HOUSTON EMPLOYMENT FORECAST 2021

GREATER HOUSTON PARTNERSHIP.

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Table of Contents

DAMAGE CONTROL

On December 7, one day before this forecast was released, the number of COVID-19 cases in the U.S. approached 15 million, roughly 4.5 percent of the total population. The number of deaths approached 300,000. Only heart disease and cancer will kill more people this year. Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases, predicts that social gatherings during Christmas and New Year's will lead to a new surge in cases in January and February.

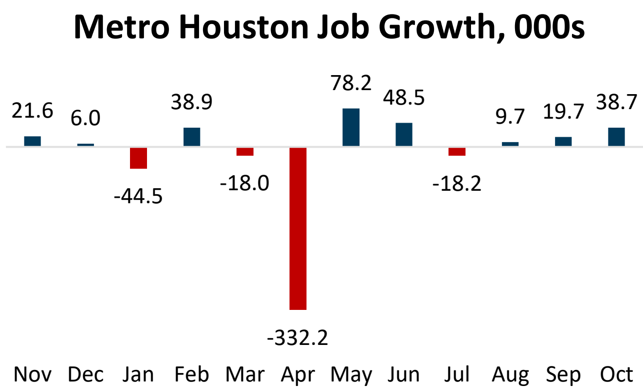
Back in March, business leaders and elected officials tried to contain the virus by shutting down schools, closing workplaces, and banning all large public gatherings. The U.S. saw 10,000 new cases per day then. (The week before this forecast was released, the nation averaged 200,000 cases per day.) Sending everyone home helped curtail the outbreak, albeit briefly, but at an enormous economic cost. The U.S. lost 22.2 million jobs. GDP fell by nearly $1.9 trillion, and over 140,000 businesses closed.

Houston suffered a double whammy. A collapse in oil prices rocked the energy industry at the same time COVID shut down the economy. The region shed 350,000 jobs during the first two months of the pandemic. The devastation could be seen throughout the economy.

- Houston's unemployment rate, at 3.9 percent in February, jumped to 5.5 percent in March, then 14.3 percent in April. That was the highest on record.
- Initial claims for unemployment benefits, barely above 4,000 the first week of March, surged to 76,000 the first week of April.
- The Houston Purchasing Managers Index (PMI), a short-term leading indicator for regional economic activity, sank to 34.6, the lowest level on record.
- West Texas Intermediate (WTI), the U.S. benchmark for light, sweet crude, averaged $16.55 in April. It opened the year at $61.17.
- The energy industry pulled 500 rigs from the field during the first three months of the pandemic. By mid-August, the drilling fleet had fallen to 244 working rigs, the lowest level on record.
- In April, passenger traffic at Houston's airports fell 95 percent compared to April '19.
- The Port of Houston handled 76,000 fewer containers during the first three months of the pandemic compared to the year before.
- Residential brokers closed on 4,100 fewer homes in March through May, a 17 percent drop from the same period in '19.
- Auto dealers sold 25,000 fewer new vehicles in March through May, a 38 percent drop.
- And the City of Houston collected $9.6 million less in sales taxes in April, a 17 percent decline from the same month the prior year.

As bad as the recession was, it would have been worse if not for the Coronavirus Aid, Relief, and Economic Security (CARES) Act, which Congress passed in late March. The act injected $2.2 trillion into the U.S. economy. Through the act's Paycheck Protection Program (PPP), Houston businesses received more than $9.4 billion in financial assistance. The Partnership estimates this supported more than 700,000 jobs in the region.

The economy began to reopen in May. Elected officials recognized the severe damage the shutdown had caused to the economy. And after six weeks at home, everyone had cabin fever. Houston recouped 78,200 jobs in May and another 48,500 in June. By October, the region had recouped 176,600 jobs overall, amounting to 50.2 percent of all jobs lost in the recession.



Houston needs another 174,000 to return to its pre-COVID employment level. That won't happen quickly. Only five times in the past 40 years has Houston added 100,000 or more jobs in a year, all during boom times for the oil and gas industry. Energy won't rescue Houston this time. Just the opposite. Energy is likely to be a drag on the economy for quite a while.

In a normal year, one not weighed down by low oil prices or over-stimulated by high prices, Houston adds 60,000 to 70,000 jobs. If the next few years are "normal," employment won't recover until the summer of '22 or the spring of '23. The most important factor determining when Houston returns to normal will be when the nation returns to normal.

A BIPOLAR YEAR

The U.S. will see two different economies next year. The first half of '21 will be a struggle. Social gatherings over Christmas and New Year's will lead to another surge of cases in January and February. Business will remain on the sidelines waiting to see what policies the Biden Administration enacts before making investment and hiring decisions. Consumers will watch the COVID vaccine rollout, assess how well it's managed, and then decide whether to queue up for the vaccine. Layoffs will continue.

Mid-year will be a tipping point. By then, most of the nation's health care workers, first responders, essential workers and vulnerable populations will have received the vaccine. The nation will be well on its way to inoculating the general population. Active COVID cases will be trending down. Stimulus packages passed in the spring will bear fruit by summer. As Europe, Asia and Latin America contain the virus, global growth will pick up. Demand for U.S. exports will grow. As the pandemic subsides, a wave of pent up demand will be unleashed. Businesses will restart projects suspended the year before. Consumers, not wanting to forego another vacation, will book flights or load up their SUVs. Energy consumption will grow, oil prices will rise, and drilling activity will pick up.

But the first quarter of '21 will be tough, especially for Houston. The region always experiences job losses in January. Retail, restaurant, and transportation workers hired for the holiday season are let go. Contract workers employed to meet year-end deadlines are released. Reorganization plans drafted in the fall are implemented. No one should be surprised when Houston loses 40,000 or more jobs this January. Houston's recovery will likely lag the U.S.'s by a few months, but growth will resume in the second half of '21. That's the major assumption used in preparing this forecast.

The Forecast

The Partnership's forecast calls for Houston to add 35,000 to 52,000 jobs in '21, with most of the growth occurring in the second half of the year. Every sector will register job growth except energy and retail. The sectors creating the most jobs will be administrative support services, health care and social assistance, manufacturing and professional services.

If WTI reaches $50 per barrel in the spring, real GDP growth exceeds 4.5 percent (annualized), and new COVID infections fall below 40,000 per day in Q1, gains will be at the high end of the range.

If oil remains mired in the mid-$40s, GDP growth slips below 3.0 percent, COVID cases remain above 40,000, and elected officials issue new stay-at-home orders, growth will be at the low end of the range.

Other factors possibly lifting Houston's job growth above what's forecasted: a new $2 trillion U.S. stimulus package, several local multi-billion infrastructure projects, a significant expansion of health care coverage, and OPEC pulling another two to three million barrels per day of production off the market. But all recovery scenarios assume a successful rollout of the vaccine, with enough of the population getting inoculated to reach herd immunity by summer. Until that occurs, the economy will muddle along. The details of the forecast follow.

DRILL, BUILD, ASSEMBLE

Energy

The past six years have been brutal for the oil and gas industry. First came the Fracking Bust ('15 – '17). The

Organization of Petroleum Exporting Countries (OPEC) refused to cut production to prop up oil prices so they fell, along with domestic drilling, energy employment and the market cap of companies in the industry.

Then came the Credit Crunch ('18 – '19). Wall Street, tired of waiting for a return on its investment, stopped funding the industry. Exploration firms had to scale back their drilling programs. Energy employment, which had only begun to recover from the Fracking Bust, began to slip again.

Then came the Russia-Saudi Oil Feud (March '20). Russia refused to reduce its production to help maintain global oil prices. To punish Russia, the Saudis flooded the market with their own crude. Once again, prices plummeted, drilling collapsed, and employment fell.

The feud was ill-timed. The COVID-19 pandemic had already gripped the world. By April, daily consumption had fallen by over 17 million barrels. A familiar pattern followed—prices fell, the rig count fell, energy employment fell. For the energy industry, it's been a series of unfortunate events.

To recap the past six years:

- Over 500 North American exploration and oil field service firms have filed for bankruptcy.
- The U.S. drilling fleet has lost nearly 1,600 rigs, an 83 percent decline.
- Metro Houston has lost nearly 100,000 upstream energy jobs.
- And energy's share of Houston's GDP has fallen from 35-40 percent (GHP '14 estimate) to 20-25 percent (GHP '19 estimate).

Next year won't be any easier for the industry. While global demand has improved, it will remain three to five million barrels per day below pre-COVID levels. The U.S. Energy Information Administration (EIA) forecasts WTI to average $45 per barrel in '21. The NYMEX futures market shows crude trading in the mid-$40s through the end of '21. Most U.S. firms need crude at $49 or higher to profitably drill a well, according to the Federal Reserve Bank of Dallas.

The industry will also face closer scrutiny from President-elect Joe Biden's Administration. He has an aggressive climate agenda, but his success in implementing that agenda will depend upon whether the Democratic Party controls the Senate. If Republicans retain control, Biden will rely on executive orders and administrative agencies to enact his plan. He's expected to:

- Bring the U.S. back into the Paris Agreement, aka the Paris Climate Accords;
- Negotiate new mileage and emission rules for autos and trucks;
- Slow or halt oil leasing on federal lands and in the Gulf of Mexico;
- Increase environmental scrutiny during the pipeline permitting process;
- Install half a million electric vehicle charging stations across the U.S.;
- And institute stricter regulations on methane emissions at all well sites.

Oil and gas fueled Houston's growth for well over a century, but that era is coming to an end. Global crude demand, if it hasn't peaked already, will do so in the next 10 to 20 years. In a recent survey of energy executives conducted by the Federal Reserve Bank of Dallas, two-thirds of the respondents believe U.S. production will never return to pre-COVID levels. And many oil and gas firms are re-structuring their organizations to include alternative energy in their portfolios. BP is selling its petrochemicals business and is investing in wind and solar farms. Shell is shifting away from just investing in resources into things like hydrogen, biofuels, renewable power and nature. And Chevron has invested more than $1.1 billion in various projects to capture and sequester carbon so it isn't released into the atmosphere.

Since the pandemic began, over 50 energy firms with significant operations in Houston have announced layoffs. This doesn't include those which occurred outside the media spotlight or those which failed to notify the Texas Workforce Commission of its intent to lay off employees.

The worst of the energy layoffs are likely over, but additional staff cuts will occur. Mergers announced in '20 will be finalized in '21. The combined companies will consolidate their operations; layoffs will result. Additional bankruptcies will occur resulting in more layoffs as well.

The industry will likely end '21 either flat or with the loss of 2,000 jobs. The losses will be reduced if WTI hits $50 before mid-year, drilling activity picks up in the summer, and a few companies move operations back to Houston. Houston would lose up to 5,000 energy jobs if: layoffs continue past Q1, more mergers are announced, WTI remains mired in the mid-$40s, and exploration activity remains flat through the end of the year. Even if oil prices and drilling activity improves dramatically, the industry will first lean more heavily on existing personnel before it adds to payroll.

Construction

Recessions always knock the wind out of real estate. The industry was already beat up and bruised prior to the pandemic. The office market had never recovered from the Fracking Bust. Multi-family housing was grossly overbuilt. Industrial/warehouse space was on the cusp of being overbuilt. And retail vacancies were creeping up. Only single-family home construction entered the recession in good health. It's also the one sector that will maintain its current pace of construction in '21.

Office

The office market, like energy, has struggled for years. Over the past decade, builders have added 42 million square feet of space for demand that never materialized. Houston's economy has diversified, but energy still drives the office market. As the energy industry shrank, so did its need for space. Since Q1/15, the office market has logged 9.3 million square feet of negative absorption.

As COVID ravaged the economy, many firms, not just energy companies, reassessed their space needs. Industrial logged 3.7 million square feet (MSF) of negative absorption through November of '20. The year will likely end with 4 million square feet thrown back on the market. With more mergers, bankruptcies and layoffs expected, the trend will continue. The demand for new office space just isn't there.

Office construction will remain subdued in '21. There may be a few build-to-suit projects or low-rise buildings in niche submarkets, but a developer would be foolish to start any new project without it being 50 percent or more preleased prior to groundbreaking.

Industrial

The problem with warehouse/industrial space is more recent. Supply and demand were balanced until late '17. That year, developers added 10.0 MSF and the market absorbed 10.4 MSF. But they've gone on a building binge ever since, adding nearly 50 MSF over the past three years. That's double what the market absorbed (24 MSF). The vacancy rate for Class A warehouse space, which includes new construction, has jumped from 12.5 percent in Q3/19 to 18.0 percent in Q3/20. The Class A vacancy rate will be even higher next year.

Fewer projects are breaking ground now. COVID has put projects on hold as well. In Q3/20, only 16.2 MSF was under construction, down from 22.0 MSF in Q1/20. CoStar expects developers to add another 16 million square feet in '21, which reflects a modest slowdown but still more space than the market will absorb.

Retail

Retail enjoyed 42 consecutive months of positive absorption prior to the pandemic but logged negative absorption in Q2 and Q3. The overall vacancy rate is up from 5.7 percent in Q1/19 to 6.4 percent in Q3/20. The rate is expected to rise as more stores and restaurants close. Some space will be filled with new tenants, other spaces repurposed, and others bulldozed.

The pandemic will tamp down retail construction in '21. A few projects may break ground in the distant suburbs. Some construction will take place closer to town as owners add on to existing centers. And developers are always looking for prime sites inside Loop 610. The market will likely see around 2.0 MSF of new retail construction over the next two years, well off the pace of 6.1 MSF of the past five years.

Single-Family

The bright spot for construction in Houston is single-family housing. John Burns Real Estate Consulting forecast for 46,000 single-family permits will be issued in Houston in '20, up from 39,500 in '19. The firm forecasts 52,000 permits will be issued next year.

Low interest rates are the main factor driving the housing boom. The average interest rate on a 30-year, fixed mortgage was 2.71 percent the first week of December '20, down from 3.73 percent the same in '19, and well below the 4.75 percent of December two years earlier.

Multifamily

Over the past five years, developers have built over 70,000 units, twice what industry rules of thumb suggest the market could absorb.[1] Yet overall occupancy continues to hover around 90 percent. Property owners have achieved this through an aggressive use of incentives. This might include free rent, waiver of a security deposit, or discounting rent on an upgraded floor plan. In early December, 70 percent of all Class A apartment units were covered by an incentive. In a normal market, that would be less than 30 percent.

Over 17,000 units were under construction in December '20. Houston will need to create more than 100,000 jobs to absorb that. Though still excessive, it reflects an improvement over December '19 when 23,600 units were

[1] The industry rule of thumb holds that for every six jobs created the market can absorb one apartment unit.

under construction. Like the Energizer Bunny, apartment developers keep on going and going and going. They will probably add another 14,000 to 16,000 units in ’21.

Heavy Industrial

COVID-19, the global recession, and overcapacity has put many plant expansions on hold. Demand for chemicals and plastics is closely tied to global GDP growth. The global economy is not expected to fully recover until ’23.

The industry also suffers from oversupply. McKinsey & Co. estimates the global chemical industry operated at 81 percent of capacity in Q3/20, down from 89 percent in Q1/20.

Refining has a similar problem. EIA reports that the U.S. refining industry utilized only 76.9 percent of its operable capacity in October ’20, down from 92.5 percent in December ’19.

A significant share of heavy construction activity in Houston involves turnarounds, i.e., planned shutdowns of a chemical plant or refinery for maintenance, repair, retrofit and renovation. To conserve cash, many turnarounds were postponed early in the pandemic. The slowdown in turnaround work affected communities along the Houston Ship Channel. Workers there have experienced double-digit unemployment rates compared to the single-digit rates on the west side of town.

Regional Unemployment Rates, October ’20

City	Rate - %	City	Rate - %
Alvin	8.3	La Porte	8.9
Baytown	15.0	League City	5.4
Deer Park	7.9	Pasadena	9.4
Friendswood	5.4	Pearland	5.5
Galveston	8.2	Sugar Land	6.3
Houston	7.7	Texas City	10.8

Source: Workforce Solutions

Another big unknown is how many of the projects suspended during the pandemic will start back up in ’21. Twenty percent of all respondents to a nationwide Associated General Contractors survey indicated they had a project that was scheduled to start in August or later cancelled. Builders are also reporting weaker backlogs going into ’21 than they had going into ’20.

The forecast calls for construction to add 2,000 to 4,000 jobs in ’21. The lower end assumes an increase in residential construction; a drop in office, industrial, retail and multifamily construction; and a few projects on hold re-starting. The upper end assumes the same, but with a rebound in turnaround work.

Manufacturing

Houston lost over 13,000 manufacturing jobs the first two months of the pandemic. Losses have continued even as the economy reopened, the effect of the slowdown in oil and gas exploration. As of October, job losses approached 22,000.

Manufacturing tied to upstream energy began to wobble prior to COVID. Once the rig count began to slip it was only a matter of time before new equipment orders tapered off. Layoffs were mild at first. Employment in machine manufacturing and fabricated metal products, two sectors closely tied to oil and gas, shed 2,000 jobs in the months leading up to the pandemic. Since March, another 9,500 have been lost.

Prior to the pandemic, trade conflicts and slower global growth were the chemical industry’s main concerns. The American Chemistry Council (ACC) estimated U.S. chemical production rose a paltry 0.6 percent in ’19. Prior to COVID, the ACC had forecast production to rise 0.4 percent in ’20. ACC’s chemical activities barometer, which includes share values, commodity prices, inventories and production, fell 14.5 percent in April ’20. Chemicals and refining shed 1,600 jobs in the pandemic, about three percent of their total workforce.

Machinery, fabricated metal products, chemicals and refining supports about two-thirds of the manufacturing jobs in the region. The remaining third, some 72,000 jobs, are spread across another 70 sectors. All but three of those sectors—motor vehicle parts, rubber products and synthetic fibers—contracted during the pandemic.

Nationally, manufacturing has rebounded. The Institute for Supply Management’s Purchasing Managers’ Index (PMI) registered a healthy 57.5 in October ’20, indicating a sixth straight month of growth for U.S. factories.[2] That bodes well for Houston, which supplies chemicals, plastics, oils, lubricants, and various components to plants across the U.S. The Houston PMI registered 53.2 in October, the third consecutive reading above 50, another sign the local manufacturing sector is on the mend.

Houston won’t recover its oilfield-related manufacturing jobs until the rig count recovers – which hopefully will start around mid-year. The outlook for chemicals and plastics

[2] Readings above 45 correlate with expansion of the service side of the economy, below 45 a contraction, while readings above 50 signal expansion in Houston’s goods producing sectors, below 50 a contraction.

has already improved. Through October, Houston chemical exports were up by weight, though down by value.

Chemical Exports, Year-to-Date, Houston-Galveston Customs District

	Oct '20	Oct '19	% Change
Metric Tons MM	15.8	15.3	3.0
Value - $ Billions	10.2	12.1	-16.8

Source: WISERTrade

The forecast assumes manufacturing will add 4,000 to 6,000 jobs in '21. Chemicals will recoup two-thirds of its losses in '21 as the global economy improves and with it the demand for chemicals and plastics. The summer rebound in drilling activity will drive the demand for machinery and fabricated metal products. Firms are likely to schedule more overtime for their remaining workers before they add additional shifts. Recovery in Houston's other manufacturing sectors will be tied to the overall recovery of the U.S. economy.

STOCK IT, SELL IT, SHIP IT

Wholesale Trade

Houston wholesalers cut 17,000 jobs during the first two months of the pandemic. Though much of Houston's economy has reopened, wholesale continues to struggle. Losses through October totaled 18,800. Only construction and restaurants have steeper hills to climb.

Wholesalers are a key link in the region's economy. They buy goods in bulk, store them in warehouses, and sell them to retailers, manufacturers, and other businesses. For grocers, this includes produce, meat and canned goods; for manufacturers, parts and components; for service industries, office supplies and equipment.

When COVID struck and demand slumped, firms cut back or cancelled orders. In March, sales fell 5.1 percent nationwide compared to the previous March. In April, sales fell 20.2 percent; in May, 15.9 percent. Over those three months, sales were down $200 billion nationwide.

Wholesalers quickly found themselves with too much inventory. The inventory-to-sales ratio, a measure of how much wholesalers have in stock, jumped to 1.63 in April. In the 25 years prior to the pandemic, the ratio averaged 1.25. In the Great Recession, it peaked at 1.41.

The industry had to cut costs, so it cut payroll. Nationwide, the layoffs amounted to 6.5 percent of sector employment. In Houston, the cuts equaled 9.6 percent. Houston wholesalers paid $1.0 billion less in wages in Q2 than they did in Q1. While the U.S. has slowly recouped its losses, Houston continues to lose jobs. As of October '20, wholesale employment was down 10.6 percent compared to February.

The wave of retail and restaurant closures has shrunk wholesalers' customer base. With businesses slow to reopen, there's less demand for office supplies and equipment. Slower growth in Europe, Latin America and Asia is limiting opportunities overseas. And with the energy industry struggling, there's less demand for oil field equipment.

The forecast calls for Houston to add 3,000 to 3,500 jobs in '21, with most of growth occurring in the second half of the year. The low end of the range assumes retail, restaurants and energy see only marginal improvement. The higher end of the range assumes a strong rebound in local retail sales, dozens of new restaurants opening, U.S. growth picking up mid-year, and a surge in drilling activity in Q3.

Retail Trade

Houston's retail sector lost 28,000 jobs early in the pandemic. "Stay Home, Work Safe" orders issued by elected officials required all non-essential stores to close. Grocery, hardware and liquor stores were considered essential. Clothing, home furnishings and jewelry stores were not. In metro Houston, retail sales fell $4.2 billion (13.7 percent) in Q2/20 compared to Q2/19.

A few sectors benefitted from the pandemic. Panic buying set in and grocery sales soared. Homeowners finally found time to build that patio deck, giving a boost to hardware and building materials. Hobby and craft stores also did a brisk business. Consumers wanted something to do other than binge content on Netflix and HBO.

METRO HOUSTON RETAIL SALES - $ Billions

Sector	Q2/20	Q2/19	% Change
Motor Vehicles	4,749	5,445	-12.8
Home Furnishings	765	875	-12.5
Electronics/Appliance	818	1,113	-26.5
Building Materials	2,509	2,282	9.9
Food and Beverage	4,996	4,471	11.7
Health and Personal	1,508	1,532	-1.6
Gasoline Stations	3,908	6,584	-40.6
Clothing Stores	914	1,379	-33.7
Sport/Hobby/Books	572	490	16.7
General Merchandise	3,122	3,299	-5.4
Miscellaneous Stores	1,773	2,393	-25.9
Nonstore, Other	910	899	1.2
TOTAL RETAIL TRADE	26,543	30,763	-13.7

Source: Texas State Comptroller

PPP loans saved some retailers but for others, the pandemic was too much. Smaller stores quietly closed their doors. The larger stores made headlines. As of late November, 29 U.S. retailers had filed for bankruptcy. This includes the following chains with Houston locations: Ascena (Ann Taylor, Catherines, Justice, Lane Bryant, Loft) Brooks Brothers, GNC, Guitar Center, JC Penny, Lord & Taylor, Lucky Brand, Neiman Marcus, Papyrus, Pier One, Stage Stores (Bealls, Palais Royal), Stein Mart, Sur La Table, Tailored Brands (Men's Wearhouse, Jos. A. Bank) and Tuesday Morning. Some will reopen with fewer stores. Others plan to liquidate their operations.

Data from the Texas Workforce Commission (TWC) suggests Houston's retail sector is only 3,100 jobs short of where it stood in February. That overestimates the extent of the recovery. Retail employment always surges in the fall as merchants take on additional help for the holiday shopping season, then let those workers go after the first of the year. A better measure of retail's recovery will be employment in February, the month before the one-year anniversary of the pandemic.

Recouping all the lost retail jobs will be tough. Houston has fewer stores now, so there are fewer places to submit employment applications. The remaining brick-and mortar stores must compete with online merchants for convenience, selection and price. And behaviors established during the pandemic will be hard to break. Consumers have grown comfortable purchasing everything from automobiles to yogurt online.

If the region does add retail jobs in '21, it will buck the trend of the last three years. Retail lost jobs in '17, '18 and '19. Online shopping, self-checkouts, and a rash of store closings have taken their toll on retail employment. The industry also faces slower population and job growth—the traditional drivers of sales.

Average Annual Growth, Metro Houston

	'10 – '14	'15 – '19
Population	129,600	113,100
Employment	91,500	38,900

Sources: Texas Workforce Commission, U.S. Census Bureau

And post-COVID, some consumers will still fear venturing into a crowded mall. To combat this, brick-and-mortar stores will need to create shopping experiences compelling enough to justify the risk.

Sectors in Houston that have performed well in recent years will continue to do so in '21. This includes grocery, hardware and general merchandise stores. Clothing and traditional department stores will continue to struggle. Auto dealers should see a boost in sales as the economy recovers, but technology will allow them to complete those transactions with fewer workers. And online shopping will continue to take market share away from traditional retailers.

The forecast calls for retail to lose another 2,000 jobs. The opening of new shopping centers in the distant suburbs may offset those losses. If the recovery is delayed into the fall, job losses may exceed 3,000.

Transportation

Houston's transportation sector lost 3,800 jobs during the early stages of the pandemic. The bulk of the losses occurred in air and truck transportation and at support service firms (e.g., crating, packaging, customs house brokers, freight forwarders).

Trucking depends on retail sales (shipments to stores, distribution centers), factory activity (raw materials in, finished goods out), and construction (materials delivered to the job site). With most stores closed, manufacturing in a slump, and many construction projects on hold, trucking volumes fell 10.3 percent nationwide from March to April and another 1.0 percent from April to May.

In Houston, trucking is also tied to global trade (container traffic at the port) and drilling activity (equipment bound for the oil fields.) The rig count began its descent in the spring, falling nearly 50 percent in by early May. Container traffic through the port fell 11.2 percent in March and April. Truck transportation and related sectors lost nearly 1,700 jobs.

Fears of catching the virus while on a crowded jet kept travelers at home. In April, passenger traffic through the Houston Airport System (HAS) was down 95 percent compared to the prior year. Air transportation and related sectors lost nearly 2,400 jobs. This doesn't include furloughed workers, who if included in the layoffs would drive up job losses.

Pipelines, bus transportation and taxi services also reported losses ranging from a few dozen to a hundred.

Two transportation sub-sectors benefitted from the pandemic—warehousing/storage and messenger/courier services. They added 3,300 and 660 jobs, respectively, during April and May. Ecommerce drove those gains.

October data from TWC suggests transportation employment now exceeds February '20 levels. As with retail, these numbers are misleading. In the fall, the sector always adds truck drivers and warehouse workers to handle the surge in holiday shipping. Come January, a more accurate picture of transportation's recovery will emerge. It's unlikely the sector has recovered all of its losses.

On a happier note, positive signs have emerged for the sector. Container traffic at the port in September and October exceeded the levels from the prior year. HAS passenger travel was down only 80 percent in October. And recent sales tax collections (see Government section) suggest local retail sales have picked up. On the other hand, the airlines continue to warn that without additional relief from Washington, their temporary furloughs will become permanent layoffs.

The forecast calls for transportation to add 2,500 to 3,000 workers in '21. To achieve the higher level of job growth, manufacturing activity needs to pick up, container traffic at the port must grow, brick-and-mortar retail must recover, and aviation layoffs must be avoided. If two or more of those factors fail to materialize, job growth will be at the lower end of the range. If the airlines follow through with their layoff threats, there won't be enough growth in other sectors to offset the losses and transportation will finish year with fewer jobs than when it started.

A WHITE-COLLAR WORLD

Information

The decline in the information sector began long before the pandemic. Employment peaked in '00 and has declined steadily since, with telecommunications and traditional media accounting for much of these losses. For instance, technology has supplanted many tasks once handled by humans. Additionally, social media and the internet have cut into newspaper, magazine, television and radio revenues.

Nationwide, advertising spending fell 35.0 percent in April compared to the same month the prior year. In May, ad spending was off by 31.0 percent. Promos for airlines, vacations, restaurants and retail stores nearly disappeared during the pandemic. If not for political ads leading up to the November elections, advertising revenues would have fallen further.

The drop in ad revenues has forced newspaper and periodical publishers to cut over 700 jobs in the pandemic. Radio and television broadcasters shed another 200. Media outlets continue to restructure. Any increase in ad spending in '21 is unlikely to lead to a hiring binge.

According to Box Office Mojo, movie ticket sales were only $4.7 million nationwide in Q2/20, down from $3.3 billion in Q2/19. In Houston, the lack of an audience led to nearly 2,500 layoffs at local cinemas. Movie theatres may now operate at 75 percent of their normal capacity provided they follow mask and social distancing guidelines. However, there hasn't been a flood of ticket buyers at the box office.

The forecast assumes most movie theatres reopen by Q3/21 that an increase in ad revenues allows local media outlets to reinstate some positions eliminated during the pandemic, and cries for better broadband services will force telecom providers to bring on additional staff. The industry will recoup 500 to 1,000 jobs in '21, likely in the second half of the year, but will never return to its pre-COVID employment levels.

Finance and Insurance

In a typical recession, bank borrowing drops precipitously. Many businesses, to better manage their cashflow, avoid taking on additional debt. Banks, worried about clients not being able to service their debts, lend only to their most credit worthy customers.

But that wasn't the case this time. In March, Congress passed the CARES Act to help businesses continue paying workers' salaries during the pandemic. Banks were flooded with applications. One local bank processed more PPP applicants in the months of March and April than they process conventional loans in a normal year. This is one reason banking suffered so few job losses. And many kept branches open during the pandemic (though clients were encouraged to schedule appointments to avoid arriving in the lobby unannounced). As a result, layoffs were minimal-fewer than 500 in an industry that employed close to 30,000 prior to the pandemic.

Unlike the Great Recession, the COVID recession did not force a single local bank failure. The much-maligned Dodd-Frank Act ensured banks were well-capitalized prior to the downturn. And since the fracking bust, many Houston banks had already pared back their energy lending, so they were less exposed to souring energy loans than in previous downturns.

Insurers had to deal with the pandemic on multiple fronts, as underwriters, claims payers, employers and investment managers. With fewer Houstonians on the roads, there were fewer auto claims. With no significant floods, hail or windstorms, there were fewer property claims. And with a record number of houses being sold, there were more opportunities to write homeowners policies. Job losses were insignificant, only 300 layoffs in a sector that employs 33,000 in Houston.

Low interest rates remain a challenge for the banking industry. The Federal Reserve has signaled it intends to hold rates near zero until the economy shows substantial improvement, which would squeeze the margins on any loans they issue. Insurers worry that consumers are delaying care while their health is deteriorating. Those claims will eventually emerge at higher levels. Claims related to COVID treatments are expected to soar.

Data from the TWC indicates that banking, finance and insurance have recovered all the jobs lost in the early stages of the pandemic. As other sectors of the economy recover, so will the demand for banking and insurance services. The forecast calls for the sector to add 800 to 1,000 jobs in ’21, the growth in employment tied to the strength of the overall recovery.

Real Estate, Rental, Leasing

Real estate, rentals and leasing includes the sale, leasing and management of properties along with the leasing of appliances, business machinery, furniture, industrial equipment and vehicles. The sector lost 5,000 jobs in March and April, the bulk of which occurred in the rental of automobiles and industrial equipment.

The drop in travel, especially business related, slashed the need for rental cars. In Q2/20, revenues fell 67 percent at Avis and 70 percent at Hertz. Those two companies furloughed 50 percent or more of their global workforces. Locally, car rental firms shed 1,500 jobs.

The slowdown in construction reduced the demand for bulldozers, cranes, lifts and scaffolding. The drop in the rig count reduced the need for compressors, tools and pumps. The closing of offices, stores and restaurants reduced the need for furniture and office equipment. These sectors shed another 2,300 jobs.

Commercial real estate saw sharp drops across all lines of business. Tenants put leasing decisions on hold, buyers grew cautious about acquiring properties, and clients cancelled meetings with advisors. Office leasing activity fell 63 percent in Q3/20 compared to Q3/19, industrial leasing dropped 45 percent, retail activity slipped 35 percent. To manage costs, brokerage firms cut payroll. Real estate shed 1,600 jobs in the early stages of the pandemic.

The car rental business won’t improve until travel resumes. With construction activity flat in ’21, demand for equipment will also be flat. Rental of office and business equipment won’t pick up until leasing activity does. Real estate will remain depressed until clients believe the worst is over and they see opportunities ahead. That’s unlikely to happen before mid-year. The forecast calls for the sector to add 500 to 1,000 jobs in ’21, with most of the gains coming in Q3 and Q4.

Professional, Scientific, Technical Services

There’s considerable noise in the employment data for professional, scientific and technical services.

The monthly data, known as the Current Employment Statistics (CES), is derived from a survey of employers with algorithms filling in gaps in the data. The CES suggests the sector lost 8,800 jobs in March and April.

A less noticed data set, the Quarterly Census of Employment and Wages (QCEW), is based on administrative records and is more accurate. It gets less play in the media because there’s a four- to five-month lag from when it’s collected to when it’s released. The QCEW suggests firms in professional/scientific/technical services cut 14,400 jobs early in the pandemic, nearly twice the losses shown in the CES.

Based on the QCEW, Houston’s architectural and engineering firms shed 6,200 job in the first two months of the pandemic (versus adding 200 in the CES survey). The downturn in both industrial construction and oil and gas projects forced the layoffs.

The region’s accounting, bookkeeping and tax prep firms shed another 3,100 jobs (compared to a loss of 800 in the CES). Cuts always occur at the end of tax season, but they were even deeper this year because of the pandemic.

As billable hours declined, law firms shed 400 jobs. Management, scientific, and technical consulting firms shed 2,300 jobs. Advertising, public relations, marketing, research labs and management consulting account for the rest of the losses.

CES data suggests 150 percent of the losses have already been recouped. That’s highly unlikely. QCEW data, though, suggest losses continued into June, which aligns with media reports and anecdotal evidence. QCEW data for Q3 and Q4 won’t be available until next year.

Economic growth should pick up in the second half of the year. President-elect Biden campaigned on corporations and wealthy Americans shouldering more of the nation’s tax burden. That will create additional work for the law firms and CPAs. Engineering projects placed on hold during the downturn are being re-evaluated and many will be restarted. Money is creeping back into marketing budgets. The constant threat of cyberattacks mandates that companies update their networks. Job growth should pick up as the economy heals. The forecast calls for professional, business and technical services to add 4,000 to 6,000 jobs next year. To hit the higher number, the region will need to see a pickup in heavy and civil construction projects early in the year.

Administrative and Support Services

TWC reports the sector lost nearly 14,000 jobs in March and April. Based on QCEW data, the Partnership estimates the losses were closer to 21,000.

Nearly half the losses, 10,000 jobs, came in employment services. This sector includes temporary and contract workers. As projects were cancelled or delayed, firms needed fewer engineers, accountants, designers, manufacturing and warehouse workers, so they released them from their contracts.

In the early stages of the pandemic, bars were closed, so they didn't need guards checking IDs at the door or watching cars in the parking lot. Same goes for cancelled concerts, festivals and public events. Investigation and security services shed 3,000 jobs.

According to data from Kastle Systems, 75 percent of Houston's office employees worked remotely in March and April, so there was little need for business support services. The subsector shed 2,500 jobs. There was less demand for services to buildings and dwellings (i.e., janitorial and landscaping). The subsector lost 1,200 jobs. The remaining administrative services job losses were spread across half a dozen other subsectors.

TWC data suggest 85 percent of the sector's job losses have been recouped. Again, that's likely an overestimate. Office occupancy is still 60 percent below pre-COVID levels. Few bars have reopened. And most festivals, concerts and similar events remain cancelled. The gains, based on data from a variety of sources, may exceed 4,000 jobs, but not by much.

The sector serves as a bellwether for broader trends in the economy. When a recovery begins, businesses add contract workers to handle the initial uptick in demand and outsourcing contracts are reinstated. The forecast assumes firms will again rely on contract workers early in the recovery. The industry will add 6,000 to 8,000 workers in '21, the range tied to the demand for engineering services, manufacturing growth, and the need for professional services.

Educational Services

This sector includes private elementary, middle and high schools; private junior and senior colleges and universities; for-profit business, vocational and technical training programs; and education support services. Vocational and technical training includes apprenticeships, computer courses, cosmetology and barber schools, driving instruction, fine arts academies, flight training, language schools, management training and sports instruction. Employees at public schools, colleges and universities are classified as government workers.

The sector lost 5,800 jobs in March and April as Stay Home, Work Safe mandates forced these establishments to close. Many reopened with the start of a new school year. Data from TWC suggests all but 600 of those jobs have been recouped. A growing school age population, parents' concerns about the quality of public education, laid off workers seeking retraining, and adults simply looking to acquire new skills will drive job growth in the sector. The forecast calls for the sector to add 600 to 1,000 jobs in '21, the magnitude of the gains depending on increases in private school enrollments and the need for post pandemic worker retraining.

GRACE UNDER PRESSURE

Health Care and Social Assistance

It's ironic that amid a pandemic the health care and social assistance sectors lost jobs. Health care shed 11,000, social assistance 8,000, and nursing care facilities 2,000.

The job losses in health care resulted from a state order issued in March prohibiting all elective surgeries. The state wanted to free-up hospital capacity for the expected surge in life-threatening COVID cases.

Other factors came into play as well. Many patients avoided doctor visits out of fear they might contract COVID from another patient while in the waiting room. Others used COVID as an excuse not to visit the dentist. With fewer cars on the road there were fewer accidents and fewer trips to the Emergency Room. And with Little League and soccer seasons cancelled there were fewer sports injuries to be treated.

Governor Abbott's order to shut down businesses did not apply to private child care centers, but out of fear, many parents pulled their children. As a result, hundreds of centers across the state were forced to close. Those fears linger and many centers remain closed. Others have reopened but operate at a fraction of their pre-COVID capacity.

The biggest challenge facing the industry in '21 will be an increase in the number of uninsured patients. One in five Houstonians lacked health insurance prior to the pandemic. With the loss of so many jobs and their accompanying benefits, the uninsured population will swell. Health providers are under continuous pressure from insurers, patients and the government to control health care costs.

The forecast calls for health care and social assistance to add 6,000 to 7,000 jobs in '21. The sector will benefit from the two factors that have supported gains in previous years—population growth and a growing number of seniors 65 and older. But growth won't hit the higher end of the range until parents overcome their fear of placing the child in day care.

OUT ON THE TOWN

Arts, Entertainment, and Recreation.

Percentage-wise, COVID hit Houston's arts, entertainment and recreation scene harder than any other sector. While a loss of 18,000 jobs pales in comparison to what restaurants and health care suffered overall, the sector lost 49 percent of its total jobs in one month.

Gyms and fitness centers closed early in the pandemic. PPP loans kept some trainers and staff on payroll, but layoffs were inevitable. The sector lost 5,900 jobs. 24-Hour Fitness and Gold's Gym have filed for bankruptcy. Dozens of gyms have permanently closed.

The pandemic hit toward the end of the National Basketball Association's (NBA) season. Major League Baseball's (MLB) season was about to start. The first snap in the National Football League (NFL) was still months away. The Rockets finished their season quarantined in a bubble. The Astros played without fans in the stadium. And the Texans have limited seating to 20 percent of NRG's stadium capacity.

The financial losses from empty stadiums have been staggering. According to Bleacher Nation, the MLB lost $3.1 billion in the '20 season. The Associated Press estimates the NBA's losses at $1.5 billion. The NFL's season is underway, so comparable estimates are not yet available.

The ban on large public gatherings forced performing arts organizations to cancel their seasons. A few arranged for digital performances, but the financial losses forced the layoff of over 700 workers.

To date, the sector has recouped less than a third of its losses, one of the slowest recoveries of any sector in Houston. And most of the gains occurred over the summer at nature centers, amusement and theme parks. When detailed data is available for Q3, those gains will likely have faded away.

Gyms and exercise facilities have reopened, but only at 75 percent of their pre-COVID capacity. The Houston Grand Opera and the Houston Ballet won't resume live, in-person performances until fall '21. The Houston Symphony is trying a hybrid model, with limited seating in Jones Hall while also providing digital access. The chatter on the sports blogs is that additional layoffs in the back office are coming.

If the fine arts can return to a regular season in the fall of '21 and gyms continue to reopen, the region should add back 1,500 jobs. But if either one of those fails to occur, job growth will be closer to 600.

Restaurants, Bars

No sector suffered more in the initial stages of the pandemic than restaurants and bars. Fitch Ratings estimates the typical restaurant saw its revenues fall 80 to 90 percent in the early stages of the pandemic. Over 100,000 jobs were shed in March and April. At one point, the industry accounted for nearly one in every five unemployment benefits claims filed in the region.

PPP loans helped some restaurants stay afloat, but despite the assistance, many didn't. Houston lost some well-known eateries—Barry's Pizza, all locations for Bernie's Burger Bus, Dolce Vita, several Pappas restaurants, The Tasting Room in Uptown Park, the original Treebeard's on Market Square, and Yia Yia Mary's. Luby's and Fuddruckers will soon join the list.

Restaurants began reopening in May, first at 25 percent of pre-COVID capacity, eventually growing to 75 percent. There were no limits set on outdoor dining. Bars, with some restrictions, are operating at 50 percent of capacity.

Patrons have been slow to return. According to data from OpenTable, Houston restaurant activity in the last week of November was down 35 percent compared to the same week the year prior. A recent McKinsey & Co. survey found 80 percent of respondents still had anxiety about dining in restaurants, especially indoors.

As of October, the industry had recovered about 85 percent of its initial job losses. Additional gains will come more slowly. For one, Houston has fewer restaurants so there are fewer places for cooks, waitstaff and busboys to work. The Texas Restaurant Association estimates that 15 percent of the restaurants in Houston have permanently closed.

Second, with more consumers shopping online, they're not stopping to eat while running errands. And with less foot traffic in the malls, they're not eating at the food courts or restaurants nearby.

Third, for the over 250,000 workers without jobs (as of October '20), dining out remains a luxury.

Finally, restauranteurs worry that the current surge in COVID cases may compel elected officials to issue new closure orders, thus forcing them to furlough their existing staff.

The forecast assumes a large portion of the adult population receives the vaccine and accepts that dining out or visiting a bar is no longer risky. Pent up demand will provide an additional lift as consumers, ready to celebrate the end of COVID, frequent bars and restaurants more often. The sector will add 4,000 to 5,000 jobs in ’21.

Hotels

Houston’s hotel industry enjoyed two months of normal bookings before COVID-19 shutdown travel. Overall occupancy averaged 65.3 percent in February. By April, it had slipped to 24.8 percent. Government mandates prohibiting large public gatherings destroyed the sector’s wedding, conference and meetings business as well. By mid-April, local hotels laid off 40 percent of their staff, amounting to over 10,000 workers.

During the earlier months of the pandemic, some hotels housed first responders and essential workers. Later, they booked rooms for Houstonians seeking staycations. A few offered special deals for guests who wanted month-to-month apartment-like rates. But none of this was enough to make up for lost revenue. McCaslin Hotel Consulting estimates revenue per available room (RevPar), was down 48 percent the first half of ’20 compared to the same six months in ’19.[3]

Recovery depends on when business travel returns and when Houston begins hosting conventions again. Corporate travel budgets are expected to be constrained even as the economy improves. The International Air Transport Association doesn’t expect domestic air passenger travel to return to pre-COVID levels until ’23; international travel is not expected to fully bounce back until ’24. The city will return to hosting major events much sooner, however.

ComicPalooza, canceled in ’20, is scheduled for mid-May ’21 at the George R. Brown Convention Center. The Offshore Technology Conference, normally scheduled for early May, has been pushed back to mid-August. Houston’s International Quilt Market, cancelled in ’20, will take place mid-October ’21. The World Petroleum Congress, originally set for December ’20, is now slated for December ’21. CERAWeek, however, will be held virtually in March. As of early December, the Houston Livestock Show & Rodeo had yet to formally announce its plans for ’21.

McCaslin forecasts overall hotel occupancy will average 50 percent in ’21, up from an average of 40 percent in ’20 but still below the 62 percent of ’19. But hotels will be slow to rehire. Instead, they will cross-train staff to handle multiple responsibilities. They will also rely on outside contractors for services once handled in-house, like maintenance and security. The forecast calls for hotel hiring to tick up as conventioneers return to Houston. The hotel sector is expected to add between 1,000 to 1,500 jobs. Growth will hit the high end of the range if Houston see a jump in leisure travel.

Other Services

Other services includes: repair shops, personal care, funeral parlors, cemeteries, dry cleaners, laundries, charities and member organizations. The sector is dominated by small firms with few employees. It’s also a sector that the TWC often misstates in its monthly reports. That’s likely the case again this year. According to the TWC, the sector lost over 27,000 jobs in March and April, about one in four in the sector. Based on data from the QCEW, the Partnership expects losses were closer to 18,000, or one in every six.

Personal care shed 4,200 jobs. Governor Abbot’s order shut down all hair and nail salons. Equipment repair lost about 3,500 jobs. Firms deferred the work until their shops and offices reopened. Other personal services, which includes personal trainers and wedding planners, lost nearly 3,000 jobs. The closing of gyms, the prohibition of large social gatherings, and mandates to stay home were the primary drivers of the job losses. Automotive repair shed 2,800 jobs. Vehicles parked in driveways required less maintained and upkeep. Dry cleaners shed 1,100 jobs. No need for starched shirts and pressed pants when working from home. Sales of gym shorts and sweatpants are up, however.

The recovery in this sector is probably further along than the employment data indicates. Government mandates have been lifted allowing hair, nail and tanning salons to open if employees and customers wear face masks - and to the extent possible, maintain social distancing. As people drive more, the demand for automotive services should grow. The outlook for dry cleaners should improve as workers gradually return to the office. The sector also tends to be entrepreneurial, so as the economy improves, more of these businesses will reopen. The forecast calls for the sector to add 1,000 to 1,500 jobs.

[3] Revenue per available room (RevPAR) is a metric used in the hospitality industry to measure hotel performance. The measurement is calculated by multiplying a hotel's average daily room rate (ADR) by its occupancy rate.

TEXAS, HARRIS, HOUSTON

Government

TWC reports the government sector shed 11,000 workers during March and April, or 2.4 percent of the total workforce. All but a handful of these layoffs occurred at school districts, community colleges and state-universities. Although campuses were closed during the early stages of the pandemic, digital instruction was provided via the internet. The losses were likely in positions such as custodial workers and cafeteria help.

Traditionally, three factors influence growth in the public sector—population growth, revenues growth, and local attitudes toward government. In '21, only one will matter—revenue growth, or the lack thereof.

At the state level, some sources of revenue, such as hotel occupancy taxes and alcohol beverage taxes, continue to show steep declines due to a sharp drop in travel and reduced business at restaurants and bars. Oil and natural gas production taxes have remained well below levels from a year ago as well.

Harris County receives the bulk of its revenue from property taxes. It's too soon to tell how COVID has impacted property values and thus revenues.

Sales tax collections for the City of Houston, which about one-fourth of its total revenue, are down about three percent on a 12-month basis.

School districts face the biggest challenge. Because they lost students during the pandemic, they face a loss of state funds. State funding formulas are complicated but they are heavily weighted toward enrollments. Alief ISD could lose as much as $40 million, Cypress-Fairbanks $29 million, and Aldine $20 million.

This forecast assumes that with tight budgets all levels of government will hold the line on expenses. There will be minimal hiring. The forecast also assumes the school districts will be "held harmless" and continue to receive their pre-COVID levels of state funding. The forecast calls for government to add 500 to 1,000 jobs depending on the strength of the recovery.

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Patrick Jankowski
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METRO HOUSTON FORECAST

Projected Job Gains/Losses, December '20 – December '21

Industry/Sector	Growth Scenario	
	Low	High
Energy	-2,000	0
Construction	2,000	4,000
Manufacturing	4,000	6,000
Wholesale Trade	3,000	3,500
Retail Trade	-3,000	-2,000
Transportation	2,500	3,000
Information	500	1,000
Finance and Insurance	800	1,000
Real Estate, Rental, Leasing	500	1,000
Professional, Scientific, Tech Services	4,000	6,000
Administrative and Support Services	8,000	10,000
Educational Services	600	1,000
Health Care and Social Assistance	6,000	7,000
Arts, Entertainment, and Recreation	600	1,500
Hotels	1,000	1,500
Restaurants, Bars	4,000	5,000
Other Services	1,000	1,500
Government	500	1,000
Total Nonfarm	35,000	52,000

Source: Greater Houston Partnership Research Division

SOURCES

Data used in the analysis and forecast came from the following sources: American Chemistry Council, Apartment Data Services, Baker Hughes, Bloomberg, CBRE, CenterPoint Energy, City of Houston Aviation Department, City of Houston Building Permit Department, Colliers International, CoStar, Dodge Data & Analytics, Federal Reserve Bank of Dallas, Federal Reserve Bank of St. Louis, Haynes and Boone, Houston Business Journal, Houston Chronicle, Houston Association of Realtors, Houston: The Economy at a Glance, Houston Facts, Industrial Info Resources, Institute for Supply Management, JLL, John Burns Real Estate Consulting, MetroStudy, Meyers Research, NAI Partners, National Association for Business Economics, Oil & Gas Journal, Port Houston, Retail Dive, TexAuto Facts, Texas Comptroller of Public Accounts, Texas Department of State Health Services, Texas Medical Center, Texas Railroad Commission, Texas Workforce Commission, The Wall Street Journal, Transwestern, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, U.S. Census Bureau, U.S. Energy Information Administration, U.S. Office of Management and Budget, WISERTrade and various company websites.