

ISM-Houston Business Report

July 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 July for the second month in a row. Manufacturing activity contracted at a modestly faster pace.

The Houston Purchasing Managers Index fell 1.6 points to 47.9 during the month. Two of the three underlying indicators that have a strong direct correlation with the economy, sales/new orders and lead times, pointed to expansion again this month. The third, employment, continues to give a strong signal for contraction. The sales/new orders index fell 3.1 points in July to 53.7. The lead times index was unchanged at 51.7. The employment index fell 3.5 points to 41.3. The underlying indicator that has the strongest inverse correlation with economic activity, finished goods inventory, fell 8.5 points this month to 49.8. This is a positive signal as it indicates that companies are getting inventories under control after the rapid fall in demand in the second quarter caused significant inventory increases.

The three-month forecast for the Houston PMI fell 2.7 points to 51.2. This was primarily driven by weakening in the sales/new orders, production, and prices paid indices. These indices, along with the lead times index, have a strong direct correlation with economic activity at the three-month forecast horizon.

On an industry specific basis, accommodations and foods services, transportation, utilities, and health care reported expansion again this month. Real estate, oil and gas, and nondurable goods manufacturing reported near neutral. Construction, durable goods manufacturing, and professional services continued to report contraction. The three-month forecast continues to be highly uncertain as further economic improvement is dependent on the severity of the COVID-19 pandemic.

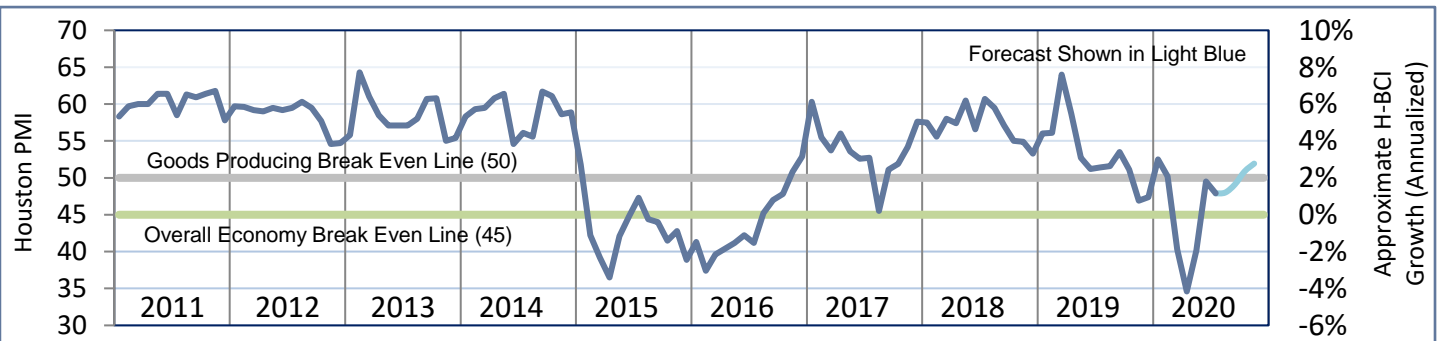
Indices at a Glance

Index	Jul	Jun	Change	Track	Rate	Trend*
Houston PMI - Current	47.9	49.5	-1.6	Contracting	Faster	5
Houston PMI - 3 Month Forecast	51.2	53.9	-2.7	Expanding	Slower	2
Sales/New Orders	53.7	56.8	-3.1	Rising	Slower	2
Production	52.4	55.5	-3.1	Rising	Slower	2
Employment	41.3	44.8	-3.5	Falling	Faster	6
Purchases	49.4	50.1	-0.7	Falling	Fr. Rising	1
Prices Paid	44.0	50.7	-6.7	Falling	Fr. Rising	1
Lead Times	51.7	51.7	0.0	Rising	Unchanged	4
Purchased Inventory	46.0	55.9	-9.9	Falling	Fr. Rising	1
Finished Goods Inventory	49.8	58.3	-8.5	Falling	Fr. Rising	1
Overall Houston Economy				Expanding	Slower	2

* Number of months on current track

Houston PMI Trend

Overall economic activity in Houston expanded again in July. 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: Air and ocean freight; exam gloves and eye protection; precious metals and industrial metals; crude oil and motor fuels; isobutane, ethylene, propylene, butadiene, methanol, benzene, toluene, and acids; ethylene and propylene based polymers; redi-mix concrete; craft labor

Down in Price: Face shields; gasoline; natural gas; heat exchangers, ANSI pumps and compressors, carbon steel pipe, fabricated structural steel, turbines; hourly contract and direct hire rates

In Short Supply: PPE; bulk gases; isopropyl alcohol

What Our Respondents Are Saying

Oil and Gas Exploration, and Key Support Services:

- U.S. and Texas rig counts continue to fall at a modest pace
- Gulf Coast crude oil stocks are now falling after reaching very high levels in early July
- *This sector reported just below neutral overall this month after seeing significant improvement last month; the sales and production indices came in near neutral while all other indices showed contraction*

Construction

- Client capital budget cuts and continued low oil prices are resulting in a sluggish year
- We still have a PPE shortage but this is not as big a problem as earlier in the year
- *This sector reported continued contraction; the sales and lead times indices came in at neutral; all other indices were reported as contracting*

Durable Goods Manufacturing

- Manufacturing in support of oil and gas exploration is still very weak
- *This sector continued to report contraction with only prices and lead times reporting near neutral; all other indices were reported as contracting*

Non-durable Goods Manufacturing:

- Outlook is stable to growing
- We still have low demand for gasoline, diesel, and jet fuel
- *This sector reported near neutral again this month; the sales and production indices were reported as expanding; the employment index continues to contract; all other indices were near neutral*

Transportation and Utilities:

- Industrial power consumption rose during the month; residential consumption remains above normal
- Air passenger traffic continues to increase, but is still well below pre-corona virus levels
- *Transportation reported continued expansion overall; the sales and purchases indices both indicated expansion at a strong pace after several months of significant contraction; the employment index was near neutral*
- *Utilities reported expansion again this month with the sales, production, purchases, and lead times indices all pointing to expansion; the employment index came in near neutral*

Financial Services and Real-estate

- Apartment rents were modestly lower this again this month
- New apartment construction is beginning to slow due to oversupply
- New home sales rose again in July
- Listings and sales of used homes continue to be depressed
- *This sector reported just below neutral overall; the sales and prices paid indices pointed to contraction; all other indices were near neutral*

Professional Services:

- There is no shortage of qualified and available people; this includes all disciplines of HR, finance, accounting, supply chain, engineering, administration, and operations; previous strong demand for jobs with highly specific skill sets has dried up as most companies with these needs are simply delaying hiring or training existing employees
- We expect the current slow conditions to continue for the balance of the year with some improvement in 2021; the amount of improvement is dependent on the price of oil rising above \$55 per barrel and a COVID vaccine
- *This sector reported as contracting again this month; while most indices were reported near neutral, the employment index showed significant contraction*

What Our Respondents Are Saying (Continued)

Health Care:

- The world's largest manufacturer/provider of gloves has been prohibited from importing gloves to the U.S., putting significant strain on the supply chain and causing the market to compress
- *This sector reported strength again this month with sales, purchases, and prices paid all pointing to expansion*

Accommodations and Food Services:

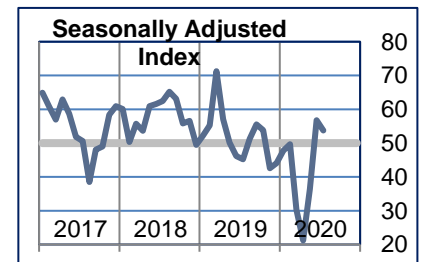
- Sales are falling as we see the reemergence of COVID-19; employment is trending back down from early June levels
- *This sector reported continued expansion from the very low performance noted earlier in the year*

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.

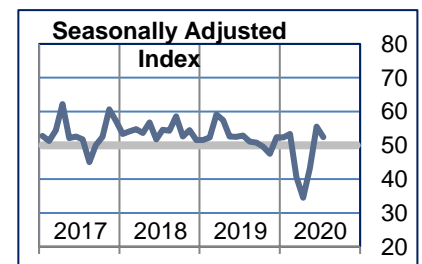
Sales/New Orders Index

		Higher	Same	Lower	Net	Index
The sales/new orders index moderated. Utilities, transportation, non-durable goods manufacturing, health care, and accommodations and food services all showed expansion. Durable goods and real estate showed weakness.	Feb/20	17%	69%	14%	3%	49.7
	Mar/20	4%	54%	42%	-38%	30.2
	Apr/20	5%	34%	61%	-56%	21.2
	May/20	18%	40%	42%	-24%	36.4
	Jun/20	36%	39%	25%	11%	56.8
	Jul/20	18%	72%	10%	8%	53.7



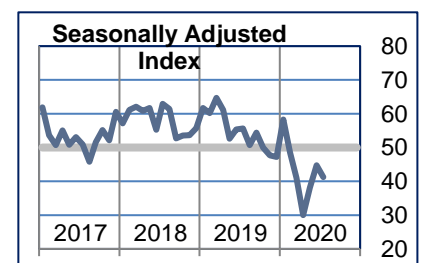
Production Index

		Higher	Same	Lower	Net	Index
The production index also moderated. Utilities and non-durable goods manufacturing reported strength while durable goods manufacturing saw weakness.	Feb/20	13%	82%	5%	8%	53.4
	Mar/20	2%	77%	21%	-19%	40.6
	Apr/20	1%	70%	29%	-28%	34.5
	May/20	6%	75%	19%	-13%	43.2
	Jun/20	14%	80%	6%	8%	55.5
	Jul/20	9%	88%	3%	6%	52.4



Employment Index

		Higher	Same	Lower	Net	Index
The employment index continues to point to contraction. Only accommodations and food services reported strength in this index. Professional services, O&G, construction, manufacturing, and health care reported weakness.	Feb/20	3%	91%	6%	-3%	48.6
	Mar/20	1%	80%	19%	-18%	41.0
	Apr/20	2%	59%	39%	-37%	30.0
	May/20	2%	74%	24%	-22%	38.1
	Jun/20	7%	79%	14%	-7%	44.8
	Jul/20	2%	78%	20%	-18%	41.3



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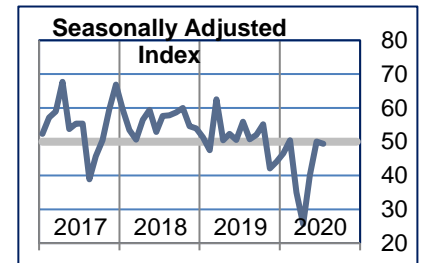
Purchases Index

The purchases index was relatively unchanged near neutral.

Transportation, utilities, and health care reported strength.

Construction, O&G, and durable goods manufacturing reported weakness.

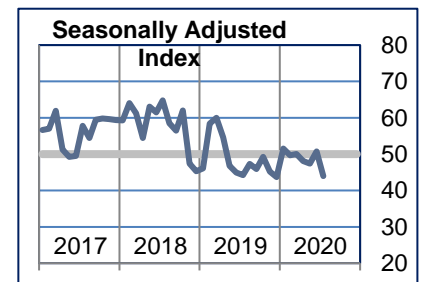
	Higher	Same	Lower	Net	Index
Feb/20	9%	82%	9%	0%	50.4
Mar/20	7%	56%	37%	-30%	35.0
Apr/20	1%	51%	48%	-47%	25.6
May/20	13%	53%	34%	-21%	40.2
Jun/20	12%	74%	14%	-2%	50.1
Jul/20	7%	84%	9%	-2%	49.4



Prices Paid Index

The prices paid index fell back below neutral with O&G, construction, and professional services reporting significant weakness. Health care reported this index as higher. All other sectors reported this index near neutral.

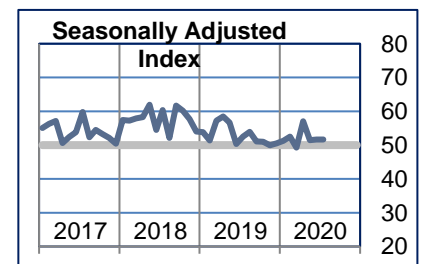
	Higher	Same	Lower	Net	Index
Feb/20	4%	94%	2%	2%	49.7
Mar/20	16%	74%	10%	6%	50.1
Apr/20	15%	68%	17%	-2%	48.1
May/20	11%	74%	15%	-4%	47.4
Jun/20	12%	74%	14%	-2%	50.7
Jul/20	8%	72%	20%	-12%	44.0



Lead Times Index

The lead times index was reported as unchanged. O&G reported this index as contracting. Utilities reported it as expanding. All other sectors came in near neutral.

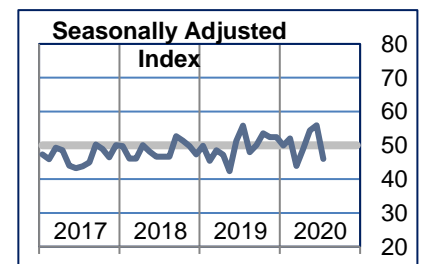
	Higher	Same	Lower	Net	Index
Feb/20	7%	92%	1%	6%	52.5
Mar/20	12%	78%	10%	2%	49.3
Apr/20	24%	66%	10%	14%	57.1
May/20	16%	75%	9%	7%	51.5
Jun/20	9%	84%	7%	2%	51.7
Jul/20	4%	94%	2%	2%	51.7



Purchased Inventory Index

The purchased goods inventory index fell back below neutral with O&G, construction, durable goods manufacturing, and utilities reporting these inventories as contracting. No sector reported expanding purchased inventories.

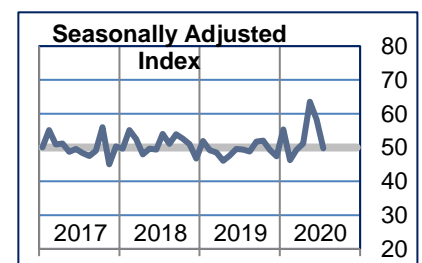
	Higher	Same	Lower	Net	Index
Feb/20	9%	88%	3%	6%	52.1
Mar/20	4%	80%	16%	-12%	43.9
Apr/20	15%	69%	16%	-1%	49.0
May/20	20%	71%	9%	11%	54.4
Jun/20	15%	82%	3%	12%	55.9
Jul/20	1%	91%	8%	-7%	46.0



Finished Goods Inventory Index

The finished goods inventory fell to just below neutral. O&G and durable goods manufacturing reported significant contraction in this index while all other sectors reported it near neutral.

	Higher	Same	Lower	Net	Index
Feb/20	5%	86%	9%	-4%	46.3
Mar/20	8%	81%	11%	-3%	49.3
Apr/20	16%	68%	16%	0%	51.1
May/20	30%	67%	3%	27%	63.6
Jun/20	15%	84%	1%	14%	58.3
Jul/20	5%	90%	5%	0%	49.8



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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