

ISM-Houston Business Report

November 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, economic activity in Houston expanded at a strong pace again in November. The overall ISM-Houston PMI diffusion index fell modestly led by moderately slower expansion in the service sector. Manufacturing activities expanded at a somewhat higher pace led by improvements in the durable goods space.

The Houston Purchasing Managers Index fell 0.7 points to 60.3 during the month. Moderately lower sales/new orders, employment, and lead times indices, partially offset by a lower finished goods inventory index caused this reduction. The first three of these indicators have the strongest direct correlation with the economic activity in Houston. The sales/new orders index fell 1.8 points to 61.4. The employment index fell 0.5 points to 57.7. The lead times index fell 0.9 points to 67.1. The Finished goods inventory index, the underlying indicator that has the strongest inverse correlation with economic activity, fell 2.3 points to 46.8, continuing to point to moderate economic expansion.

The three-month forecast for the Houston PMI fell 0.1 points to 57.1. A lower sales/new orders index, mostly offset by higher production and prices paid indices accounts for this fall. 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, real-estate, 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.

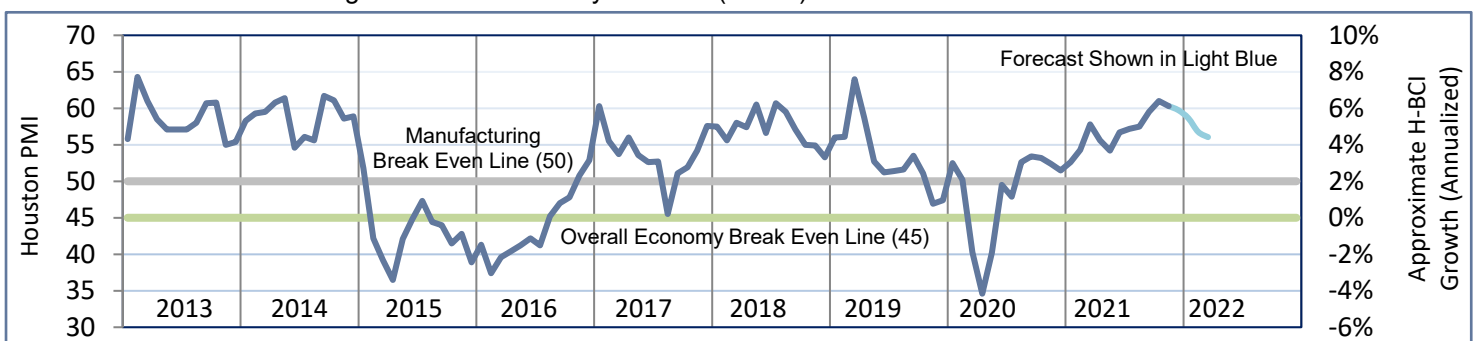
Indices at a Glance

Index	Nov	Oct	Change	Track	Rate	Trend*
Houston Overall PMI - Current	60.3	61.0	-0.7	Expanding	Slower	16
Houston Overall PMI - 3M Forecast	57.1	57.2	-0.1	Expanding	Slower	18
Sales/New Orders	61.4	63.2	-1.8	Rising	Slower	18
Production	53.0	52.9	0.1	Rising	Faster	18
Employment	57.7	58.2	-0.5	Rising	Slower	10
Purchases	58.4	58.6	-0.2	Rising	Slower	3
Prices Paid	69.2	67.1	2.1	Rising	Faster	15
Lead Times	67.1	68.0	-0.9	Rising	Slower	20
Purchased Inventory	49.3	50.4	-1.1	Falling	Fr. Rising	1
Finished Goods Inventory	46.8	49.1	-2.3	Falling	Faster	11
Overall Houston Economy				Expanding	Slower	18

* Number of months on current track

Houston PMI Trend

Overall economic activity in Houston expanded in November. 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, skilled, and professional labor; MRO materials, steel based products[‡], carbon and alloy steel piping materials, lined pipe, capital equipment, lumber; crude oil[‡], electricity, industrial gasses; IT software and hardware

Down in Price: Crude oil[‡], gasoline, diesel, jet fuel, natural gas, natural gas liquids; ethane, propane, normal-butane, iso-butane, ethylene, propylene, PVC, polypropylene, polyethylene, aluminum, copper wire and piping materials, carbon steel products[‡]

In Short Supply: Basic and skilled labor, truck drivers, IT talent; chemical based products; valves; truck freight; computer hardware including printers

[‡] reported as up or down by different respondents

What Our Respondents Are Saying

Oil and Gas Exploration, and Key Support Services:

- We see high single digit inflation for 2022
- Continued pressure on material pricing and labor wages
- *This sector continues to show strong improvement; the production, employment, prices paid, and lead times indices are all pointing to stronger expansion*

Construction:

- *This sector reported strong growth again this month; the employment, prices paid, and lead times indices all stayed at high levels*

Durable Goods Manufacturing:

- Material availability and higher prices continue to be a concern
- *This sector strengthened during the month with improvements in the sales/new orders, employment, purchases, prices paid, and lead times indices; the production index remained near neutral*

Non-durable Goods Manufacturing:

- *This sector reported moderately lower growth this month with the sales/new orders index falling to near neutral. The production, prices paid, lead times, and inventory indices all showed strong growth*

Trade, Transportation, and Warehousing:

- *This sector expanded at a slower pace during the month; the sales/new orders, employment, purchases, and prices paid indices showed continued strength*

Real-Estate Services:

- New home inventories stand at about 1 month of sales, which is the lowest level in recent memory
- Apartment absorption this year is twice that seen over the last few years
- Office real-estate vacancy rates have increased to 25%
- Industrial real-estate vacancy rates are now below 8% and retail vacancy rates are below 6%
- *This sector expanded at a moderately faster pace; the sales/new orders, prices paid, lead times, and inventory indices remained strong; all other indices reported near neutral*

Professional and Business Services:

- We are seeing an almost immediate need for skilled people, however, those that are in the job market are being very selective on who they will work for
- Job openings continue to exceed the availability of talent for professional and technical roles, and also for light and heavy industrial labor positions
- Remote and hybrid work models continue to evolve and change the way companies get work done
- Resignations by professionals and technical talent continue to increase as individuals leave the job market or look for more flexible work environments and higher pay
- Salaries, signing bonuses, and benefits are increasing
- Capital spending in the O&G sector is slowly increasing as oil prices remain above \$60, however, finding talent to work on the projects is proving to be a significant challenge
- *This sector continued to show strength during the month; the sales/new orders, employment, prices paid, and lead times indices remained strong*

What Our Respondents Are Saying (Continued)

Leisure and Hospitality

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

Health Care

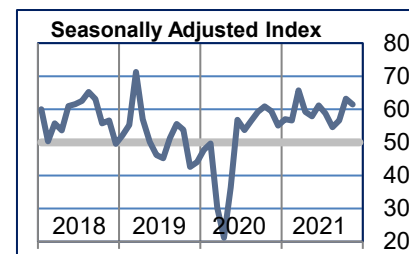
- This sector reported expansion at a higher rate than last month; the sales/new orders, employment, purchases, prices paid, and lead times indices all show strength

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.

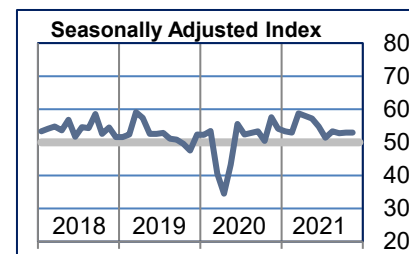
Sales/New Orders Index

		Higher	Same	Lower	Net	Index
The sales/new orders index fell minimally due to moderately lower activity in service related sectors.	Jun/21	20%	79%	1%	19%	61.2
	Jul/21	19%	81%	0%	19%	58.7
Durable goods manufacturing activities returned to above neutral while non-durable goods manufacturing fell to near neutral.	Aug/21	10%	89%	1%	9%	54.6
	Sep/21	15%	84%	1%	14%	56.7
	Oct/21	23%	75%	2%	21%	63.2
	Nov/21	17%	82%	1%	16%	61.4



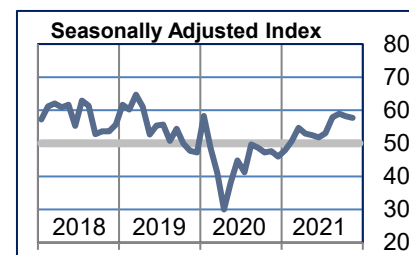
Production Index

		Higher	Same	Lower	Net	Index
The production index was relatively unchanged. Oil & gas and non-durable goods manufacturing operations reported considerable strength. All other sectors that report this index came in near neutral.	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
	Nov/21	7%	92%	1%	6%	53.0



Employment Index

		Higher	Same	Lower	Net	Index
The employment index fell minimally again this month. Oil & gas, construction, durable goods manufacturing, transportation, health care, professional and business services, and leisure and hospitality stayed above neutral.	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
	Nov/21	20%	74%	6%	14%	57.7



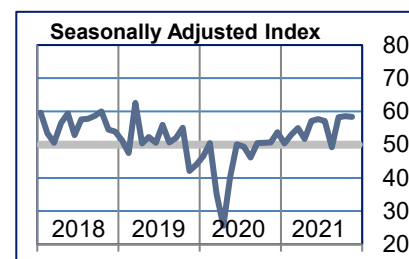
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Purchases Index

The purchases index was also relatively unchanged. Durable goods joined wholesale trade, transportation, healthcare, and leisure and hospitality reporting this index well above neutral. All other sectors reported near neutral.

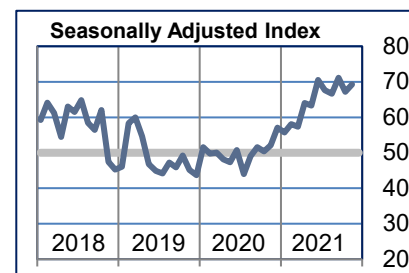
	Higher	Same	Lower	Net	Index
Jun/21	21%	72%	7%	14%	57.7
Jul/21	17%	77%	6%	11%	57.1
Aug/21	3%	94%	3%	0%	49.2
Sep/21	22%	78%	0%	22%	58.3
Oct/21	20%	78%	2%	18%	58.6
Nov/21	16%	82%	2%	14%	58.4



Prices Paid Index

The prices paid index rose modestly with almost all sectors continuing to report this index as expanding at a rapid pace.

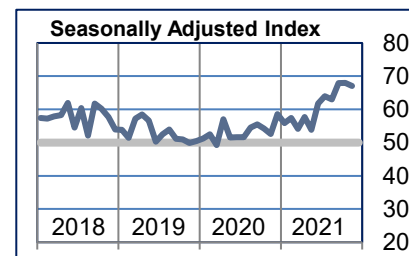
	Higher	Same	Lower	Net	Index
Jun/21	37%	63%	0%	37%	70.5
Jul/21	32%	68%	0%	32%	67.6
Aug/21	31%	69%	0%	31%	66.7
Sep/21	42%	58%	0%	42%	71.1
Oct/21	39%	61%	0%	39%	67.1
Nov/21	37%	62%	1%	36%	69.2



Lead Times Index

The lead times index fell minimally. As with the prices paid index, most sectors reported this index as continuing to expand at a rapid pace.

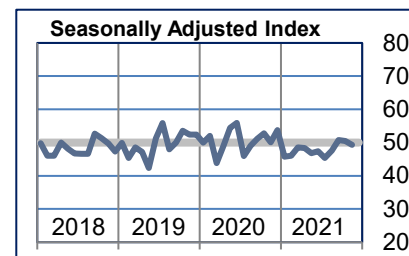
	Higher	Same	Lower	Net	Index
Jun/21	24%	75%	1%	23%	61.8
Jul/21	27%	73%	0%	27%	63.9
Aug/21	26%	74%	0%	26%	63.1
Sep/21	36%	64%	0%	36%	67.9
Oct/21	35%	64%	1%	34%	68.0
Nov/21	35%	62%	3%	32%	67.1



Purchased Inventory Index

The purchased inventory index fell modestly to just below neutral. Non-durable goods manufacturing continues to report these inventories as falling. All other sectors that report these inventories reported near neutral.

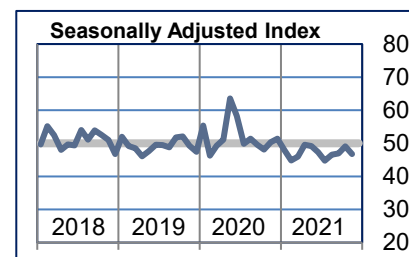
	Higher	Same	Lower	Net	Index
Jun/21	0%	95%	5%	-5%	47.4
Jul/21	0%	93%	7%	-7%	45.4
Aug/21	0%	95%	5%	-5%	47.6
Sep/21	2%	96%	2%	0%	50.8
Oct/21	2%	95%	3%	-1%	50.4
Nov/21	2%	95%	3%	-1%	49.3



Finished Goods Inventory Index

The finished goods inventory index fell over 2 points. Durable goods manufacturing joined non-durable goods and new home construction reporting these inventories as contracting at a rapid pace. All other sectors reported near neutral.

	Higher	Same	Lower	Net	Index
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
Nov/21	1%	93%	6%	-5%	46.8



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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