

ISM-Houston Business Report

April 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, both goods and services producing activities in Houston contracted further during April. Overall economic activity is now contracting at its fastest rate since the ISM-Houston Business Survey began in 1995.

The Houston Purchasing Managers Index fell almost 6 points to 34.6 during April. Two of the three underlying indicators that have a strong direct correlation with the economy, sales/new orders and employment, are now pointing to significant contraction. The third, lead times, is giving a contradictory signal of near term expansion, however, it is believed that higher lead times are currently being caused by supply chain disruptions rather than a supply shortages. The sales/new orders index fell 9 points to 21.2, its lowest level since our survey began. The employment index fell 11 points to 30.0, approaching the lows seen in the great recession. The underlying indicator that has the strongest inverse correlation with economic activity, finished goods inventory, rose almost 2 points to end above neutral.

The three-month forecast for the Houston PMI fell an additional 2.3 points to 41.9. This was primarily driven by degradation of the sales/new orders and prices paid indices, with a positive offset allowed by the increasing lead times index. These indices have a strong direct correlation with economic activity at the three-month forecast horizon. Note that this drop would have been greater if not for the unusual impact of supply chain restrictions on the lead times index.

On an industry specific basis, no sector reported expansion overall. Oil & gas, construction, manufacturing, mid-stream operations, professional services, and health care all reported significant weakness. From a three-month forecast standpoint, modest improvement is predicted if the effects of the COVID-19 virus moderate quickly.

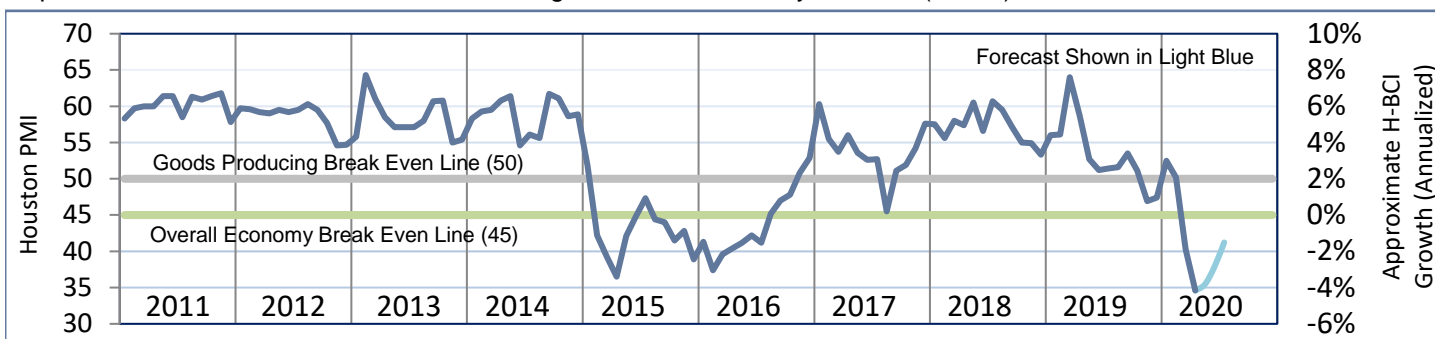
Indices at a Glance

Index	Apr	Mar	Change	Track	Rate	Trend*
Houston PMI - Current	34.6	40.3	-5.7	Contracting	Faster	2
Houston PMI - 3 Month Forecast	41.9	44.2	-2.3	Contracting	Faster	2
Sales/New Orders	21.2	30.2	-9.0	Falling	Faster	6
Production	34.5	40.6	-6.1	Falling	Faster	2
Employment	30.0	41.0	-11.0	Falling	Faster	3
Purchases	25.6	35.0	-9.4	Falling	Faster	2
Prices Paid	48.1	50.1	-2.0	Falling	Fr. Rising	1
Lead Times	57.1	49.3	7.8	Rising	Fr. Falling	1
Purchased Inventory	49.0	43.9	5.1	Falling	Slower	2
Finished Goods Inventory	51.1	49.3	1.8	Rising	Fr. Falling	1
Overall Houston Economy				Contracting	Faster	2

* Number of months on current track

Houston PMI Trend

Overall economic activity in Houston contracted in April for the second month. 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: Personal Protective Equipment (PPE) and cleaning supplies; ethanol, isopropyl alcohol, glycerin; gold for catalyst applications; software; ocean freight

Down in Price: Crude and motor fuels; ethylene, propylene, ethylene and propylene based polymers, ethylene glycol and propylene glycol derivatives, raffinates, butadiene, MTBE; professional services; containerized ocean freight

In Short Supply: PPE; ethanol, isopropyl alcohol, glycerin

What Our Respondents Are Saying

Oil and Gas Exploration, and Key Support Services:

- Global crude demand is down 20-25% and inventories are rising; U.S. inventories will be completely full sometime in May
- U.S. and Texas rig counts are now half of what they were at the beginning of the year
- We closed some oil wells during the month due to the low oil price
- Focus on manpower and capital efficiencies are accelerating
- Employment is under downward pressure with service companies furloughing many employees; owners are eliminating new hire positions but anticipate minimal layoffs at this point as the talent drain was high during the 2014-16 layoffs
- Some E&P companies are at risk of failure; assets will be picked up by stronger companies
- There is significant on-going uncertainty

Engineering and Construction:

- Construction permits and starts are down across the board
- Lower demand conditions in nearly all respects due to COVID-19
- Many large capital projects have been significantly delayed or suspended

Manufacturing - Durable Goods:

- Manufacturing for the energy sector will be tough for many months
- If we wait much longer to start our economy, the damage may not be repairable
- Quite surprising with everything going on, we have not seen any major impact

Manufacturing - Non-Durable Goods:

- Everything has slowed due to COVID-19
- With the exception of gold, precious metals pricing for catalysts have been stable

Wholesale Trade:

- Sales of hand sanitizer, masks, gloves, test kits, and other covid -19 related products increased significantly; as did raw materials for hand sanitizers

Transportation and Utilities (including mid-stream operations):

- Industrial and residential power consumption was up in April, commercial usage was down
- Houston Airport traffic is down significantly; many taxiways are unusable due to parked planes; carriers are attempting to reduce their cash outflow as fast as they can
- The port of Houston remains open as it is considered critical infrastructure; vessel traffic is down year-over-year

Financial Services and Real-estate

- New home sales activity increased modestly in April with price erosion occurring to ensure sales; closing times are being extended to ensure buyers still meet credit requirements
- Used home closings in April were down from March but consistent with April 2019
- Apartment rental prices and adsorption were down in April

Professional Services:

- COVID-19 and the oil price decline are having a major negative impact on employment; non-employee labor has been reduced significantly, if not eliminated all together
- Direct hire activity in O&G has come to a standstill; layoffs and furloughs have begun at plant sites and field locations; reductions in force for corporate level positions are also underway but are being done in smaller numbers to keep them out of the public view; expect these smaller scale layoffs in professional and technical roles to continue for several months

What Our Respondents Are Saying (Continued)

Health Care:

- Healthcare operations are down 60%, with occupancy for non COVID-19 patients at 30% on average
- Healthcare facilities are all operating at a net loss

Accommodations and Food Services:

- Hotel occupancy rates and revenues are way down
- Some hotels and many restaurants are at risk of failure

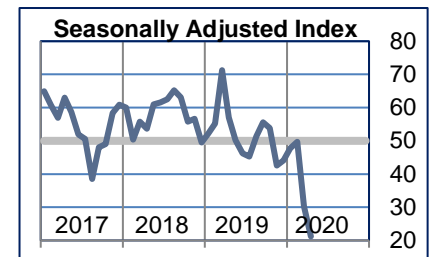
Trend of Underlying Indicators

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

The sales/new orders index fell an additional 9 points this month to the lowest level ever recorded with all industry groups reporting a contracting sales/new orders index.

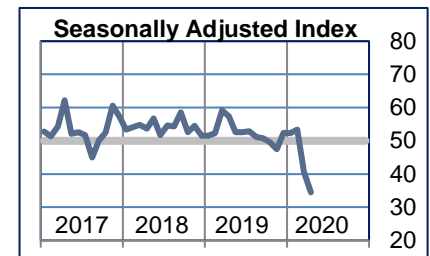
	Higher	Same	Lower	Net	Index
Nov/19	1%	80%	19%	-18%	42.6
Dec/19	4%	77%	19%	-15%	44.1
Jan/20	14%	71%	15%	-1%	47.7
Feb/20	17%	69%	14%	3%	49.7
Mar/20	4%	54%	42%	-38%	30.2
Apr/20	5%	34%	61%	-56%	21.2



Production Index

The production index fell about 6 additional points during the month, well below neutral. All goods producing industries reported significant contraction in this index.

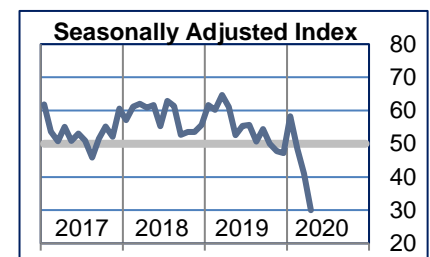
	Higher	Same	Lower	Net	Index
Nov/19	2%	93%	5%	-3%	47.5
Dec/19	6%	89%	5%	1%	52.4
Jan/20	9%	87%	4%	5%	52.3
Feb/20	13%	82%	5%	8%	53.4
Mar/20	2%	77%	21%	-19%	40.6
Apr/20	1%	70%	29%	-28%	34.5



Employment Index

The employment index fell an additional 11 points. Oil and gas, construction, manufacturing, transportation, professional services, health care, and accommodations/food services reported significant contraction.

	Higher	Same	Lower	Net	Index
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
Mar/20	1%	80%	19%	-18%	41.0
Apr/20	2%	59%	39%	-37%	30.0



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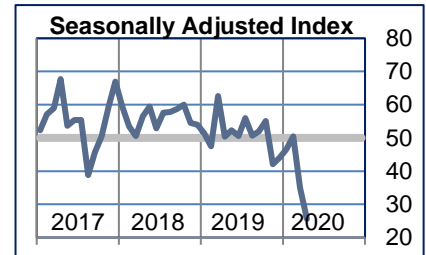


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Purchases Index

The purchases index fell a little over 4 points to 25.6 points, also its lowest level on record. No industry reported this index as expanding.

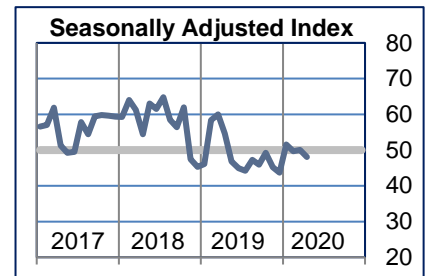
	Higher	Same	Lower	Net	Index
Nov/19	7%	72%	21%	-14%	42.1
Dec/19	8%	68%	24%	-16%	44.0
Jan/20	4%	88%	8%	-4%	46.5
Feb/20	9%	82%	9%	0%	50.4
Mar/20	7%	56%	37%	-30%	35.0
Apr/20	1%	51%	48%	-47%	25.6



Prices Paid Index

The prices paid index fell slightly to end just below neutral. Oil & gas, construction, manufacturing, utilities, and professional services reported strong contraction, while wholesale trade and health care reported significant expansion.

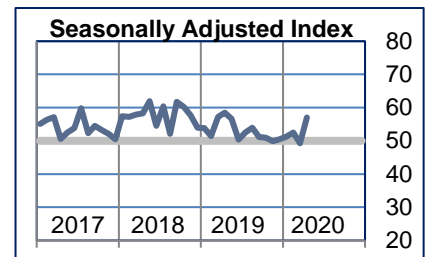
	Higher	Same	Lower	Net	Index
Nov/19	2%	85%	13%	-11%	45.2
Dec/19	2%	80%	18%	-16%	43.7
Jan/20	4%	95%	1%	3%	51.5
Feb/20	4%	94%	2%	2%	49.7
Mar/20	16%	74%	10%	6%	50.1
Apr/20	15%	68%	17%	-2%	48.1



Lead Times Index

The lead times index rose 8 points to end above neutral. Oil & gas, construction, wholesale trade, and health care reported the large increases. Professional services and manufacturing reported contraction.

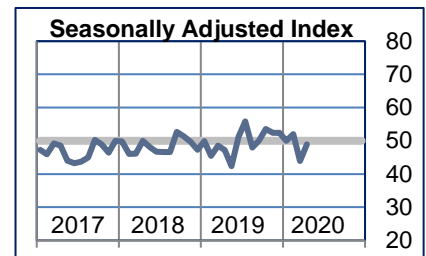
	Higher	Same	Lower	Net	Index
Nov/19	5%	89%	6%	-1%	49.9
Dec/19	5%	90%	5%	0%	50.5
Jan/20	5%	92%	3%	2%	51.2
Feb/20	7%	92%	1%	6%	52.5
Mar/20	12%	78%	10%	2%	49.3
Apr/20	24%	66%	10%	14%	57.1



Purchased Inventory Index

The purchased inventory index returned to near neutral after indication inventory contraction last month. This index was well above neutral for wholesale trade and health care, but below neutral for most other industries.

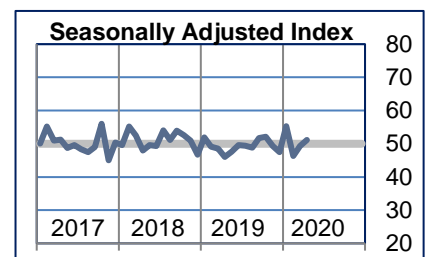
	Higher	Same	Lower	Net	Index
Nov/19	4%	94%	2%	2%	52.4
Dec/19	2%	95%	3%	-1%	52.4
Jan/20	8%	88%	4%	4%	50.0
Feb/20	9%	88%	3%	6%	52.1
Mar/20	4%	80%	16%	-12%	43.9
Apr/20	15%	69%	16%	-1%	49.0



Finished Goods Inventory Index

The finished goods inventory index rose modestly to just above neutral. Oil & gas and nondurable goods manufacturing reported significant increases in this index.

	Higher	Same	Lower	Net	Index
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
Mar/20	8%	81%	11%	-3%	49.3
Apr/20	16%	68%	16%	0%	51.1



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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