

ISM-Houston Business Report

February 2019



Analysis and report by **Ross Harvison, CPSM**
 Chair of the ISM-Houston Business Survey Committee

(Houston, Texas) – According to Houston supply chain executives, manufacturing activity in Houston expanded in February for the 18th consecutive month and overall economic activity expanded for the 31st month. The near-term forecast points to continued overall economic growth. The forecast for manufacturing strengthened further.

The February Houston Purchasing Managers Index registered **56.1**, up marginally from last month. The three underlying indicators that have the strongest direct correlation with current economic activity (sales/new orders, employment, and lead times) continue to point towards growth near term. The underlying indicator that has the largest inverse correlation, finished goods inventory, has been tracking close to neutral for the last several months.

The three-month forecast for the Houston PMI registered **53.7**, up 2.9 points from its January reading of 50.8. A significantly higher prices paid index, along with sustained positive performance of the sales/new orders, production, and lead times indices were the primary drivers for the improvement in the forecast index. These indices are all directly correlated with economic activity at all forecast horizons.

On an industry specific basis Health Care, Professional Services, Construction, and Durable Goods Manufacturing reported expansion. Non-durable Goods manufacturing and Oil & Gas showed contraction. From a three-month forecast standpoint, Construction, Health Care, and Professional Services are pointing to continued strength.

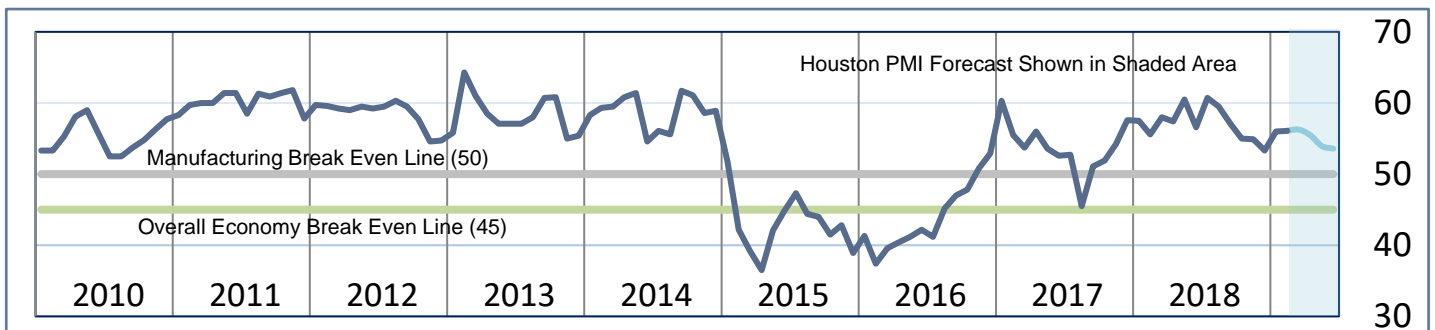
Indices at a Glance

Index	Feb	Jan	Change	Track	Rate	Trend*
Houston PMI - Current	56.1	56.0	0.1	Expanding	Faster	18
Houston PMI - 3 Month Forecast	53.7	50.8	2.9	Expanding	Faster	2
Sales/New Orders	55.2	52.2	3.0	Rising	Faster	2
Production	52.3	51.5	0.8	Rising	Faster	18
Employment	60.2	61.7	-1.5	Rising	Slower	18
Purchases	47.5	51.3	-3.8	Falling	Fr. Rising	1
Prices Paid	58.4	46.1	12.3	Rising	Fr. Falling	1
Lead Times	51.4	53.9	-2.5	Rising	Slower	27
Purchased Inventory	45.4	49.9	-4.5	Falling	Faster	4
Finished Goods Inventory	49.2	51.9	-2.7	Falling	Fr. Rising	1
Overall Houston Economy				Expanding	Slower	31

* Number of months on current track

Houston PMI Trend

Manufacturing expansion, including supporting services, continued for the 18th consecutive month in February with the Houston PMI registering 56.1, up modestly from January. This growth was led by strong performance in the sales/new orders, employment, and prices paid indices. Readings over 50 generally indicate manufacturing expansion; readings below 50 show contraction. A PMI above 45 generally correlates with expansion of the Houston-The Woodlands-Sugar Land Business Cycle Index.



Commodities Reported to have Notable Prices Changes or to be in Short Supply

Up in Price: Crude and motor fuels; butene-1; ocean freight; copper wire and cable; heat exchangers, pumps, compressors, and turbines; vaccines

Down in Price: Alloy and carbon steel pipe

In Short Supply: Craft, light industrial, and manufacturing labor; IT Service Center personnel; Tax Professionals; EPI Pens and other drugs

Sector Summaries

Oil and Gas Exploration, and Key Support Services:

- *This sector reported relatively flat month over month with production and prices as registered as increasing, employment and lead times unchanged, and purchases and inventories as down*

Engineering and Construction:

- *Respondents in this sector reported significant improvement with new orders, employment, and prices increasing; purchases and inventories were down*

Manufacturing - Durable Goods:

- *Manufacturing for the drilling industry remains strong with a number of large PO's due in the near future*
- *This sector reported just above neutral this month with employment, prices, and lead times all rising; sales are falling and finished goods inventories are rising*

Manufacturing - Non-Durable Goods:

- *This sector reported as flat with last month; sales and production were unchanged; prices and inventories rose; employment, purchases, and lead times fell*

Wholesale Trade:

- *Respondents in this area reported activities relatively unchanged from last month; all indicators were close to neutral*

Professional Services:

- *There has been an increase by energy companies exploring the hiring of both employee and non-employee labor to support capital projects and operations in general but decisions to act on hiring any resources are being delayed; companies seem to be very deliberate before making the move to add any type of resources*
- *We see a slight increase in optimism by energy companies to begin spending money, particularly in the area of building of infrastructure for mid-stream assets*
- *Overall, respondents in this area indicated modest improvement this month after indicating a significant gain in January; the sales/new orders and employment showed strong growth*

Health Care:

- *Another busy year ahead*
- *This sector continues to report strong growth; the employment, purchases, prices paid, and lead times indices all showed significant strength again this month*

Trend of Underlying Indicators

The Houston PMI is based on diffusion indices for eight underlying indicators. The net value of each indicator is simply the percentage of respondents who cite a positive shift from the previous month minus the percentage who cite a negative shift. The diffusion index is calculated based on the percent of respondents reporting higher results plus one-half of those responding the same with a seasonal adjustment based on an X13 ARIMA forecast. Seasonally adjusted values above 50 for the Sales/New Orders, Production, Employment, Prices Paid, and Lead Times indicators generally point towards expansion at all forecast horizons and values below 50 signal contraction. Note that the Prices Paid Index may not follow this trend late in an economic expansion. The Inventory measures have an inverse correlation at most forecast horizons, meaning that values below 50 point to expansion and values above point to contraction. The Purchases index is inversely correlated with economic activity at the two, three, and four month forecast horizons.

ISM-Houston Business Report

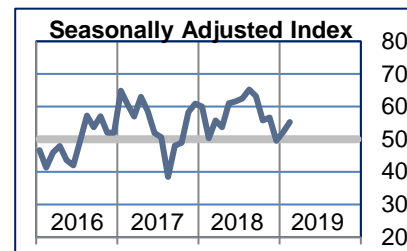
February 2019



Sales/New Orders Index

The sales/new orders index rose modestly. Construction and professional services reported rising sales, while durable goods and O&G reported falling sales; non-durable goods manufacturing reported as flat.

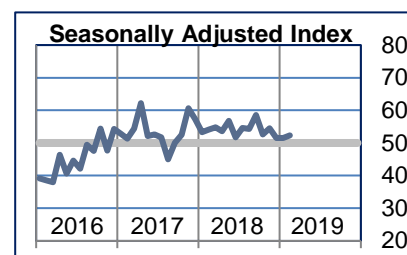
	Higher	Same	Lower	Net	Index
Sep/18	32%	61%	7%	25%	63.1
Oct/18	19%	69%	12%	7%	55.8
Nov/18	11%	83%	6%	5%	56.6
Dec/18	9%	77%	14%	-5%	49.5
Jan/19	11%	81%	8%	3%	52.2
Feb/19	20%	75%	5%	15%	55.2



Production Index

The production index was relatively flat from last month. Only O&G reported this index as rising. Durable goods manufacturing joined all other sectors reporting near neutral.

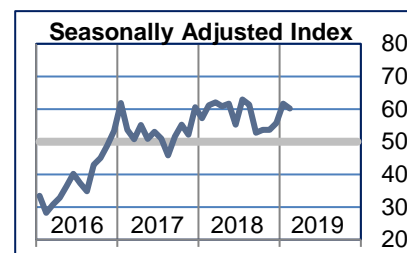
	Higher	Same	Lower	Net	Index
Sep/18	18%	81%	1%	17%	58.6
Oct/18	12%	83%	5%	7%	52.6
Nov/18	6%	93%	1%	5%	54.5
Dec/18	5%	92%	3%	2%	51.6
Jan/19	3%	96%	1%	2%	51.5
Feb/19	8%	90%	2%	6%	52.3



Employment Index

The employment index continued to show strength. Health care, professional services and construction reported rising employment. Non-durable goods manufacturing indicated falling employment.

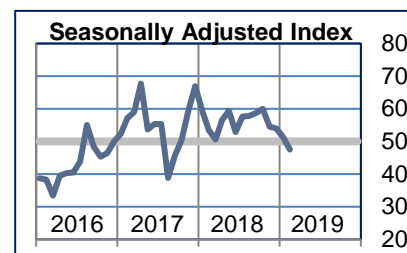
	Higher	Same	Lower	Net	Index
Sep/18	14%	78%	8%	6%	52.7
Oct/18	18%	73%	9%	9%	53.6
Nov/18	16%	75%	9%	7%	53.6
Dec/18	20%	74%	6%	14%	55.7
Jan/19	35%	50%	15%	20%	61.7
Feb/19	24%	70%	6%	18%	60.2



Purchases Index

The purchases index fell below neutral. Only health care reported greater purchases. Construction, O&G and non-durable goods reported purchases as lower again this month.

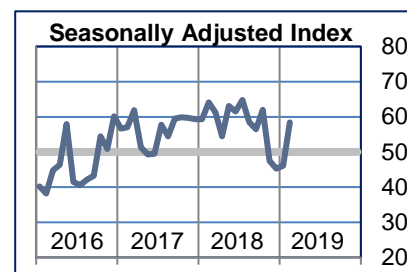
	Higher	Same	Lower	Net	Index
Sep/18	26%	66%	8%	18%	58.7
Oct/18	22%	70%	8%	14%	60.0
Nov/18	10%	87%	3%	7%	54.6
Dec/18	12%	82%	6%	6%	54.0
Jan/19	16%	72%	12%	4%	51.3
Feb/19	6%	84%	10%	-4%	47.5



Prices Paid Index

The prices paid index rose considerably this month with construction, manufacturing, and healthcare reporting significant increases in this index. No sector reported prices as falling.

	Higher	Same	Lower	Net	Index
Sep/18	20%	72%	8%	12%	56.4
Oct/18	30%	69%	1%	29%	62.0
Nov/18	8%	81%	11%	-3%	47.4
Dec/18	10%	74%	16%	-6%	45.3
Jan/19	12%	68%	20%	-8%	46.1
Feb/19	19%	78%	3%	16%	58.4



ISM-Houston Business Report

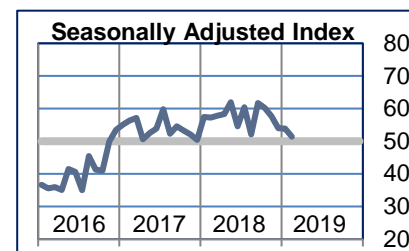
February 2019



Lead Times Index

The lead times index fell to close to neutral this month. Health care, construction, and durable goods manufacturing reported increasing lead times while all other sectors registered near neutral.

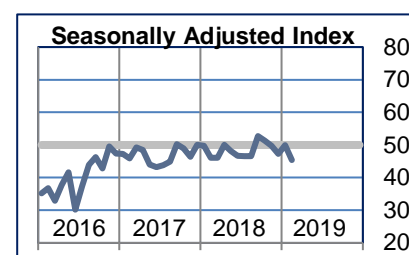
	Higher	Same	Lower	Net	Index
Sep/18	24%	75%	1%	23%	61.7
Oct/18	18%	81%	1%	17%	60.2
Nov/18	17%	82%	1%	16%	57.7
Dec/18	11%	85%	4%	7%	54.0
Jan/19	10%	85%	5%	5%	53.9
Feb/19	9%	88%	3%	6%	51.4



Purchased Inventory Index

The purchased goods inventory index fell this month, ending well below neutral. Construction and O&G reported the highest rate of falling inventories. Non-durable goods manufacturing was the only sector to report rising inventories.

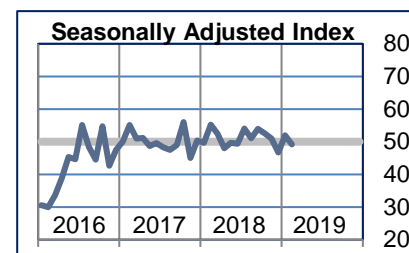
	Higher	Same	Lower	Net	Index
Sep/18	8%	89%	3%	5%	52.7
Oct/18	4%	89%	7%	-3%	51.4
Nov/18	5%	90%	5%	0%	49.7
Dec/18	1%	89%	10%	-9%	47.3
Jan/19	10%	87%	3%	7%	49.9
Feb/19	4%	88%	8%	-4%	45.4



Finished Goods Inventory Index

The finished goods inventory index dipped to slightly below neutral. Manufacturing continued to report increasing inventories, while O&G reported decreases. Other sectors reported near neutral.

	Higher	Same	Lower	Net	Index
Sep/18	9%	89%	2%	7%	53.9
Oct/18	5%	94%	1%	4%	52.6
Nov/18	5%	93%	2%	3%	51.0
Dec/18	1%	94%	5%	-4%	46.8
Jan/19	10%	89%	1%	9%	51.9
Feb/19	4%	92%	4%	0%	49.2



Comments on Houston PMI Calculation Methods

The Houston PMI is calculated by applying optimal regression factors to each of the eight underlying indicators noted above. These regression factors are determined using standard regression techniques comparing these underlying indicators to the Houston-The Woodlands-Sugar Land Business Cycle Index (Houston BCI), which is reported on a monthly basis by the Federal Reserve Bank of Dallas. ISM-Houston periodically reviews the capability of its correlations and adjusts the regression factors when appropriate. The most recent revision occurred as a result of a review undertaken during the third quarter of 2018, which determined that changes in the Houston economy over the last decade have shifted the intercept of the correlation, causing a neutral Houston PMI to no longer align with a neutral Houston BCI. A Houston PMI of 45 points now equates to a neutral Houston BCI. A similar offset between the National PMI and the National economy has existed for some time.

The new regression factors have been utilized for this report. Additionally, the Houston PMI reported from the beginning of 2014 to present has been restated using the revised regression factors.

The ISM-Houston Business Report began in January 1995

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