

ISM-Houston Business Report

February 2020



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 this month after showing expansion for only one month. Services producing industry activity expanded for the second month. Overall economic activity continues to expand at a moderate pace. Many respondents indicated that the COVID-19 virus is affecting their business activities.

The February Houston Purchasing Managers Index fell to **50.2** from last month's level of 52.4. Only one of the three underlying indicators that have the strongest direct correlation with economic activity, lead times, is now pointing to expansion. The other two indicators with a strong positive correlation, sales/new orders and employment, are now showing potential contraction. The lead times index rose 1.3 points to 52.5. The sales/new orders index rose 2.0 points to 49.7. The employment index fell 9.7 points to 48.6. The underlying indicator that has the largest inverse correlation, finished goods inventory, fell 9.0 points to 46.3.

The three-month forecast for the Houston PMI rose 0.2 points to 51.4. Improvement in the sales/new orders and lead times indices were offset by softening of the prices paid index. These indices have a strong direct correlation with economic activity at the three-month forecast horizon.

On an industry specific basis, durable goods manufacturing, utilities, wholesale trade, and health care reported expansion. Construction and professional services joined oil & gas in reporting contraction. From a three-month forecast standpoint, modest improvement is predicted if the effects of the COVID-19 virus are minimal.

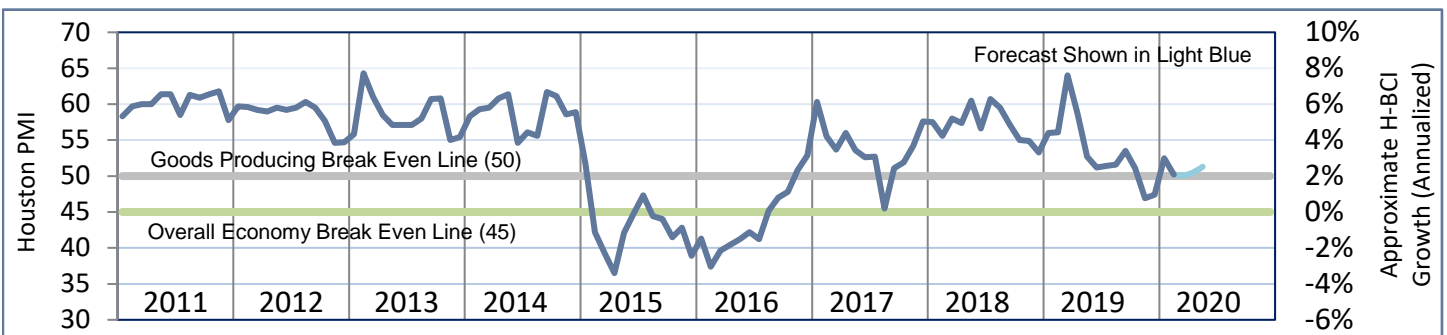
Indices at a Glance

Index	Feb	Jan	Change	Track	Rate	Trend*
Houston PMI - Current	50.2	52.5	-2.3	Expanding	Slower	2
Houston PMI - 3 Month Forecast	51.4	51.2	0.2	Expanding	Faster	2
Sales/New Orders	49.7	47.7	2.0	Falling	Slower	4
Production	53.4	52.3	1.1	Rising	Faster	3
Employment	48.6	58.3	-9.7	Falling	Fr. Rising	1
Purchases	50.4	46.5	3.9	Rising	Fr. Falling	1
Prices Paid	49.7	51.5	-1.8	Falling	Fr. Rising	1
Lead Times	52.5	51.2	1.3	Rising	Faster	3
Purchased Inventory	52.1	50.0	2.1	Rising	Fr. Neutral	1
Finished Goods Inventory	46.3	55.3	-9.0	Falling	Fr. Rising	1
Overall Houston Economy				Expanding	Slower	43

* Number of months on current track

Houston PMI Trend

Overall economic activity in Houston has grown for 43 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: Fabricated structural steel, alloy pipe, copper wire and cable, heat exchangers; electrical equipment; gold, palladium, and rhodium for catalysts; imported commodity chemicals, polyethylene and polypropylene; ocean freight from Asia

Down in Price: Crude oil and motor fuels; natural gas, propane, butane, isobutane, ethylene; domestically produced commodity chemicals; carbon steel pipe; bulk electrical materials

In Short Supply: Masks, gowns and any supplies for preventing the spread of COVID-19; craft labor and welders; robotic process automation (RPA), internet of things (IoT), and artificial intelligence (AI) developers; IT cyber security personnel

Respondent Comments and Sector Summaries

Oil and Gas Exploration, and Key Support Services:

- Texas rig counts were relatively stable during the month
- Reorganizations are continuing to shrink employment
- *This sector continues to contract; the sales, production, employment, and purchases indices are pointing to significant slowing; all other indices are near neutral*

Engineering and Construction:

- We are seeing disruptions due to the Coronavirus outbreak
- The uncertainty involving the Coronavirus and resulting market volatility is causing our customers to reassess their capital spend plans for 2020 and beyond
- *This sector reported flat this month; the sales/new orders index fell below neutral and the employment returned to neutral; the prices paid index continues to point to expansion*

Manufacturing - Durable Goods:

- *This sector reported strength again this month with the sales/new orders and production indices continuing to point to growth; the employment index fell to near neutral and the purchases index fell below neutral*

Manufacturing - Non-Durable Goods:

- Pricing and demand seem to be trending downward
- The Coronavirus will have an affect on our markets if there is a continued increase in cases and deaths
- *This sector fell back to contraction this month; the sales, employment, and purchases indices are showing significant weakness; all other indices are near neutral*

Transportation and Utilities (including mid-stream operations):

- COVID-19 is not impacting our power generation materially so far
- *This sector also weakened to near neutral with all indices reported as flat from month to month*

Wholesale Trade:

- We are already having customers not wanting to purchase materials made in China due to the Coronavirus

Professional Services:

- Concerns over the Coronavirus have caused companies to hit pause on hiring and capital investment
- *This sector returned to indicating contraction with the sales index falling well below neutral and the employment index falling to neutral*

Health Care:

- *This sector is expanding at a slower pace with the employment index moderating significantly*
-

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.

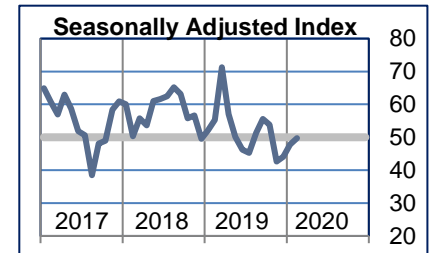
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Sales/New Orders Index

The sales/new orders index rose to just below neutral. Weakness in oil & gas, construction, nondurable goods manufacturing, and professional services were offset by strength in durable goods, utilities, and wholesale trade.

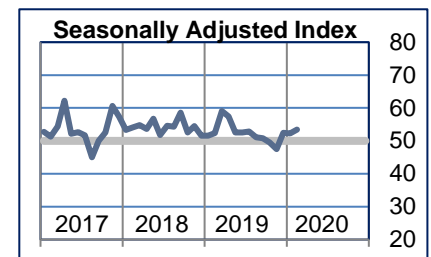
	Higher	Same	Lower	Net	Index
Sep/19	14%	84%	2%	12%	55.6
Oct/19	10%	87%	3%	7%	53.9
Nov/19	1%	80%	19%	-18%	42.6
Dec/19	4%	77%	19%	-15%	44.1
Jan/20	14%	71%	15%	-1%	47.7
Feb/20	17%	69%	14%	3%	49.7



Production Index

The production index rose modestly. Wholesale trade joined durable goods manufacturing and utilities in reporting strength. Oil & gas fell to below neutral. All other industries responded as flat month to month.

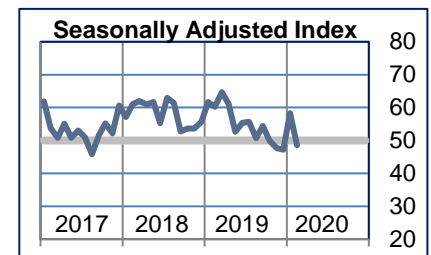
	Higher	Same	Lower	Net	Index
Sep/19	6%	90%	4%	2%	50.8
Oct/19	2%	97%	1%	1%	49.6
Nov/19	2%	93%	5%	-3%	47.5
Dec/19	6%	89%	5%	1%	52.4
Jan/20	9%	87%	4%	5%	52.3
Feb/20	13%	82%	5%	8%	53.4



Employment Index

The employment index fell back below neutral with nondurable goods manufacturing joining oil & gas indicating contraction in this index. Health care continues to show strength in this index. All other sectors are near neutral.

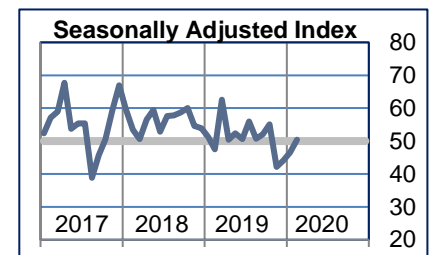
	Higher	Same	Lower	Net	Index
Sep/19	13%	84%	3%	10%	54.4
Oct/19	8%	85%	7%	1%	50.0
Nov/19	9%	79%	12%	-3%	47.7
Dec/19	8%	78%	14%	-6%	47.2
Jan/20	22%	74%	4%	18%	58.3
Feb/20	3%	91%	6%	-3%	48.6



Purchases Index

The purchases index rose to just above neutral. Durable goods manufacturing joined nondurable goods and oil & gas in reporting this index as contracting. Utilities and Wholesale Trade reported it as expanding.

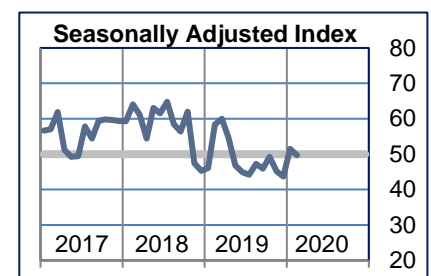
	Higher	Same	Lower	Net	Index
Sep/19	13%	84%	3%	10%	52.1
Oct/19	11%	88%	1%	10%	55.1
Nov/19	7%	72%	21%	-14%	42.1
Dec/19	8%	68%	24%	-16%	44.0
Jan/20	4%	88%	8%	-4%	46.5
Feb/20	9%	82%	9%	0%	50.4



Prices Paid Index

The prices paid index fell back below neutral with only construction reporting significant expansion in this index. All other sectors reported in at or just below neutral.

	Higher	Same	Lower	Net	Index
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
Jan/20	4%	95%	1%	3%	51.5
Feb/20	4%	94%	2%	2%	49.7



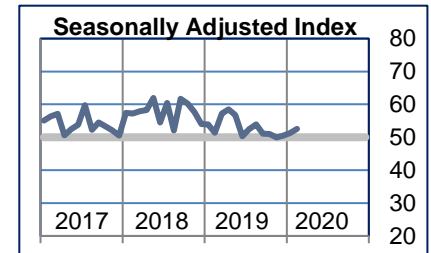
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Lead Times Index

The lead times index rose modestly. Utilities and transportation joined oil & gas and nondurable goods manufacturing in reporting this index as rising. All other sectors reported this index near neutral.

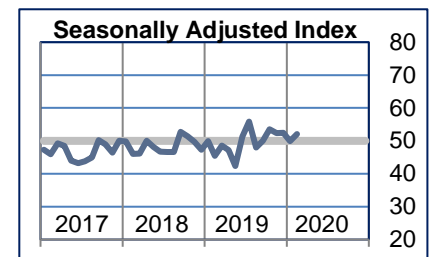
	Higher	Same	Lower	Net	Index
Sep/19	5%	94%	1%	4%	51.1
Oct/19	6%	89%	5%	1%	51.0
Nov/19	5%	89%	6%	-1%	49.9
Dec/19	5%	90%	5%	0%	50.5
Jan/20	5%	92%	3%	2%	51.2
Feb/20	7%	92%	1%	6%	52.5



Purchased Inventory Index

The purchased inventory index rose modestly. Nondurable goods manufacturing and wholesale trade reported purchased inventories as rising, while durable goods manufacturing reported them as falling.

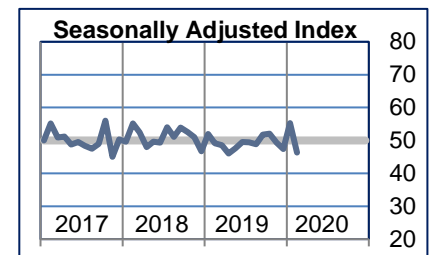
	Higher	Same	Lower	Net	Index
Sep/19	1%	95%	4%	-3%	50.0
Oct/19	2%	96%	2%	0%	53.6
Nov/19	4%	94%	2%	2%	52.4
Dec/19	2%	95%	3%	-1%	52.4
Jan/20	8%	88%	4%	4%	50.0
Feb/20	9%	88%	3%	6%	52.1



Finished Goods Inventory Index

The finished goods inventory index fell back below neutral. Oil & gas and nondurable goods manufacturing reported this index as expanding. All other sectors reported near neutral.

	Higher	Same	Lower	Net	Index
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
Jan/20	16%	80%	4%	12%	55.3
Feb/20	5%	86%	9%	-4%	46.3



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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