

ISM-Houston Business Report

December 2019



ISM—Houston, Inc.

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

(Houston, Texas) – According to Houston area supply chain executives, goods producing industry activity in Houston contracted modestly in December. While construction activity improved, it was offset by continued weakness in manufacturing and oil & gas. Services producing industry activity continued to run near neutral. Overall economic activity continued to expand at a very modest rate.

The December Houston Purchasing Managers Index rose modestly to **47.4** from last month's level of 46.9. Two of the three underlying indicators that have the strongest direct correlation with economic activity, sales/new orders and employment, continue to report below neutral. The third underlying indicator with a strong positive correlation, lead times, returned to just above neutral. The sales/new orders index rose 1.5 points to 44.1. The employment index fell an additional 0.5 points to 47.2. The lead times index rose 0.6 points to 50.5. The underlying indicator that has the largest inverse correlation, finished goods inventory, fell an additional 1.9 points to 47.4.

The three-month forecast for the Houston PMI rose 1.8 points to 49.7. Strengthening of the sales/new orders, production, and lead times indices drove most of this increase. These indices have a strong direct correlation with economic activity at the three-month forecast horizon.

On an industry specific basis, transportation and utilities, and health care reported expansion. Oil & gas, durable goods manufacturing, wholesale trade, and professional services reported contraction. From a three-month forecast standpoint, modest improvement is anticipated for this assessment.

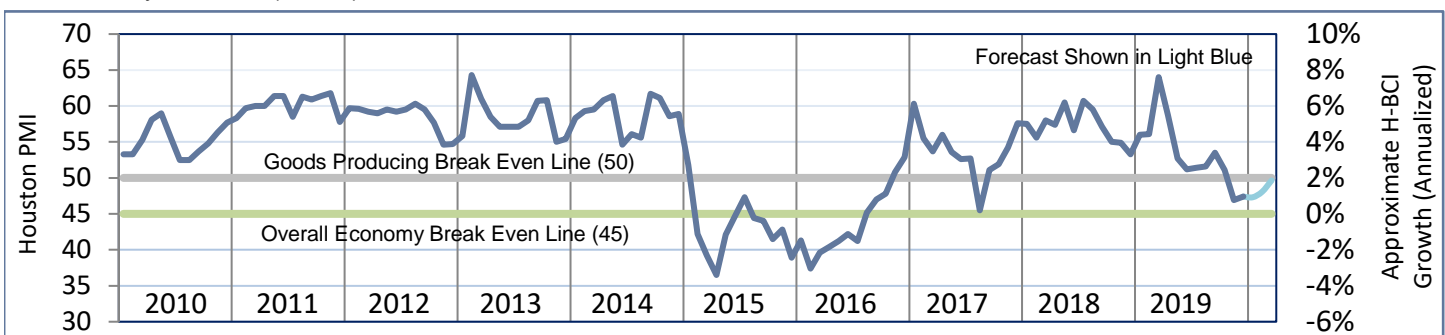
Indices at a Glance

Index	Dec	Nov	Change	Track	Rate	Trend*
Houston PMI - Current	47.4	46.9	0.5	Contracting	Slower	2
Houston PMI - 3 Month Forecast	49.7	47.9	1.8	Contracting	Slower	2
Sales/New Orders	44.1	42.6	1.5	Falling	Slower	2
Production	52.4	47.5	4.9	Rising	Fr. Falling	1
Employment	47.2	47.7	-0.5	Falling	Faster	2
Purchases	44.0	42.1	1.9	Falling	Slower	2
Prices Paid	43.7	45.2	-1.5	Falling	Faster	8
Lead Times	50.5	49.9	0.6	Rising	Fr. Falling	1
Purchased Inventory	52.4	52.4	0.0	Rising	Unchanged	3
Finished Goods Inventory	47.4	49.3	-1.9	Falling	Faster	2
Overall Houston Economy				Expanding	Faster	41

* Number of months on current track

Houston PMI Trend

Activity of goods producing industries in Houston contracted in December for the second month. Overall economic activity has grown for 41 months. HPMI readings over 50 generally indicate goods producing industry expansion; readings below 50 show contraction. An HPMI above 45 generally correlates with expansion of the Houston-The Woodlands-Sugar Land Business Cycle Index (H-BCI).



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

Up in Price: Crude oil and motor fuels; natural gas; ethylene oxide and derivatives; platinum, palladium, and rhodium for catalysts

Down in Price: Fabricated structural steel, carbon steel pipe; ocean freight; natural gas; natural gas liquids, ethane, propane; ethylene, and propylene; propylene glycol, methanol; and bottled gases

In Short Supply: Craft labor, welders, CDL drivers; helium gas; AI, machine learning, cyber security and other IT professionals

Respondent Comments and Sector Summaries

Oil and Gas Exploration, and Key Support Services:

- U.S. and Texas rig counts were relatively unchanged this month
- *This sector reported moderate contraction at a faster pace this month; the employment, purchases, and prices paid indices continue to point to slowing in this sector*

Engineering and Construction:

- Fewer suppliers shut down during the holidays in an effort to boost yearly performance
- *This sector improved to just above neutral this month; new orders were about the same as last month, while the employment, purchases, and prices paid indices continue to point to expansion*

Manufacturing - Durable Goods:

- *This sector improved modestly during the month, but remains below neutral overall; the sales, production, purchases, and prices paid indices continue to indicate contraction in this sector; the lead time index returned to neutral after pointing to contraction last month*

Manufacturing - Non-Durable Goods:

- We see business slowing down
- After falling much of the year, polymer prices appear to have stabilized
- *This sector remained near neutral during the month; the sales, purchases, and prices paid indices remained weak, while the production and employment indices stayed near neutral; lead times continue to rise*

Transportation and Utilities (including mid-stream operations):

- *This sector returned to indicating strength after one month of weakness; the sales, production, employment, and purchases indices were all reported as rising; lead times are falling*

Professional Services:

- Business activity slowed in December
- Some optimism around rising oil prices occurred in late December; increased hiring at O&G companies is anticipated if prices stabilize around \$70
- Hiring activities are on hold until after the first of the year; companies have the bandwidth of budget to add staff but they are holding off for now
- *This sector remained below neutral with continued significant weakness in the sales and employment indices*

Health Care:

- Holiday slowness, but will pick up in early January
- *This sector continues to report strength; the employment index was reported well above neutral 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. Values above 50 for Sales/New Orders, Production, Employment, Prices Paid, and Lead Times generally point towards expansion 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 three-month forecast horizon.

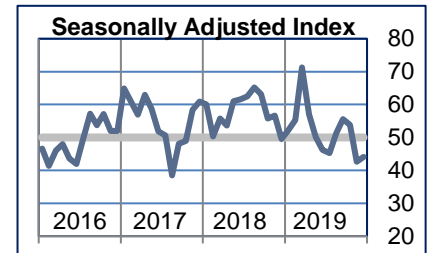
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Sales/New Orders Index

The sales/new orders index remained well below neutral. Manufacturing, wholesale trade, and professional services reported significant contraction. Transportation and utilities indicated renewed strength.

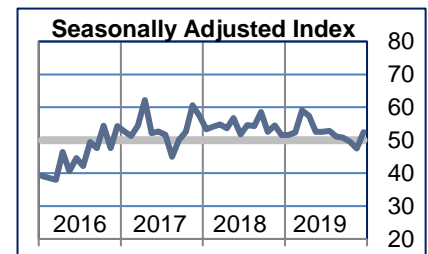
	Higher	Same	Lower	Net	Index
Jul/19	14%	67%	19%	-5%	45.2
Aug/19	7%	90%	3%	4%	51.3
Sep/19	14%	84%	2%	12%	55.6
Oct/19	10%	87%	3%	7%	53.9
Nov/19	1%	80%	19%	-18%	42.6
Dec/19	4%	77%	19%	-15%	44.1



Production Index

The production index rebounded to above neutral, led by a significant improvement in transportation and utilities. Durable goods manufacturing reported further contraction in this index. All other industries responded near neutral.

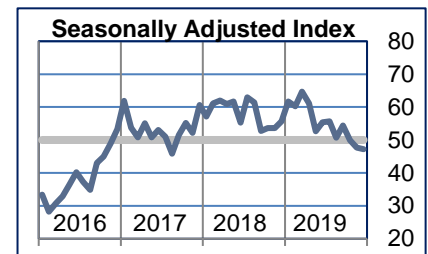
	Higher	Same	Lower	Net	Index
Jul/19	7%	91%	2%	5%	52.9
Aug/19	4%	95%	1%	3%	51.1
Sep/19	6%	90%	4%	2%	50.8
Oct/19	2%	97%	1%	1%	49.6
Nov/19	2%	93%	5%	-3%	47.5
Dec/19	6%	89%	5%	1%	52.4



Employment Index

The employment index remained moderately below neutral. Oil & gas and professional services reported additional weakness. Transportation and utilities, and health care reported strength.

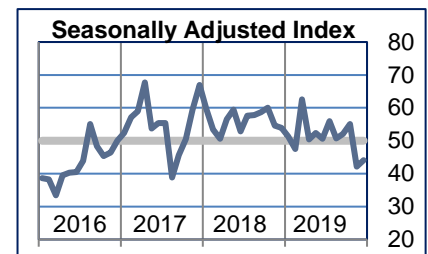
	Higher	Same	Lower	Net	Index
Jul/19	18%	74%	8%	10%	55.6
Aug/19	7%	86%	7%	0%	50.7
Sep/19	13%	84%	3%	10%	54.4
Oct/19	8%	85%	7%	1%	50.0
Nov/19	9%	79%	12%	-3%	47.7
Dec/19	8%	78%	14%	-6%	47.2



Purchases Index

The purchases index also remained well below neutral. Oil & gas, manufacturing, and wholesale trade reported well below neutral. Transportation and utilities rebounded to above neutral.

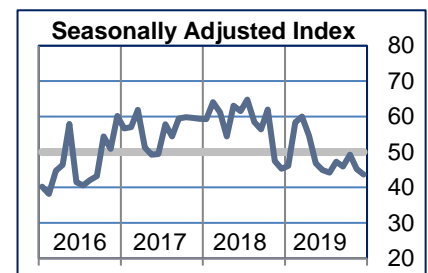
	Higher	Same	Lower	Net	Index
Jul/19	12%	86%	2%	10%	56.0
Aug/19	8%	89%	3%	5%	50.7
Sep/19	13%	84%	3%	10%	52.1
Oct/19	11%	88%	1%	10%	55.1
Nov/19	7%	72%	21%	-14%	42.1
Dec/19	8%	68%	24%	-16%	44.0



Prices Paid Index

The prices paid index remained well below neutral. Oil & gas, manufacturing, and wholesale trade reported prices as falling at a rapid pace. Construction reported prices as continuing to rise.

	Higher	Same	Lower	Net	Index
Jul/19	6%	75%	19%	-13%	44.2
Aug/19	3%	89%	8%	-5%	47.3
Sep/19	1%	92%	7%	-6%	45.9
Oct/19	6%	88%	6%	0%	49.2
Nov/19	2%	85%	13%	-11%	45.2
Dec/19	2%	80%	18%	-16%	43.7



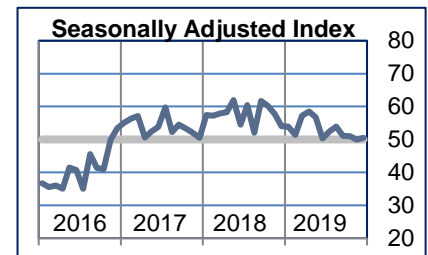
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Lead Times Index

The lead times index rose minimally. Construction, and transportation and utilities reported lead times as falling at a fast pace. Oil & gas and nondurable goods manufacturing continue to report this index as rising.

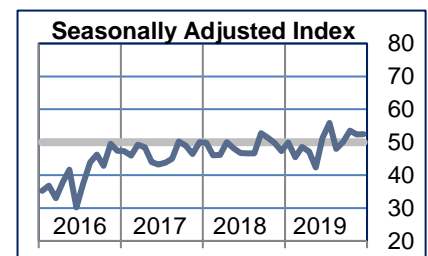
	Higher	Same	Lower	Net	Index
Jul/19	6%	93%	1%	5%	52.5
Aug/19	15%	81%	4%	11%	53.9
Sep/19	5%	94%	1%	4%	51.1
Oct/19	6%	89%	5%	1%	51.0
Nov/19	5%	89%	6%	-1%	49.9
Dec/19	5%	90%	5%	0%	50.5



Purchased Inventory Index

The purchased inventory index remained near neutral with durable goods manufacturing reporting reductions while transportation and utilities reported increases. All other sectors reported near neutral.

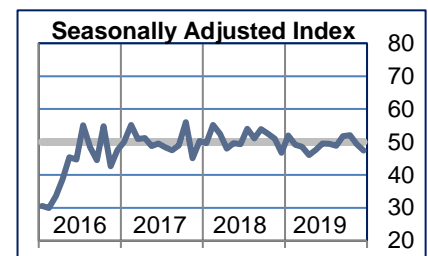
	Higher	Same	Lower	Net	Index
Jul/19	14%	85%	1%	13%	55.9
Aug/19	5%	87%	8%	-3%	48.0
Sep/19	1%	95%	4%	-3%	50.0
Oct/19	2%	96%	2%	0%	53.6
Nov/19	4%	94%	2%	2%	52.4
Dec/19	2%	95%	3%	-1%	52.4



Finished Goods Inventory Index

The finished goods inventory index remained just below neutral. Durable goods manufacturing returned to neutral after rising last month. Nondurable goods manufacturing reported this index as contracting.

	Higher	Same	Lower	Net	Index
Jul/19	1%	97%	2%	-1%	49.4
Aug/19	4%	91%	5%	-1%	48.8
Sep/19	2%	97%	1%	1%	51.8
Oct/19	1%	98%	1%	0%	52.1
Nov/19	2%	97%	1%	1%	49.3
Dec/19	2%	94%	4%	-2%	47.4



Houston PMI Calculation Methods

The Houston Purchasing Managers Index provides a measure of current economic activity in the greater Houston area and a forecast of likely shifts in activity over a three-month forecast horizon. The current and forecast HPMI indices are based on diffusion indices for the eight underlying indicators noted in this report. The respondents to the survey report the direction of each these activities as up, the same, or down in comparison to the previous month. An index for each area is calculated by subtracting the percentage of respondents that sight a negative shift from the percentage that sight a positive shift. The HPMI is calculated by applying optimal regression factors to each of these underlying indicators with the result being converted to a 0 to 100 scale. Readings over 50 generally indicate manufacturing expansion; readings below 50 show contraction. An HPMI above 45 generally correlates with expansion of the Houston-The Woodlands-Sugar Land Business Cycle Index (H-BCI).

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