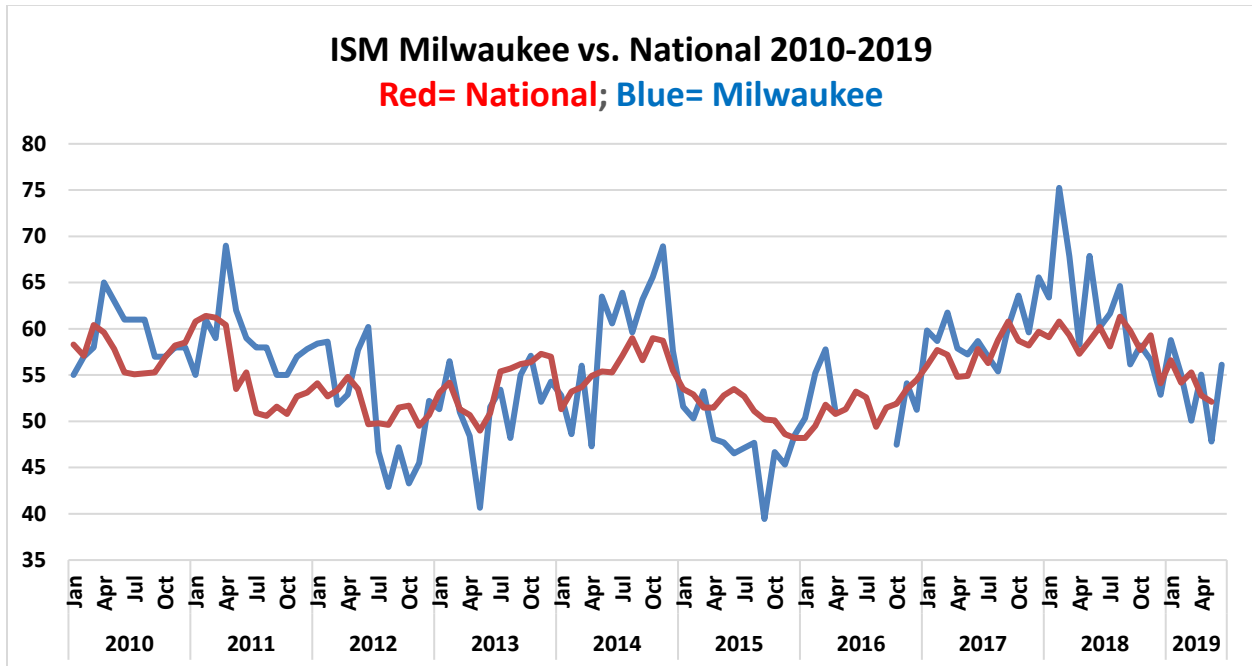
## Six- Month Outlook on Business Conditions

In this outlook, there is an upward shift in positive expectations compared with April in terms of market conditions. Approximately 46% of respondents expect positive conditions, 39% expect conditions to remain the same and 15% of the respondents expect conditions to worsen within the next six months.

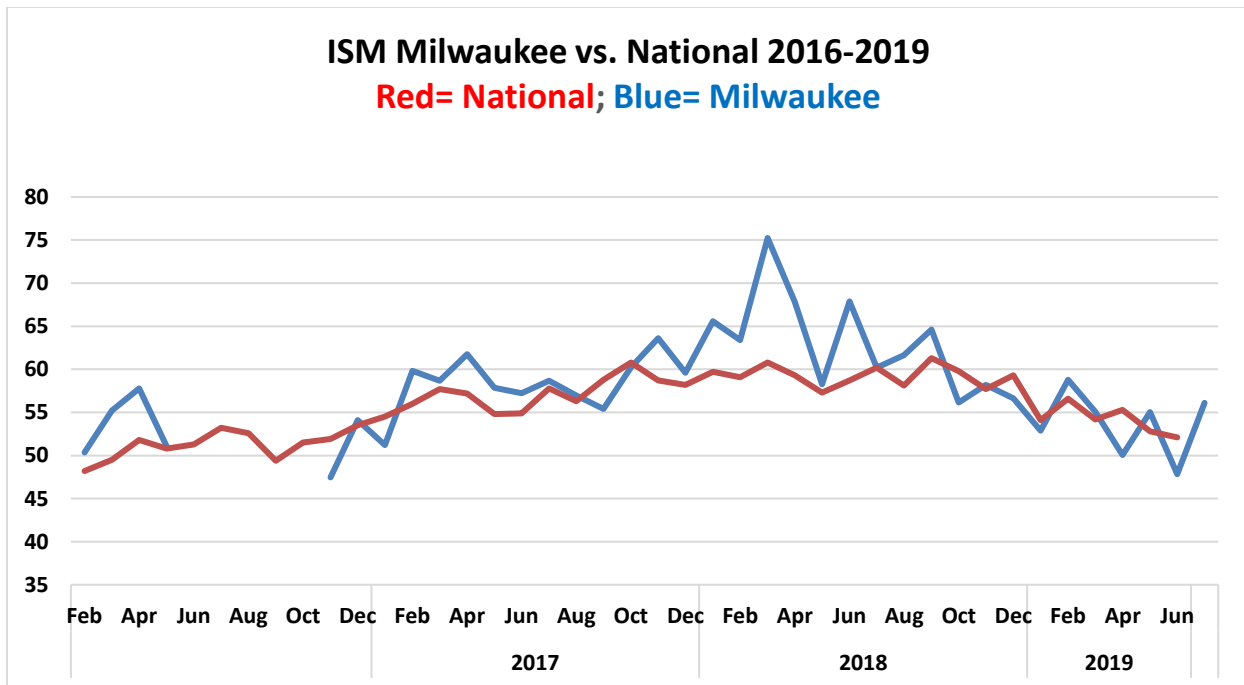
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Jun-19	38.46%	46.15%	15.38%	61.54%
May-19	46.15%	38.46%	15.38%	65.38%
Apr-19	16.67%	66.67%	16.67%	50.00%

**Milwaukee versus the Nation –**

*January 2010 – June 2019 Graph*



*January 2016- June 2019 Graph*



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**Marquette-ISM Report on Manufacturing  
July 2019- Early Release**

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Released: July 31<sup>st</sup>, 2019

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**Summary**

Milwaukee-area PMI	July 2019	June 2019	May 2019
Seasonally adjusted	46.44	56.11	47.83

(Milwaukee, Wisconsin) – July’s Index registered at 46.44, a decrease from 56.11 in June. July’s index indicates negative territory.

**What respondents are saying in July 2019:**

- Manufacturing support services such as painting, anodizing, and plating are constrained which has caused manufactured lead times for parts to increase.
- A continued shortage of qualified labor for suppliers has led to significant supply chain issues.

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

MANUFACTURING AT A GLANCE: July 2019*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Jul-19	Jun-19		
PMI	46.44	56.11	-9.7	declining
New Orders	35.83	51.23	-15.4	declining
Production	43.48	48.26	-4.8	declining
Employment	56.95	66.38	-9.4	growing
Supplier Deliveries	53.63	68.55	-14.9	slower
Inventories	42.31	46.15	-3.8	declining
Customers' Inventories *	40.91	40.91	0.0	declining
Prices *	46.15	69.23	-23.1	declining
Backlog of Orders *	41.67	45.45	-3.8	declining
Exports *	50.00	56.25	-6.3	growing
Imports *	56.25	42.86	13.4	growing

(\* ) The indices are seasonally adjusted *except for* the Customers' Inventories, Prices, Backlog of Orders, Exports, and Imports Indexes, which do not meet accepted criteria for seasonal adjustments.

**What respondents are saying in July 2019:**

- Price increases are occurring in commodity items, fasteners, and other stocked items at distributors.
- Slowdowns in Chinese and European markets are impacting production in the United States.
- Customer behaviors are not providing a clear direction on market demand, creating a degree of uncertainty.
- Agricultural markets continue to slow.



## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **July 2019, June 2019, and May 2019.**

	Diffusion Index Jul-19	Diffusion Index Jun-19	Diffusion Index May-19	Direction	Comments
Blue Collar	60.7	62.3	52.9	growing	-
White Collar	49.4	51.6	57.0	declining	-

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

## What respondents are saying in July 2019:

- The shortage of qualified labor continues, leading to high employee turnover as talent seeks better available opportunities.

## Buying Policy

Average commitment lead-time for Capital Expenditures increased from 108 days to 130 days. Average lead-time for Production Materials increased from 53 days to 59 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies decreased from 24 days to 15 days.

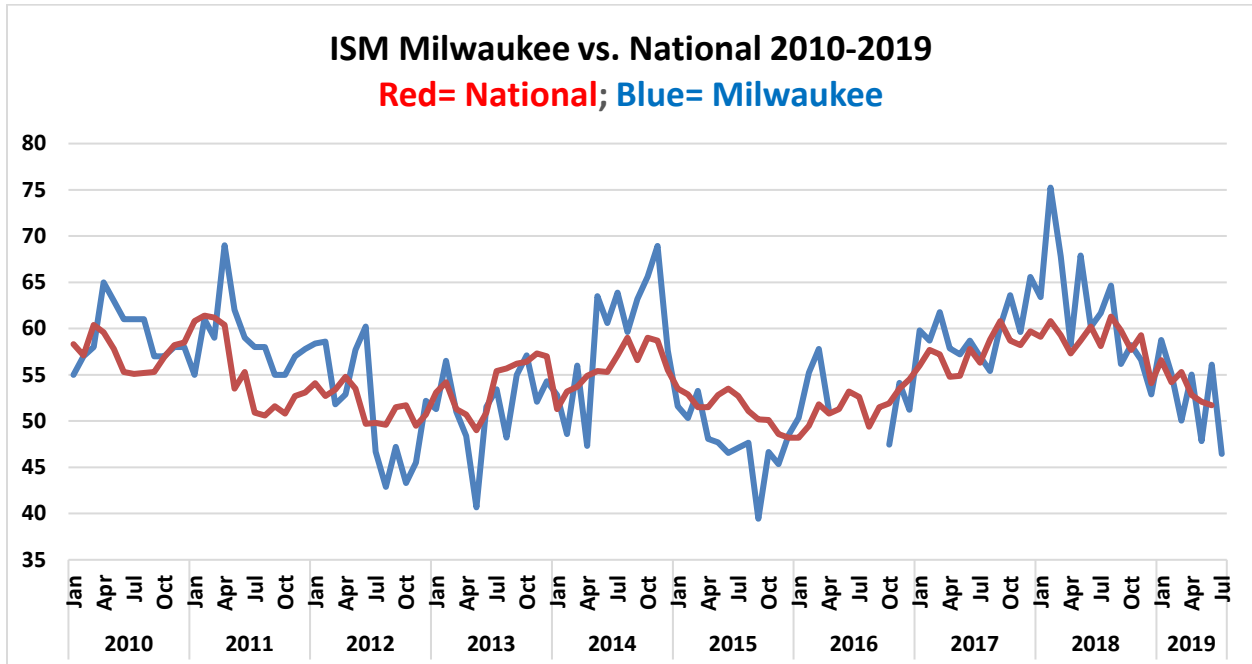
## Six- Month Outlook on Business Conditions

In this outlook, there is a continued downward shift in positive expectations compared with May and June in terms of market conditions. Approximately 21% of respondents expect positive conditions, 57% expect conditions to remain the same and 21% of the respondents expect conditions to worsen within the next six months.

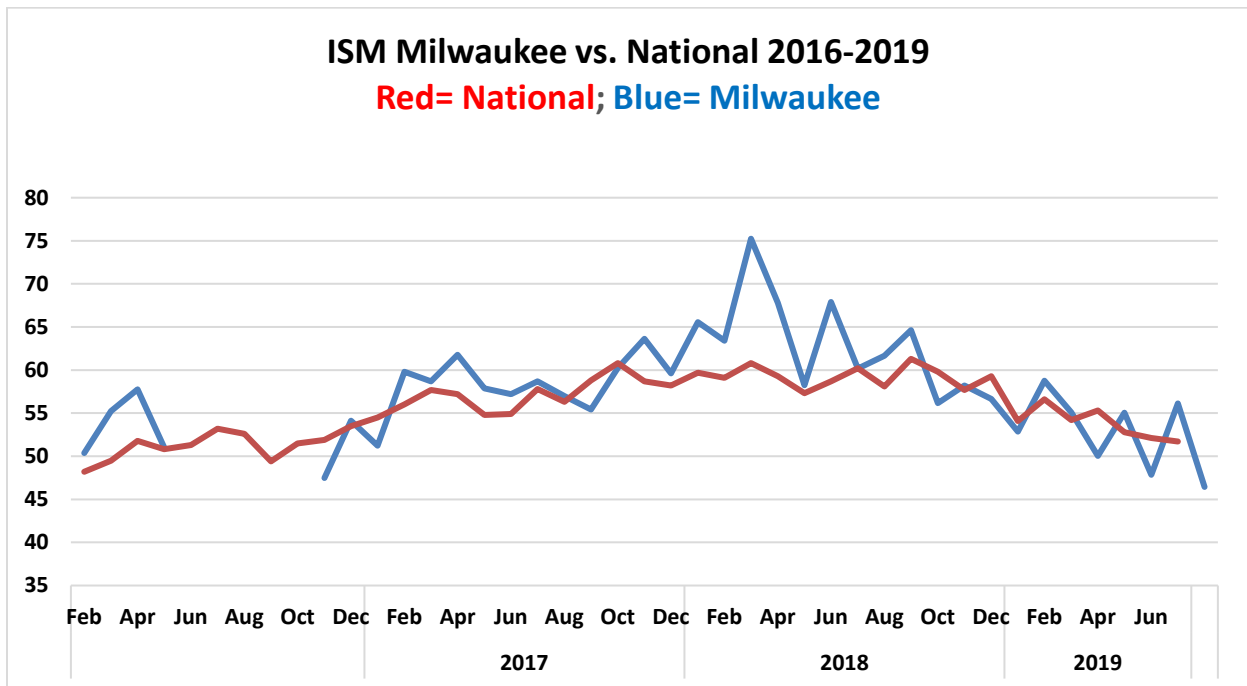
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Jul-19	21.43%	57.14%	21.43%	50.00%
Jun-19	38.46%	46.15%	15.38%	61.54%
May-19	46.15%	38.46%	15.38%	65.38%

**Milwaukee versus the Nation –**

*January 2010 – July 2019 Graph*



*January 2016- July 2019 Graph*



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**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.**

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**Marquette ISM® Report on Manufacturing  
August 2019- Early Release**

Contact: Bill Lee  
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Released: August 30<sup>th</sup>, 2019

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**Summary**

Milwaukee-area PMI	August 2019	July 2019	June 2019
Seasonally adjusted	47.29	46.44	56.11

(Milwaukee, Wisconsin) – August's Index registered at 47.29, an increase from 46.44 in July. August's index still indicates negative territory.

**What respondents are saying in August 2019:**

- Accurate forecast of current customer base.
- Lower customer orders and multiple customers deferring deliveries.
- A continued shortage of qualified labor for suppliers has led to significant supply chain issues.

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

MANUFACTURING AT A GLANCE: August 2019*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Aug-19	Jul-19		
PMI	47.29	46.44	0.8	declining
New Orders	43.80	35.83	8.0	declining
Production	43.48	43.48	0.0	declining
Employment	45.56	56.95	-11.4	declining
Supplier Deliveries	61.29	53.63	7.7	slower
Inventories	42.31	42.31	0.0	declining
Customers' Inventories *	40.91	40.91	0.0	declining
Prices *	53.85	46.15	7.7	growing
Backlog of Orders *	36.36	41.67	-5.3	declining
Exports *	31.25	50.00	-18.8	declining
Imports *	50.00	56.25	-6.3	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 August 2019:

- Increased production has reduced volume of backlog items.

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for August 2019, July 2019, and June 2019.

	Diffusion Index Aug-19	Diffusion Index Jul-19	Diffusion Index Jun-19	Direction	Comments
Blue Collar	57.0	60.7	62.3	declining	-
White Collar	41.8	49.4	51.6	declining	-

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

## What respondents are saying in August 2019: (comments from respondents are mixed...)

- Some are hiring to increase production, while others are reviewing option for temporary layoff of Blue-Collar workers.

## Buying Policy

Average commitment lead-time for Capital Expenditures decreased from 130 days to 108 days. Average lead-time for Production Materials remained the same at 59 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies increased from 15 days to 20 days.

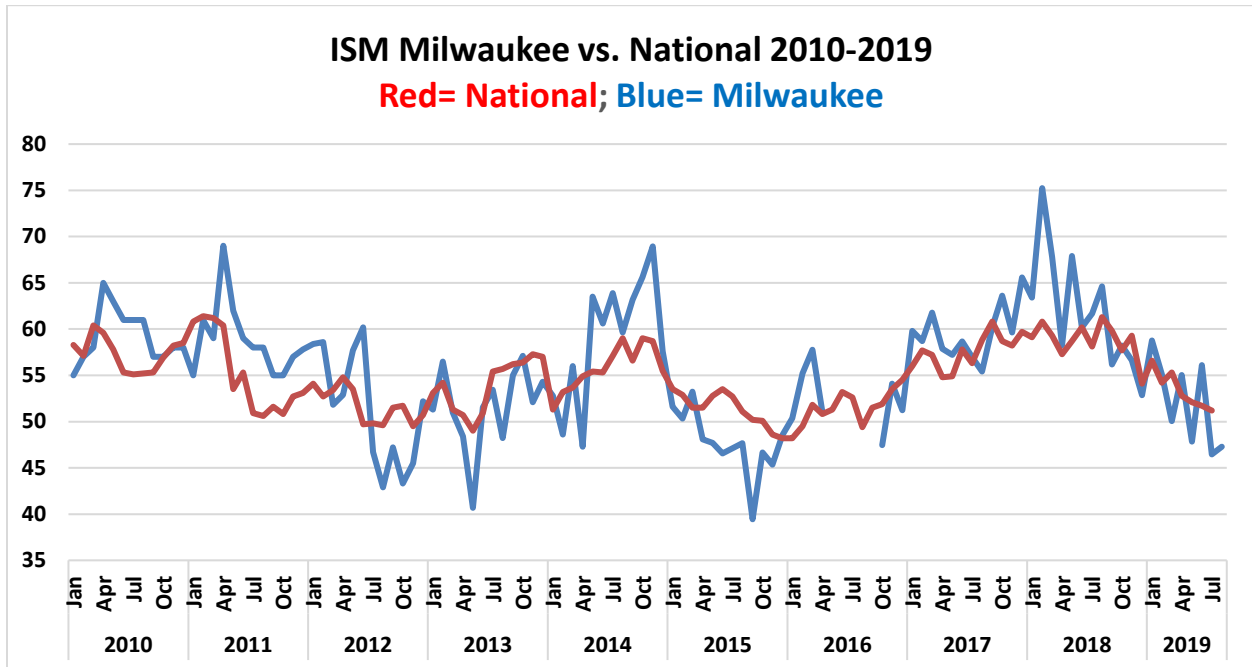
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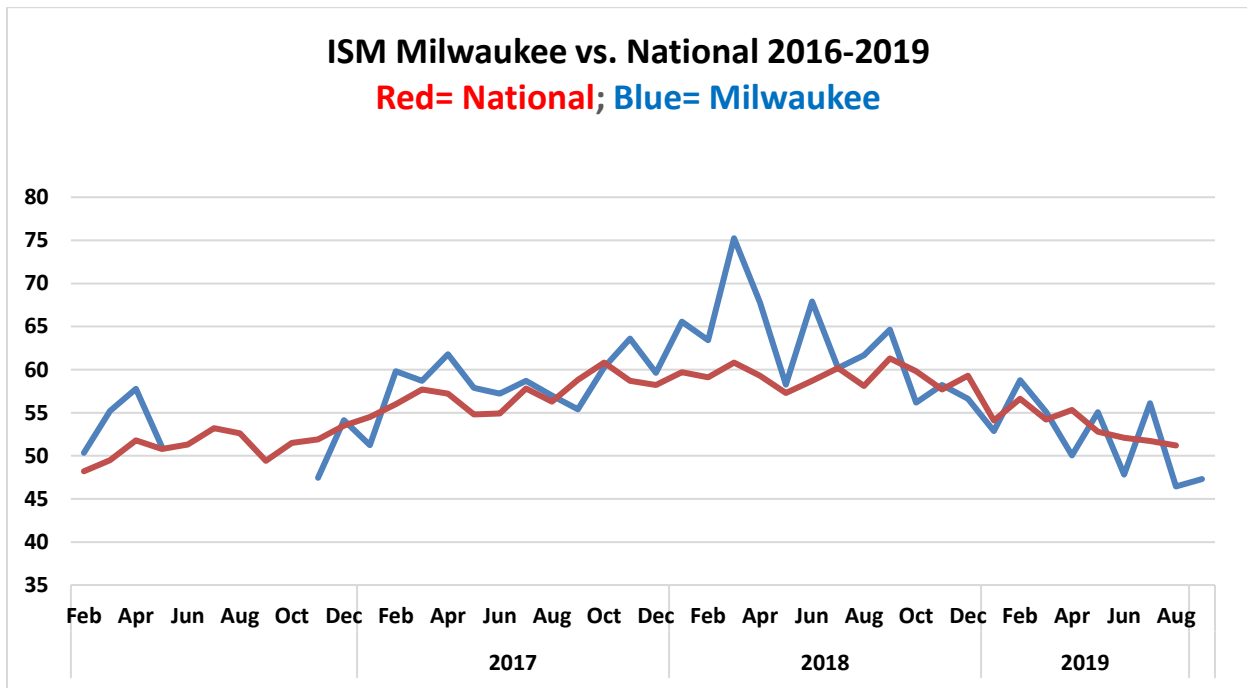
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Aug-19	23.08%	53.85%	23.08%	50.00%
Jul-19	21.43%	57.14%	21.43%	50.00%
Jun-19	38.46%	46.15%	15.38%	61.54%

Milwaukee versus the Nation –

January 2010 – August 2019 Graph



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**Summary**

Milwaukee-area PMI	September 2019	August 2019	July 2019
Seasonally adjusted	45.41	47.29	46.44

(Milwaukee, Wisconsin) – September’s Index registered at 45.41, a decrease from 47.29 in August. September’s index indicates negative territory.

**What respondents are saying in September 2019:**

- Demand for products is slowing and some are now seeing reductions in customer demand extending into 2020
- Import prices have increased since August due to tariffs
- European customers reducing orders due to economy

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

<b>MANUFACTURING AT A GLANCE: September 2019*</b>				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Sep-19	Aug-19		
PMI	45.41	47.29	-1.9	declining
New Orders	47.45	43.80	3.6	declining
Production	42.82	43.48	-0.7	declining
Employment	41.13	45.56	-4.4	declining
Supplier Deliveries	49.80	61.29	-11.5	faster
Inventories	45.83	42.31	3.5	declining
Customers' Inventories *	25.00	40.91	-15.9	declining
Prices *	54.17	53.85	0.3	imcreasing
Backlog of Orders *	31.82	36.36	-4.5	declining
Exports *	43.75	31.25	12.5	declining
Imports *	41.67	50.00	-8.3	declining

(\* ) 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 September 2019:**

- Some companies expressed a positive outlook for future orders from products currently in the R&D pipeline
- Delayed customer orders have created large gaps in the supply chain

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **September 2019, August 2019, and July 2019.**

	Diffusion Index Sep-19	Diffusion Index Aug-19	Diffusion Index Jul-19	Direction	Comments
Blue Collar	45.2	57.0	60.7	declining	-
White Collar	41.1	41.8	49.4	declining	-

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

## What respondents are saying in September 2019:

Comments this month are mixed:

- Blue Collar employment levels are steady due to owner's desire to retain an effective work team
- Others are reviewing options for temporary layoff of Blue-Collar workers.

## Buying Policy

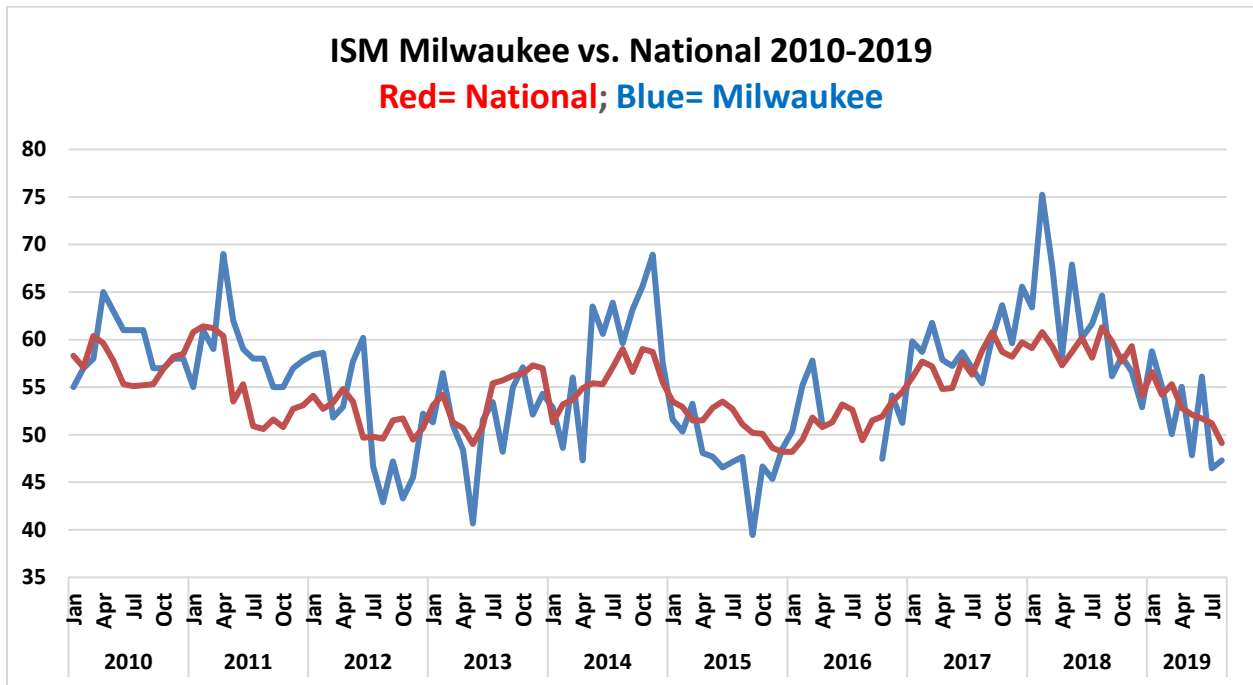
Average commitment lead-time for Capital Expenditures increased from 108 days to 110 days. Average lead-time for Production Materials decreased from 59 to 49 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies decreased from 20 days to 14 days.

## Six- Month Outlook on Business Conditions

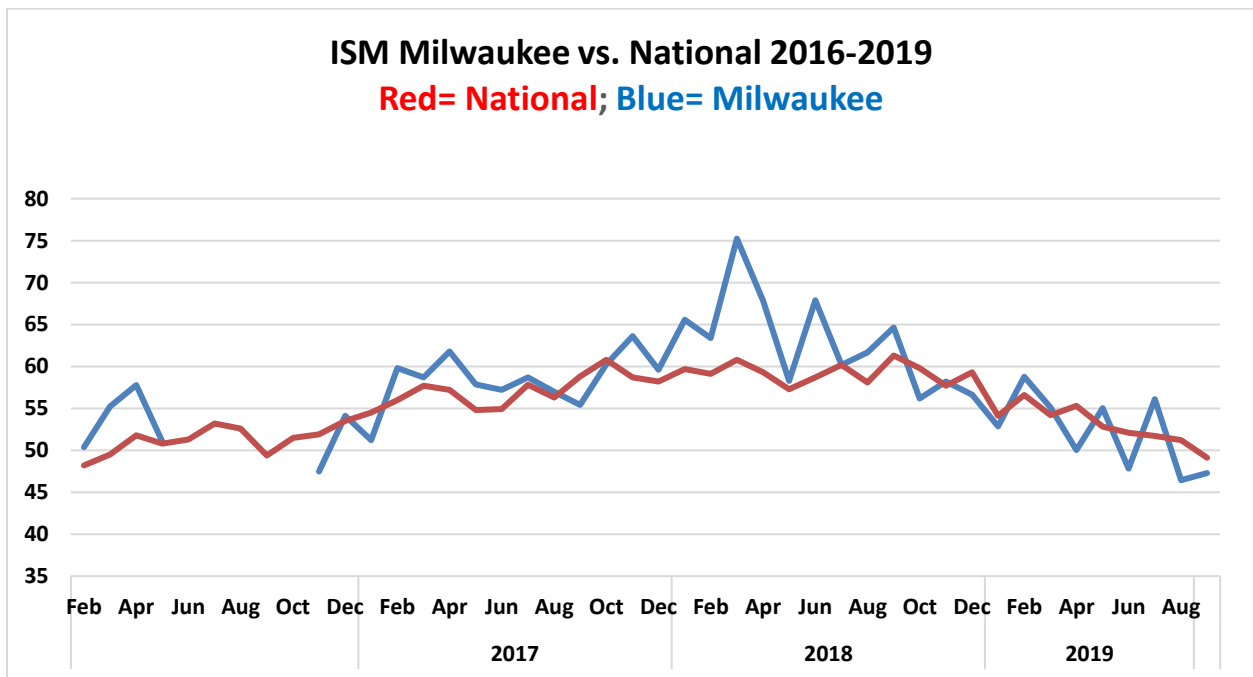
In this outlook, there is an upward shift in positive expectations compared with August in terms of market conditions. Approximately 33% of respondents expect positive conditions, 42% expect conditions to remain the same and 25% of the respondents expect conditions to worsen within the next six months.

	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Sep-19	33.33%	41.67%	25.00%	54.17%
Aug-19	23.08%	53.85%	23.08%	50.00%
Jul-19	21.43%	57.14%	21.43%	50.00%

**Milwaukee versus the Nation –  
January 2010 – September 2019 Graph**



**January 2016- September 2019 Graph**



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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>

**Marquette ISM® Report on Manufacturing  
October 2019- Early Release**

Contact: Bill Lee  
Director, Center for Supply Chain Management  
Marquette University  
(414) 288-6587  
[bill.lee@marquette.edu](mailto:bill.lee@marquette.edu)

Released: October 31<sup>st</sup>, 2019

*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.*

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**Summary**

Milwaukee-area PMI	October 2019	September 2019	August 2019
Seasonally adjusted	42.54	45.41	47.29

(Milwaukee, Wisconsin) – October's Index registered at 42.54, a decrease from 45.41 in September. October's index indicates negative territory.

**What respondents are saying in October 2019:**

- Continued customer order reductions through 2020
- While business seems steady, it is not robust and growing like earlier in the year
- Business owners are refusing additional work and are not interested in expanding due to recent concerns regarding an upcoming recession.

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

MANUFACTURING AT A GLANCE: October 2019*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Oct-19	Sep-19		
PMI	42.54	45.41	-2.9	declining
New Orders	40.26	47.45	-7.2	declining
Production	39.97	42.82	-2.9	declining
Employment	38.39	41.13	-2.7	declining
Supplier Deliveries	47.03	49.80	-2.8	faster
Inventories	47.06	45.83	1.2	declining
Customers' Inventories *	30.00	25.00	5.0	declining
Prices *	50.00	54.17	-4.2	neutral
Backlog of Orders *	40.63	31.82	8.8	declining
Exports *	37.50	43.75	-6.3	declining
Imports *	33.33	41.67	-8.3	declining

(\*) 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 October 2019:

- Production levels are steady at lower volumes than earlier in the year
- Suppliers are maintaining the same lead times but are slowly reducing over time
- Customers are waiting until the last minute to order
- Retaliatory tariffs in multiple countries are creating challenges for export orders

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **October 2019, September 2019, and August 2019.**

	Diffusion Index Oct-19	Diffusion Index Sep-19	Diffusion Index Aug-19	Direction	Comments
Blue Collar	38.4	45.2	57.0	declining	-
White Collar	35.6	41.1	41.8	declining	-

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

## What respondents are saying in October 2019:

- The labor pool is diminishing
- It is becoming increasingly more difficult to find and retain good employees
- Difficult to find replacements for both Blue and White Collar employees

## Buying Policy

Average commitment lead-time for Capital Expenditures increased from 110 days to 124 days. Average lead-time for Production Materials decreased from 49 to 44 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies remained the same at 14 days.

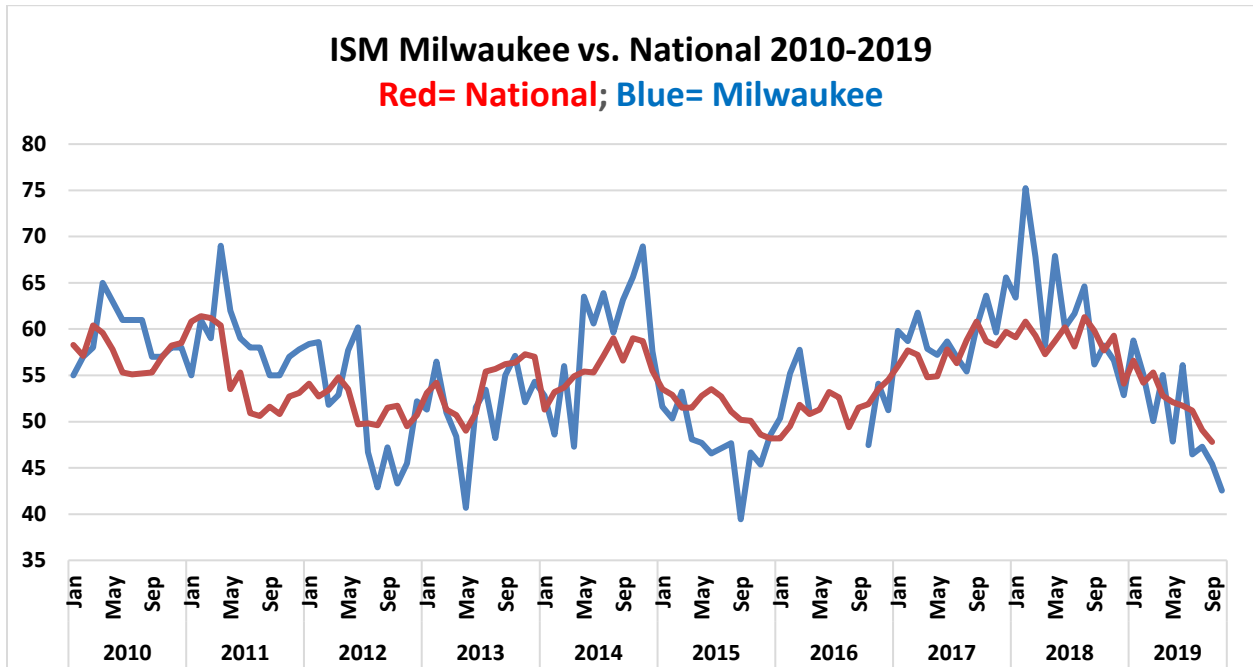
## Six- Month Outlook on Business Conditions

In this outlook, there is a downward shift in positive expectations compared with September in terms of market conditions. Approximately 17% of respondents expect positive conditions, 56% expect conditions to remain the same and 28% of the respondents expect conditions to worsen within the next six months. This month's diffusion index is the lowest since November, 2012.

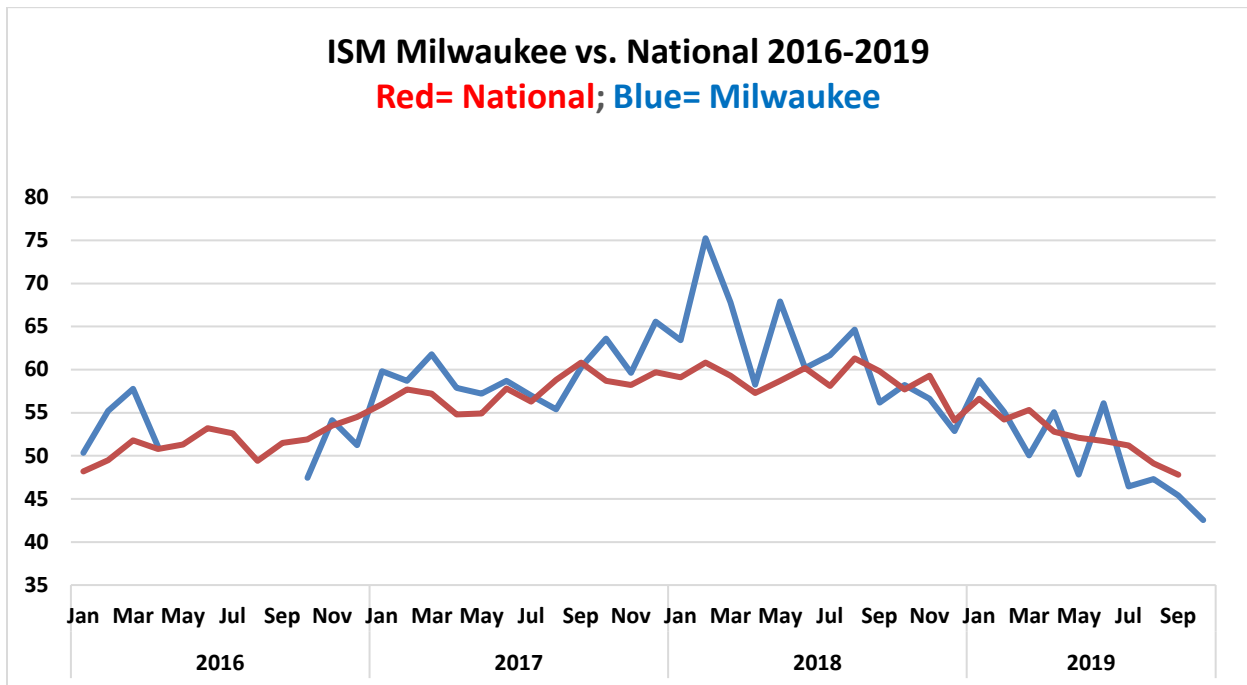
	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Oct-19	16.67%	55.56%	27.78%	44.44%
Sep-19	33.33%	41.67%	25.00%	54.17%
Aug-19	23.08%	53.85%	23.08%	50.00%



**Milwaukee versus the Nation –  
January 2010 – October 2019 Graph**



**January 2016- October 2019 Graph**



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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.**

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**Marquette ISM<sup>®</sup> Report on Manufacturing  
November 2019- Early Release**

Contact: Bill Lee  
Director, Center for Supply Chain Management  
Marquette University  
(414) 288-6587  
[bill.lee@marquette.edu](mailto:bill.lee@marquette.edu)

Released: November 29<sup>th</sup>, 2019

*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.*

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**Summary**

Milwaukee-area PMI	November 2019	October 2019	September 2019
Seasonally adjusted	42.12	42.54	45.41

(Milwaukee, Wisconsin) – November's Index registered at 42.12, a decrease from 42.54 in October. November's index indicates negative territory.

**What respondents are saying in November 2019:**

- Continued customer order reductions in Q4 and through 2020
- Slowing production levels in some sectors
- Business seems to have stabilized and is now picking up a bit

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

MANUFACTURING AT A GLANCE: November 2019*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Nov-19	Oct-19		
PMI	42.12	42.54	-0.4	declining
New Orders	36.54	40.26	-3.7	declining
Production	42.32	39.97	2.4	declining
Employment	31.94	38.39	-6.5	declining
Supplier Deliveries	49.80	47.03	2.8	faster
Inventories	50.00	47.06	2.9	neutral
Customers' Inventories *	33.33	30.00	3.3	declining
Prices *	50.00	50.00	0.0	neutral
Backlog of Orders *	19.23	40.63	-21.4	declining
Exports *	40.91	37.50	3.4	declining
Imports *	31.25	33.33	-2.1	declining

(\*) 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 2019:

- Production levels are the lowest of the year
- Steel pricing is favorable for early 2020
- Slightly concerned about deliveries from Chinese suppliers with the New Year approaching
- Forecasts for 2020 customer inventories are slightly lower than 2019

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **November 2019, October 2019, and September 2019.**

	Diffusion Index Nov-19	Diffusion Index Oct-19	Diffusion Index Sep-19	Direction	Comments
Blue Collar	29.0	38.4	45.2	declining	-
White Collar	37.7	35.6	41.1	declining	-

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

## What respondents are saying in November 2019:

- The labor pool is diminishing
- Difficult to find qualified Blue Collar employees
- The outlook is slow but not stagnating

## Buying Policy

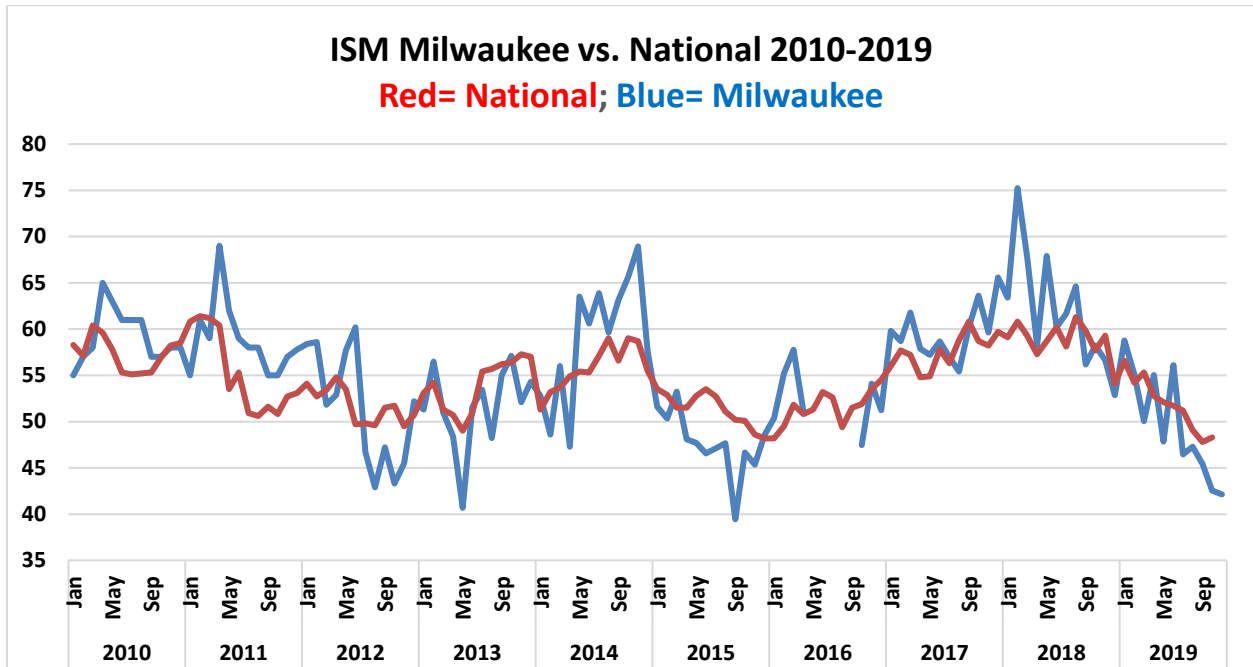
Average commitment lead-time for Capital Expenditures decreased from 124 days to 109 days. Average lead-time for Production Materials increased from 44 to 51 days. Average lead-time for Maintenance, Repair and Operating (MRO) Supplies increased from 14 to 18 days.

## Six- Month Outlook on Business Conditions

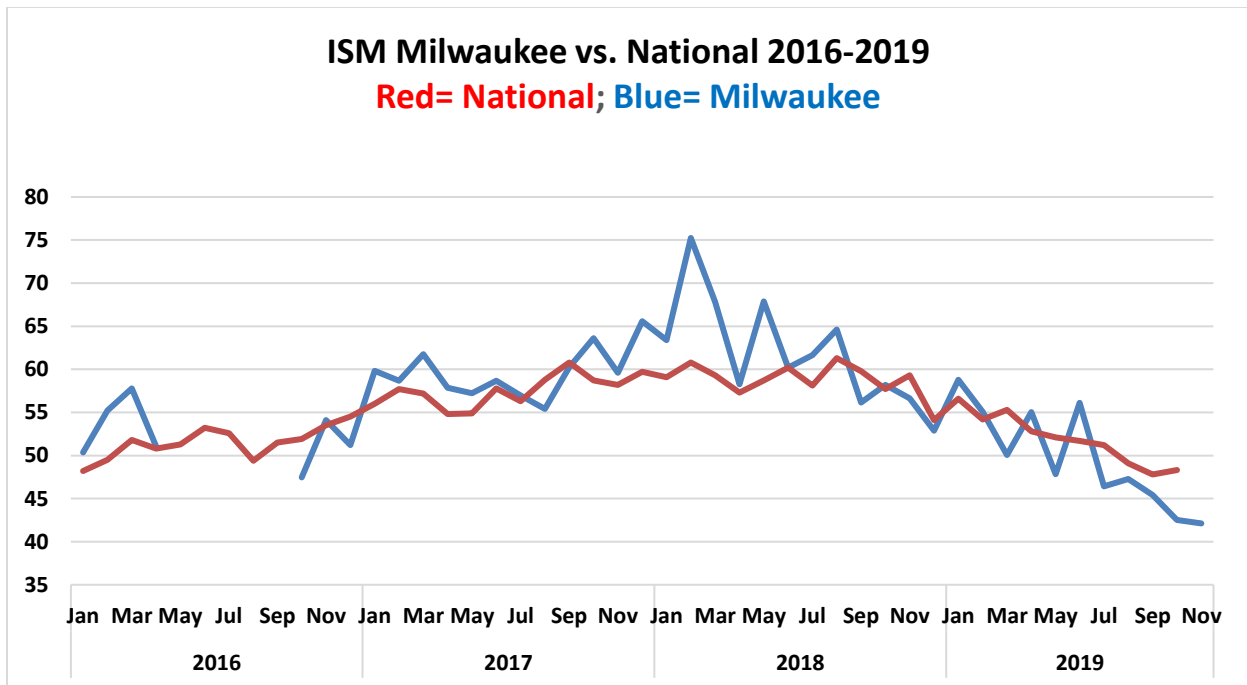
In this outlook, there is a downward shift in positive expectations compared with September in terms of market conditions. Approximately 31% of respondents expect positive conditions, 38% expect conditions to remain the same and 31% of the respondents expect conditions to worsen within the next six months.

	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Nov-19	31.25%	37.50%	31.25%	50.00%
Oct-19	16.67%	55.56%	27.78%	44.44%
Sep-19	33.33%	41.67%	25.00%	54.17%

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January 2010 – November 2019 Graph**



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## Marquette ISM® Report on Manufacturing December 2019- Early Release

Contact: Bill Lee  
Director, Center for Supply Chain Management  
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(414) 288-6587  
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Released: December 31<sup>st</sup>, 2019

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### Summary

Milwaukee-area PMI	December 2019	November 2019	October 2019
Seasonally adjusted	45.10	42.12	42.54

(Milwaukee, Wisconsin) – December's Index registered at 45.10, an increase from 42.12 in November. December's index, while showing some signs of improvement continues to indicate negative territory.

### What respondents are saying in December 2019:

- Continued tariffs on goods from China and uncertainty regarding international trade agreements are the biggest concern
- Somewhat reduced order volume and continued demand volatility expected to continue through 2020
- Suppliers are increasing prices due to the need to outsource labor



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

MANUFACTURING AT A GLANCE: December 2019*				
Index	Series	Series	Percentage Point Change	Direction
	Index	Index		
	Dec-19	Nov-19		
PMI	45.10	42.12	3.0	declining
New Orders	42.63	36.54	6.1	declining
Production	45.34	42.32	3.0	declining
Employment	37.74	31.94	5.8	declining
Supplier Deliveries	46.87	49.80	-2.9	faster
Inventories	52.94	50.00	2.9	growing
Customers' Inventories *	32.14	33.33	-1.2	declining
Prices *	55.88	50.00	5.9	growing
Backlog of Orders *	36.67	19.23	17.4	declining
Exports *	35.00	40.91	-5.9	declining
Imports *	45.00	31.25	13.8	declining

(\*) 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 2019:

- Production levels are starting to rebound from historic lows
- Beginning to see increased orders from Europe on new product designs
- End of the year price adjustments are signaling slightly higher prices

## Blue and White-Collar Employment:

We have collected input on Blue and White Collar Employment. The indices are below for **December 2019, November 2019, and October 2019.**

	Diffusion Index Dec-19	Diffusion Index Nov-19	Diffusion Index Oct-19	Direction	Comments
Blue Collar	43.6	29.0	38.4	declining	-
White Collar	40.6	37.7	35.6	declining	-

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

## What respondents are saying in December 2019:

- Some are not replacing voluntary blue-collar departures
- Expect future outlook to follow slowing trends

## Buying Policy

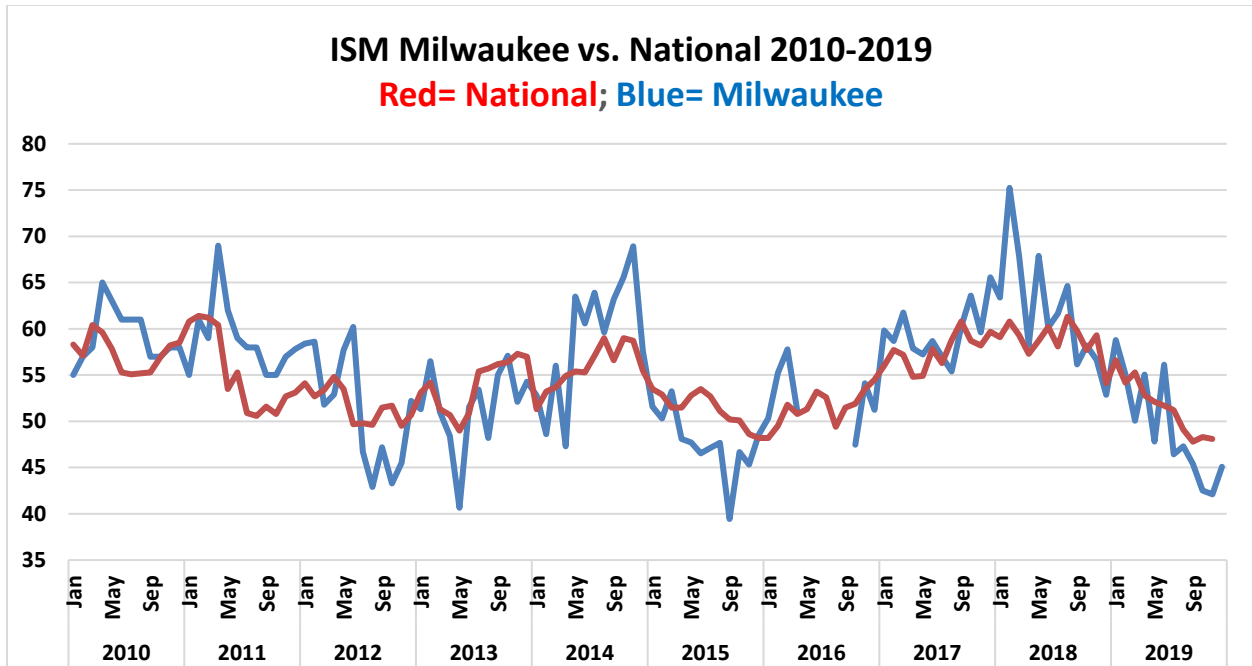
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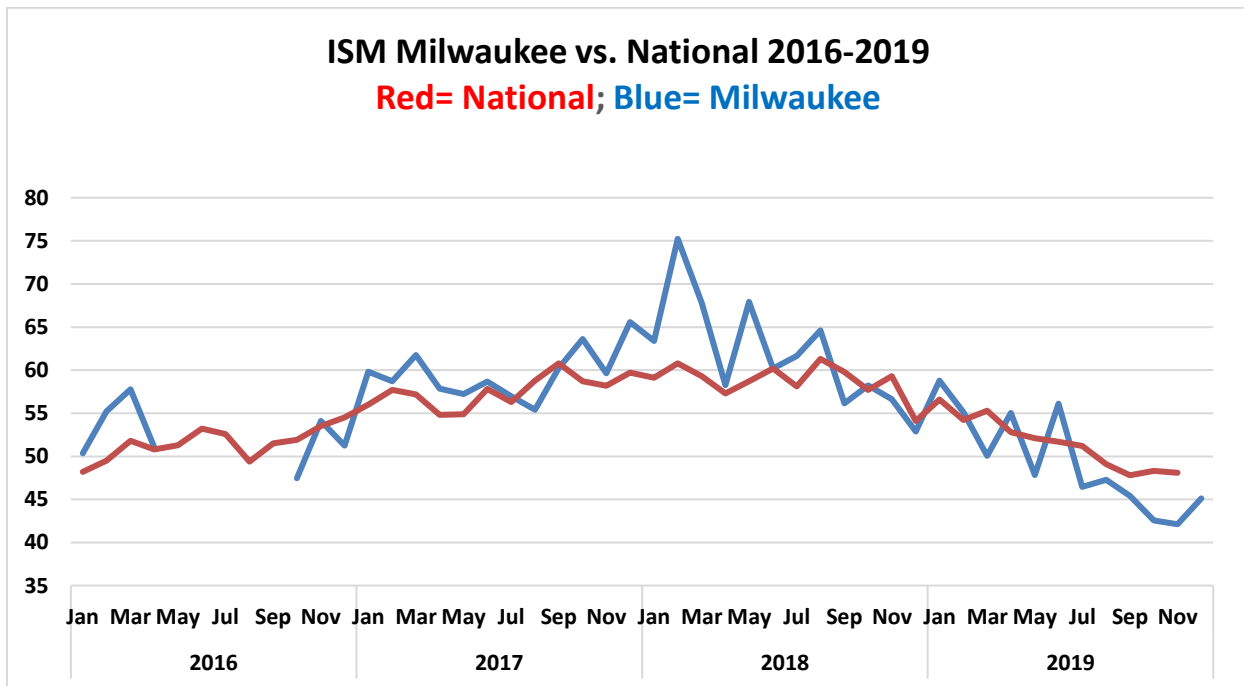
In this outlook, there is an upward shift in positive expectations compared with November in terms of market conditions. This is the highest index value in the last 6 months. Approximately 35% of respondents expect positive conditions, 53% expect conditions to remain the same and 12% of the respondents expect conditions to worsen within the next six months.

	Expect Positive Conditions	Expect Same Conditions	Expect Worse Conditions	Diffusion Index
Dec-19	35.29%	52.94%	11.76%	61.76%
Nov-19	31.25%	37.50%	31.25%	50.00%
Oct-19	16.67%	55.56%	27.78%	44.44%

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