

ISM-Houston Business Report

October 2021



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 at a strong pace again in October. The overall ISM-Houston PMI diffusion index rose modestly led by service sector activities which reported stronger growth. Manufacturing activities expanded at a moderately slower pace.

The Houston Purchasing Managers Index rose 1.5 points to 61.0 during the month. Significant improvement in the sales/new orders index and a relatively unchanged lead times index, partially offset a lower employment index, drove this improvement. These three indicators have the strongest direct correlation with the economic activity in Houston. The sales/new orders index rose 6.5 points to 63.2. The employment index fell 0.7 points to 58.2. The lead times index rose 0.1 points to 68.0. The Finished goods inventory index, the underlying indicator that has the strongest inverse correlation with economic activity, rose 2.1 points to 49.1, continuing to point to modest economic expansion.

The three-month forecast for the Houston PMI rose 0.9 points to 57.2. Higher sales/new orders and production indices were partially offset by a lower prices paid index to account for this gain. These indices have a strong direct correlation with economic activity at the three-month forecast horizon.

On an industry specific basis, oil & gas, construction, manufacturing, wholesale trade, transportation, healthcare, new and existing home sales, professional and management services, and leisure and hospitality reported strong expansion. The three-month forecast continues to predict expansion, primarily due to the strength of the sales/new orders, production, and prices paid indices.

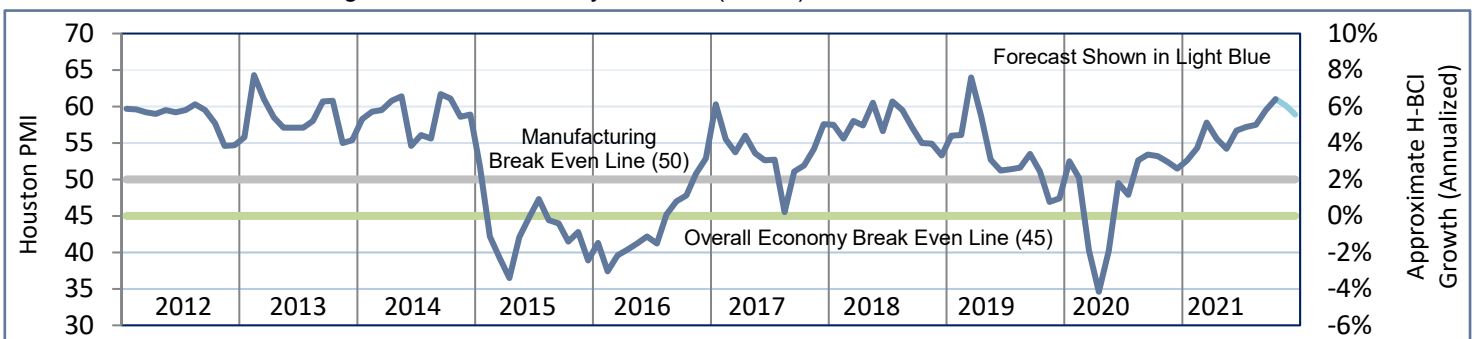
Indices at a Glance

Index	Oct	Sep	Change	Track	Rate	Trend*
Houston Overall PMI - Current	61.0	59.5	1.5	Expanding	Faster	15
Houston Overall PMI - 3M Forecast	57.2	56.3	0.9	Expanding	Faster	17
Sales/New Orders	63.2	56.7	6.5	Rising	Faster	17
Production	52.9	52.7	0.2	Rising	Faster	17
Employment	58.2	58.9	-0.7	Rising	Slower	9
Purchases	58.6	58.3	0.3	Rising	Faster	2
Prices Paid	67.1	71.1	-4.0	Rising	Slower	13
Lead Times	68.0	67.9	0.1	Rising	Faster	18
Purchased Inventory	50.4	50.8	-0.4	Rising	Slower	2
Finished Goods Inventory	49.1	47.0	2.1	Falling	Slower	10
Overall Houston Economy				Expanding	Faster	17

* Number of months on current track

Houston PMI Trend

Overall economic activity in Houston expanded in October. 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: PPE and other clinical supplies; craft and skilled labor; crude oil, gasoline, diesel, jet fuel, natural gas, natural gas liquids; ethane, propane, normal-butane, iso-butane, butadiene, styrene, xylene, ethylene glycol, propylene glycol, triethylene glycol, glycol ethers, industrial gases; lumber, concrete, carbon and alloy steel piping, lined pipe, electrical bulk materials; bulk and containerized ocean freight, rail and truck freight; software and computer hardware

Down in Price: Propylene; PVC, polyethylene and polypropylene resins

In Short Supply: Basic and skilled labor, truck drivers, IT talent; steel, tubing, plastic, paint; glycols, amines, alcohols, surfactants, diatomaceous earth, caustic soda, acids; ocean and truck freight; computer hardware and other electronics

What Our Respondents Are Saying

Oil and Gas Exploration, and Key Support Services:

- Continued price inflation across almost all categories
- US and Texas rig counts continue to rise
- *This sector improved significantly further this month; the production, employment, purchases, prices paid, and lead times indices are all pointing to stronger expansion*

Construction:

- Not seeing anything in short supply, but lead times have increased across nearly all commodities
- There are general supply chain concerns about impacts related to COVID and the pending vaccine mandate
- *This sector reported growth at a strong pace again this month; the employment, prices paid, and lead times indices continue to point to significant growth*

Durable Goods Manufacturing:

- A national energy policy that really addresses the energy needs of our country would be very helpful
- *This sector, while showing growth, weakened during the month; the employment, prices paid, and lead times indices remained strong; the sales/new orders index fell to well below neutral and the production index fell to near neutral*

Non-durable Goods Manufacturing:

- Hard work in improving cybersecurity
- *This sector reported growth again this month with the sales/new orders, purchases, prices paid, lead times, and inventory indices remaining strong; the production index stayed below neutral*

Trade, Transportation, and Warehousing:

- Freight rates and lead times continue to increase
- US Customs is now shutting down imports from countries using child labor
- *This sector expanded at a faster pace during the month; the employment, purchases, prices paid, and lead times indices continue to show strength; the sales/new orders index strengthened to well above neutral*

Real-Estate Services:

- New and existing homes listings and sales were flat month to month but continue to be above last year's levels
- Apartment occupancy rates and prices continue to rise
- *This sector expanded at a moderate pace similar to last month; the sales/new orders, prices paid, lead times, and inventory indices remain strong; all other indices reported near neutral*

Professional and Business Services:

- If the price of oil remains above \$75 it will inspire more capital spending for 2022
- The pandemic continues to have far reaching impact on the supply and demand for talent
- Job openings exceed the availability of talent in the professional and technical space
- Professional and technical talent resignations continue to rise as individuals leave the job market or look for more flexible work environments at other companies
- Wages and salaries are rising as the demand for talent far exceeds the availability of talent.
- *This sector improved modestly during the month; the sales/new orders, employment, prices paid, and lead times indices remained strong; the purchases index joined all other indices near neutral*

What Our Respondents Are Saying (Continued)

Leisure and Hospitality

- This sector reported growth at a higher level this month; the sales/new orders index joined the employment, purchases, prices paid, and lead times indices pointing to strong growth

Health Care

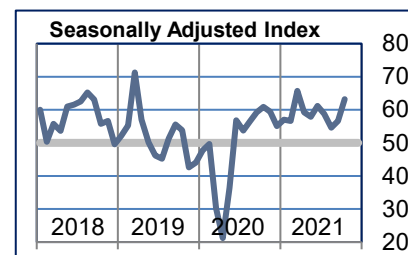
- With the wide availability of the vaccine, many operations are moving to full capacity while maintaining safety protocols
 - This sector reported expansion at a higher rate than last month; most underlying indices for this sector improved

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.

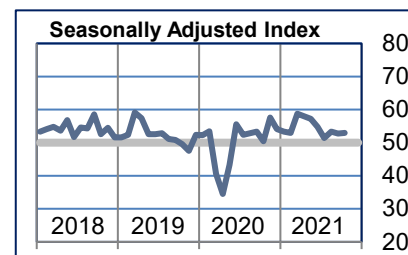
Sales/New Orders Index

		Higher	Same	Lower	Net	Index
The sales/new orders index improved notably led by service related activities; particularly healthcare. Non-durable goods manufacturing improved modestly while durable goods manufacturing fell well below neutral.	May/21	20%	79%	1%	19%	57.9
	Jun/21	20%	79%	1%	19%	61.2
	Jul/21	19%	81%	0%	19%	58.7
	Aug/21	10%	89%	1%	9%	54.6
	Sep/21	15%	84%	1%	14%	56.7
	Oct/21	23%	75%	2%	21%	63.2



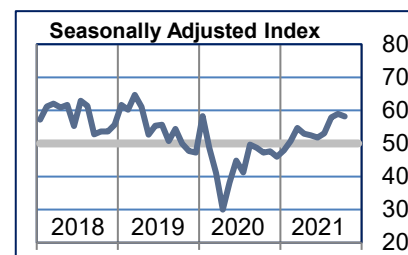
Production Index

		Higher	Same	Lower	Net	Index
The production index stayed near neutral. Oil & gas and mid-stream operations reported considerable strength. Non-durable goods remained below neutral. All other sectors reported near neutral.	May/21	15%	85%	0%	15%	57.2
	Jun/21	9%	89%	2%	7%	54.8
	Jul/21	4%	95%	1%	3%	51.4
	Aug/21	6%	94%	0%	6%	53.3
	Sep/21	10%	86%	4%	6%	52.7
	Oct/21	10%	86%	4%	6%	52.9



Employment Index

		Higher	Same	Lower	Net	Index
The employment index fell minimally. Oil & gas, construction, durable goods manufacturing, transportation, health care, professional and business services, and leisure and hospitality reported above neutral.	May/21	15%	76%	9%	6%	52.4
	Jun/21	13%	82%	5%	8%	51.8
	Jul/21	13%	79%	8%	5%	53.1
	Aug/21	16%	81%	3%	13%	57.9
	Sep/21	19%	80%	1%	18%	58.9
	Oct/21	21%	73%	6%	15%	58.2



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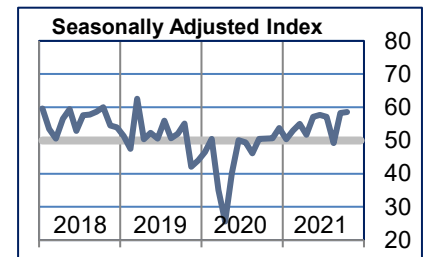


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Purchases Index

The purchases index was relatively unchanged. Non-durable goods manufacturing joined oil & gas, wholesale trade, transportation, and leisure and hospitality reporting well above neutral.

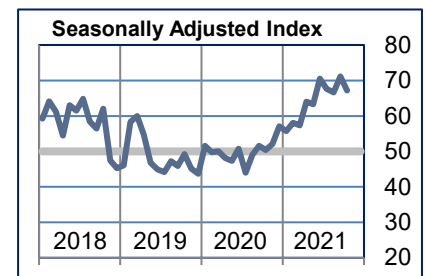
	Higher	Same	Lower	Net	Index
May/21	21%	71%	8%	13%	57.1
Jun/21	21%	72%	7%	14%	57.7
Jul/21	17%	77%	6%	11%	57.1
Aug/21	3%	94%	3%	0%	49.2
Sep/21	22%	78%	0%	22%	58.3
Oct/21	20%	78%	2%	18%	58.6



Prices Paid Index

The prices paid index moderated but still shows strength. Most sectors continue to report this index as expanding at rapid pace.

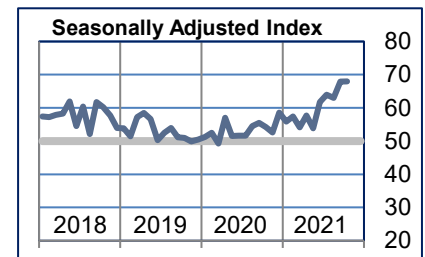
	Higher	Same	Lower	Net	Index
May/21	33%	66%	1%	32%	63.3
Jun/21	37%	63%	0%	37%	70.5
Jul/21	32%	68%	0%	32%	67.6
Aug/21	31%	69%	0%	31%	66.7
Sep/21	42%	58%	0%	42%	71.1
Oct/21	39%	61%	0%	39%	67.1



Lead Times Index

The lead times index stayed nearly the same. As with the prices paid index, most sectors reported this index as continuing to expand at rapid pace.

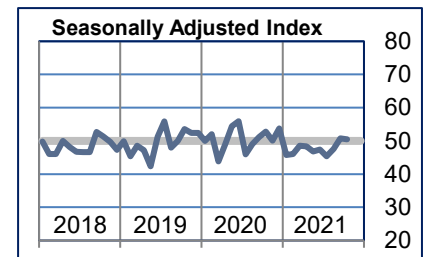
	Higher	Same	Lower	Net	Index
May/21	13%	85%	2%	11%	53.8
Jun/21	24%	75%	1%	23%	61.8
Jul/21	27%	73%	0%	27%	63.9
Aug/21	26%	74%	0%	26%	63.1
Sep/21	36%	64%	0%	36%	67.9
Oct/21	35%	64%	1%	34%	68.0



Purchased Inventory Index

The purchased inventory index remained near neutral. Non-durable goods reported these inventories as falling. All other sectors that report these inventories reported near neutral.

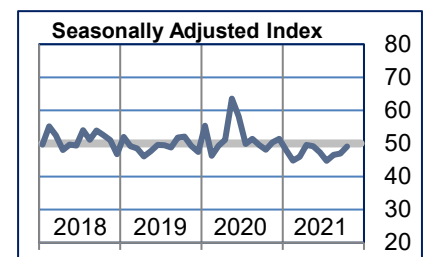
	Higher	Same	Lower	Net	Index
May/21	2%	91%	7%	-5%	46.8
Jun/21	0%	95%	5%	-5%	47.4
Jul/21	0%	93%	7%	-7%	45.4
Aug/21	0%	95%	5%	-5%	47.6
Sep/21	2%	96%	2%	0%	50.8
Oct/21	2%	95%	3%	-1%	50.4



Finished Goods Inventory Index

The finished goods inventory index rose modestly but remained below neutral. Non-durable goods manufacturing and new home construction reported these inventories a contracting at a rapid pace.

	Higher	Same	Lower	Net	Index
May/21	3%	91%	6%	-3%	49.2
Jun/21	0%	93%	7%	-7%	47.4
Jul/21	0%	92%	8%	-8%	44.7
Aug/21	0%	95%	5%	-5%	46.6
Sep/21	0%	92%	8%	-8%	47.0
Oct/21	0%	93%	7%	-7%	49.1



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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