

ISM-Houston Business Report

December 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, overall economic activity in Houston expanded in December for the seventh month. Manufacturing activities expanded for the first time since January. Services activities have now expanded for the last five months.

The Houston Purchasing Managers Index fell 0.9 points to 51.5 during the month. The sales/new orders and lead times indices, two of the three underlying indicators that have a strong direct correlation with the economy, continue to point to strong expansion. Employment, the third indicator with a strong positive correlation, continues to show economic weakness. The sales/new orders index fell 4.3 points in December to 55.1. The lead times index rose a strong 6.0 points to 58.6. The employment index fell 1.6 points to 46.0. Finished goods inventory, the underlying indicator that has the strongest inverse correlation with economic activity, rose 1.1 points to 51.4, continuing to show a weak contraction signal.

The three-month forecast for the Houston PMI fell 1.4 points to 54.1. This was driven by weakening in the sales/new orders and production indices offset modestly by strengthening in 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 leisure and hospitality, health care, and transportation reported expansion at a strong pace. Manufacturing and oil & gas reported expansion at a modest pace. Professional services reported contraction at a rapid pace. All other sectors reported near neutral. The three-month forecast predicts strong improvement for all sectors primarily due to the current strength of the sales/new orders, production, and prices paid indices. As noted previously, this is dependent on the severity of the current pandemic.

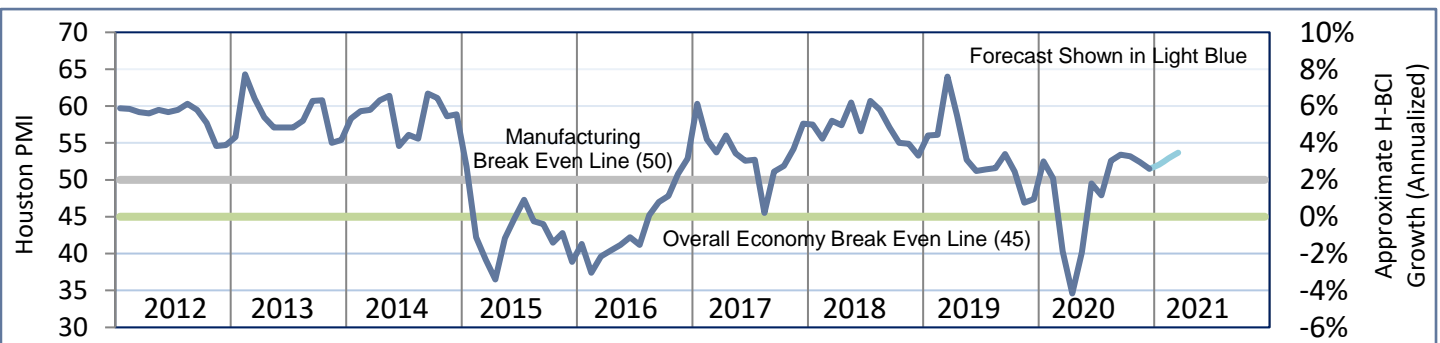
Indices at a Glance

Index	Dec	Nov	Change	Track	Rate	Trend*
Houston Overall PMI - Current	51.5	52.4	-0.9	Expanding	Slower	5
Houston Overall PMI - 3M Forecast	54.1	55.5	-1.4	Expanding	Slower	7
Sales/New Orders	55.1	59.4	-4.3	Rising	Slower	7
Production	54.1	57.6	-3.5	Rising	Slower	7
Employment	46.0	47.6	-1.6	Falling	Faster	11
Purchases	53.7	50.7	3.0	Rising	Faster	4
Prices Paid	57.1	52.1	5.0	Rising	Faster	4
Lead Times	58.6	52.6	6.0	Rising	Faster	9
Purchased Inventory	53.8	50.1	3.7	Rising	Faster	4
Finished Goods Inventory	51.4	50.3	1.1	Rising	Faster	2
Overall Houston Economy				Expanding	Slower	7

* Number of months on current track

Houston PMI Trend

Overall economic activity in Houston expanded again in December. 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: Needles and syringes; crude oil, gasoline, diesel, jet fuel; propane, natural gas liquids; ethylene and derivatives, propylene and derivatives, butadiene, polyethylene, polypropylene; platinum, rhodium; turbines, electrical equipment, carbon and alloy steel pipe, copper wire and cable, fabricated structural steel; ready mix concrete; lumber; bulk and containerized ocean freight

Down in Price: PPE supplies (masks and gloves); equipment and materials

In Short Supply: Hypodermic needles and syringes; butadiene; professionals with very specialized skill sets

What Our Respondents Are Saying

Oil and Gas Exploration, and Key Support Services:

- Texas Rig Counts continue to rise and are now at about 50% above their summer lows
- *This sector rose to modestly above neutral led by considerably higher purchases and lead time indices; the employment index was reported as significantly below neutral; all other indices were at neutral*

Construction:

- The optimistic view remains for capital project approvals in 2021
- Expect to maintain current business conditions through the first half of 2021 due to the continued impacts of COVID
- *This sector fell to just below neutral led by falling sales/new orders, employment, and purchases indices; the prices and lead times indices showed strength*

Durable Goods Manufacturing:

- *This sector returned to expansion for the first time since February; the employment index rose to neutral; the lead times index showed strength; the sales index came in at neutral; the production, purchases, and inventory indices showed weakness*

Non-durable Goods Manufacturing:

- Refinery utilization is up marginally
- We have seen a slight uptick in jet fuel demand due to Holiday travel; there is still a huge over supply
- Appears to be some strengthening despite it being December, which is traditionally a slow time
- *This sector improved to above neutral this month with strength reported for the sales, production, lead times, and inventory indices; the employment index continues to be reported well below neutral*

Transportation:

- Airport passenger traffic improved again this month but it is still below normal levels
- Houston container imports were up modestly this year while container exports fell
- *This sector reported expansion at a significantly faster pace this month; the sales, employment, and purchases indices showed considerable strength while all other indices were reported near neutral*

Financial Services and Real-estate:

- New home starts for 2020 exceeded 2019 levels; new home prices are rising; finished vacant homes and lots are at their lowest levels since the 2014 downturn
- Apartment rental rates fell marginally while occupancy rose a meager amount
- Office vacancy rates are at their highest level since the early 1990s
- Industrial real estate deliveries significantly exceeded absorption this year
- *This sector reported modestly above neutral overall again this month; the sales index fell to near neutral while the employment index rose to indicate modest expansion*

Professional and Business Services:

- There is optimism in the Energy Sector now that the price of oil is above \$47; this needs to continue for the next 6 months to give money people the comfort that an energy investment will be rewarded
- Layoffs have continued in the O&G sector and demand for new employees, consultants, and contingent labor remains low
- Companies are focused on strengthening balance sheets, selling off assets, and reducing or at least maintaining expenses
- Job seekers are looking outside of O&G for work and finding opportunities in the alternative energy and technology sectors
- *This sector continues to report contraction with significant weakness in sales/new orders, employment, and purchases*

What Our Respondents Are Saying (Continued)

Health Care:

- Due to increased demand driven by COVID-19 and routine vaccination/medication administrations, hypodermic safety needle manufacturers are stressed to meet demand; most needles and syringes are on allocation indefinitely; production schedules have been extended into mid 2021
- *This sector continues to report strength with the sales, purchases, and lead times indices all pointing to expansion; the employment and prices paid indices remain near neutral*

Accommodations and Food Services:

- *This sector reported further strength with the sales, employment, and purchase indices pointing to strong expansion*

Trend of Underlying Indicators

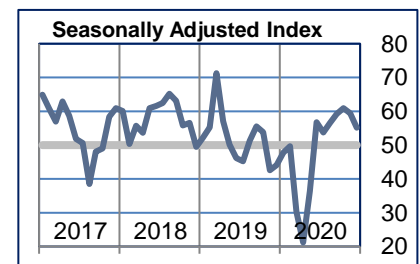
The Houston PMI is based on diffusion indices for eight underlying indicators. The net value of each indicator is simply the percentage of respondents who cite a positive shift from the previous month minus the percentage who cite a negative shift. The diffusion index is calculated based on the percent 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.

Sales/New Orders Index

This index pointed to continued expansion at a slower pace.

Transportation, non-durable goods manufacturing, health care, and leisure and hospitality showed expansion. Professional services fell below neutral.

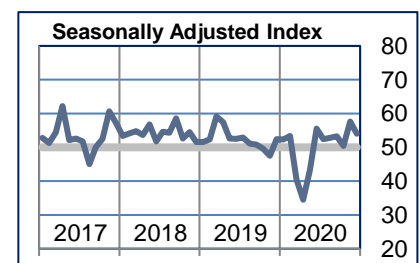
	Higher	Same	Lower	Net	Index
Jul/20	18%	72%	10%	8%	53.7
Aug/20	20%	74%	6%	14%	56.5
Sep/20	26%	69%	5%	21%	59.2
Oct/20	25%	67%	8%	17%	60.9
Nov/20	18%	78%	4%	14%	59.4
Dec/20	15%	75%	10%	5%	55.1



Production Index

The production index also pointed to continued expansion at a slower pace. Durable goods manufacturing was the only sector to report considerable strength. All other industries came at or just above neutral.

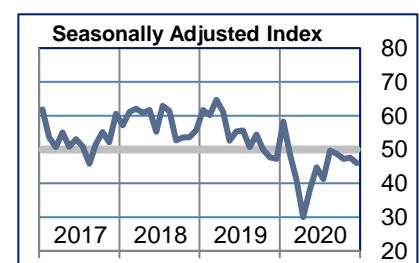
	Higher	Same	Lower	Net	Index
Jul/20	9%	88%	3%	6%	52.4
Aug/20	10%	85%	5%	5%	52.8
Sep/20	10%	87%	3%	7%	53.3
Oct/20	6%	88%	6%	0%	50.4
Nov/20	14%	86%	0%	14%	57.6
Dec/20	7%	91%	2%	5%	54.1



Employment Index

This index continues to point to contraction. O&G, construction, non-durable goods, and professional services reported further contraction. Leisure and hospitality, and transportation reported it as expanding.

	Higher	Same	Lower	Net	Index
Jul/20	2%	78%	20%	-18%	41.3
Aug/20	9%	78%	13%	-4%	49.7
Sep/20	9%	79%	12%	-3%	48.7
Oct/20	4%	84%	12%	-8%	47.2
Nov/20	7%	78%	15%	-8%	47.6
Dec/20	4%	83%	13%	-9%	46.0



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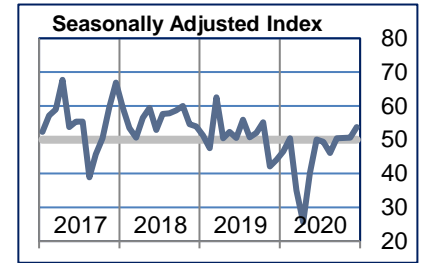


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Purchases Index

This index is pointing to modest expansion. O&G, transportation, health care, and leisure and hospitality reported it as expanding. Construction, durable goods manufacturing, and professional services reported it as contracting.

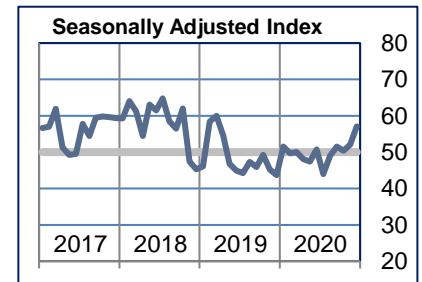
	Higher	Same	Lower	Net	Index
Jul/20	7%	84%	9%	-2%	49.4
Aug/20	6%	83%	11%	-5%	46.1
Sep/20	15%	75%	10%	5%	50.5
Oct/20	13%	74%	13%	0%	50.5
Nov/20	7%	85%	8%	-1%	50.7
Dec/20	10%	83%	7%	3%	53.7



Prices Paid Index

The prices paid index rose 5 points to indicate strong expansion. Construction, wholesale trade, and professional services reported this index as expanding. All other sectors reported near neutral.

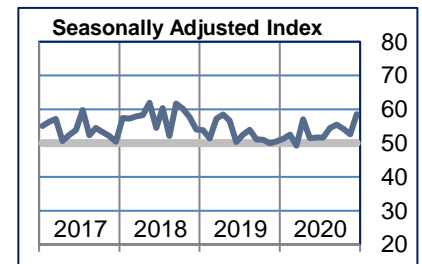
	Higher	Same	Lower	Net	Index
Jul/20	8%	72%	20%	-12%	44.0
Aug/20	8%	80%	12%	-4%	49.0
Sep/20	11%	80%	9%	2%	51.5
Oct/20	11%	82%	7%	4%	50.4
Nov/20	10%	82%	8%	2%	52.1
Dec/20	10%	89%	1%	9%	57.1



Lead Times Index

The lead times index is now rising at a faster pace. Oil & gas, construction, manufacturing, and health care reported this index as expanding at a high rate. All other sectors reported near neutral.

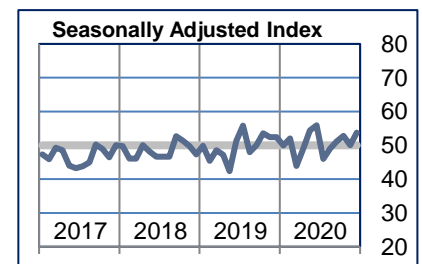
	Higher	Same	Lower	Net	Index
Jul/20	4%	94%	2%	2%	51.7
Aug/20	12%	85%	3%	9%	54.5
Sep/20	13%	86%	1%	12%	55.5
Oct/20	7%	93%	0%	7%	54.2
Nov/20	7%	90%	3%	4%	52.6
Dec/20	13%	87%	0%	13%	58.6



Purchased Inventory Index

The purchased goods inventory index is also rising at a faster pace. Durable goods manufacturing, wholesale trade, and health care reported these inventories as expanding. O&G and construction reported them as contracting.

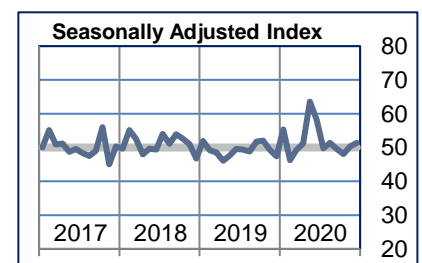
	Higher	Same	Lower	Net	Index
Jul/20	1%	91%	8%	-7%	46.0
Aug/20	2%	93%	5%	-3%	49.0
Sep/20	6%	88%	6%	0%	51.2
Oct/20	9%	84%	7%	2%	52.8
Nov/20	8%	85%	7%	1%	50.1
Dec/20	10%	83%	7%	3%	53.8



Finished Goods Inventory Index

The finished goods inventory index rose modestly. Durable goods manufacturing noted this index as rising at significant pace. Oil & gas and non-durable goods manufacturing reported falling finished goods inventories.

	Higher	Same	Lower	Net	Index
Jul/20	5%	90%	5%	0%	49.8
Aug/20	6%	93%	1%	5%	51.4
Sep/20	5%	87%	8%	-3%	49.6
Oct/20	6%	83%	11%	-5%	48.1
Nov/20	12%	79%	9%	3%	50.3
Dec/20	10%	82%	8%	2%	51.4



Houston PMI Calculation Methods

The Houston Purchasing Managers Index has been included as an integral part of the ISM-Houston Business Report since the Houston chapter of the Institute for Supply Management started publication of this document in January 1995. The report and index are published monthly as the primary deliverables from a survey of Houston area Supply Chain leaders regarding the status of key activities believed to provide insight into the strength of the economy. The respondents come from diverse organizations including construction, energy, engineering, health care, durable and non-durable goods manufacturing, financial and business services, wholesale and retail trade, and utilities related companies.

The Houston Purchasing Managers Index is determined from diffusion indices of the eight indicators of economic activity covered by the ISM-Houston Business Survey and Report. These underlying indicators are sales or new orders, production, employment, purchases, prices paid for major purchases, lead times from sellers, purchased materials inventory (raw materials and supplies), and finished goods inventories. The respondents to the survey report the direction of each these activities as either up, the same or down in comparison to the previous month. An index for each of these areas is then calculated by subtracting the percentage of respondents that sight a negative shift from the percentage that sight a positive shift. For indicators that are positively correlated with economic growth, this results in an underlying index that points to expansion when it is above zero. Indicators that are negatively correlated with growth point to expansion when they are below zero.

The final 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. This top-level index is converted to a 0 to 100 scale to match that of the national Purchasing Managers Index® (PMI®) which is published monthly by the Institute for Supply Management® (ISM®). Readings over 50 for the HPMI generally indicate manufacturing expansion in the Houston in the near term and readings below 50 show coming manufacturing contraction.

It is important to note that the manufacturing breakeven HPMI does not equate to the breakeven point for the overall Houston economy. 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 economy as measured by the Houston BCI. A similar offset between the National PMI and the National economy has existed for some time.

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