THE ECONOMY AT A GLANCE
HOUSTON

GREATER HOUSTON PARTNERSHIP
Making Houston Greater.

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Table of Contents

RECESSION? MAYBE, MAYBE NOT

Three questions dominate any discussion about the economy these days:

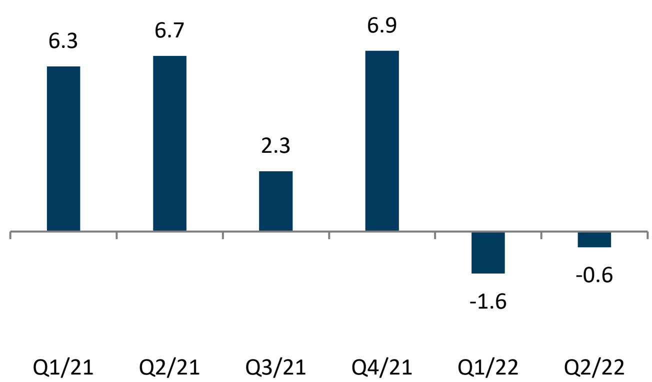
- Is the U.S. in a recession?
- If not, how likely are we to end up in one?
- If the U.S. slips into a recession, will Houston follow?

This issue of *Glance attempts to* answer those questions.

Is the U.S. in a recession?

One rule of thumb holds that the U.S. is in recession when real gross domestic product (GDP), declines for two consecutive quarters. GDP declined 1.6 percent in Q1/22 and 0.6 percent in Q2/22.

% CHANGE IN GDP FROM PRIOR QUARTER*

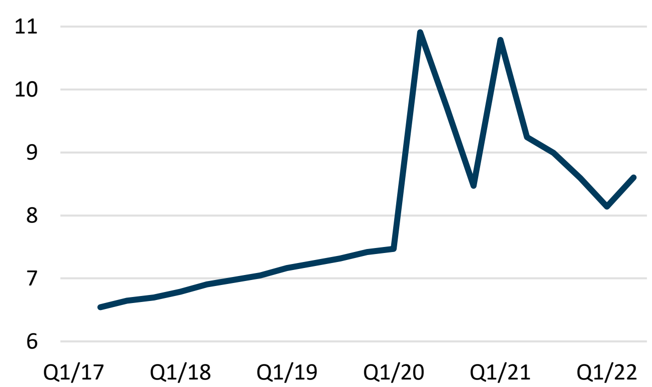


* Seasonally adjusted annual rate
Source: U.S. Bureau of Economic Analysis

There are problems with that rule of thumb, however. For one, GDP is frequently revised as additional data becomes available. The Bureau of Economic Analysis (BEA) originally reported the economy shrank 0.9 percent in Q1/22 only to revise that to 0.6 percent in later reports. Better data on consumer spending and inventory investments forced the revision. As more data is available, the decline could shrink further or be revised away entirely. Years from now the BEA may still be revising Q1/22 GDP.

Second, negative outliers can overshadow strength elsewhere in the economy. For example, government expenditures are part of the GDP calculations. Several federal programs designed to assist businesses and individuals during the pandemic expired or tapered off in Q1/22, dramatically reducing government's role in the economy. That contributed to the negative GDP calculations in Q1.

TOTAL U.S. GOVERNMENT EXPENDITURES, $ BILLIONS



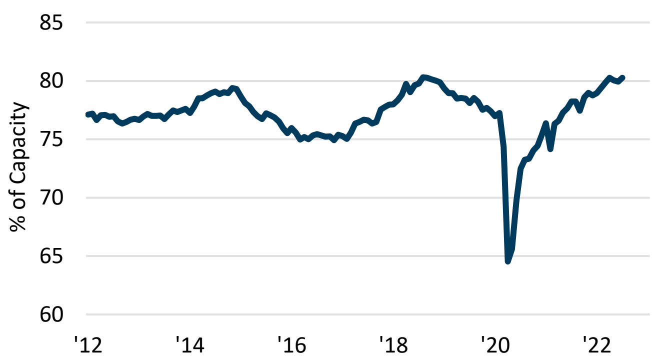
* Seasonally adjusted annual rate
Source: U.S. Bureau of Economic Analysis

BEA also subtracts the value of imports from exports in calculating GDP. Over the last 10 years, this has typically subtracted 0.5 to 1.5 percent from growth. But imports were extremely heavy earlier this year as businesses rebuilt inventories. BEA estimates net imports subtracted 3.2 percent from GDP growth in Q1/22. If trade had been at a normal level, GDP growth would likely have been positive.

And lost in the original GDP report were signs of strength in the economy. Consumer spending grew 2.7 percent in Q1, business investment was up 7.3 percent, and residential real estate investments expanded 2.1 percent at seasonally adjusted, inflation-adjusted, annualized rates. These performances suggest an expanding, not a contracting economy.

Furthermore, relying solely on GDP to assess the health of the U.S. economy ignores other metrics, like job growth and industrial capacity utilization. For example, the nation has added 3.5 million jobs through August of this year, almost double the annual growth rate. And industrial capacity utilization was at 80.3 percent in July, the second highest level of the past 10 years. Those metrics don't suggest an economy that's in recession.

TOTAL U.S. CAPACITY UTILIZATION



Source: Board of Governors of the Federal Reserve System

A Better Measure

Most economists rely on a definition developed by the Business Cycle Dating Committee of the National Bureau of Economic Research to determine if the nation is in a recession. According to the committee, a recession is:

> *. . . a significant decline in economic activity that is spread across the economy and that lasts more than a few months.*

Specifically, the committee looks for declines in personal income, employment, consumer spending, retail sales, wholesale trade, and industrial production when determining if the U.S. is in recession. They also consider the depth, duration, and diffusion of any declines as well.

The most current data for the NBER metrics suggest the economy is expanding, albeit more slowly than earlier in the year. Job growth remains healthy. Consumers continue to spend. U.S. industrial production is trending up. Income growth has slowed but not declined. And retail and wholesale sales have slipped only marginally.

SELECTED NBER RECESSION INDICATORS
Percent Change from Previous Year

	Industrial Production	Personal Income*	Personal Expenditures*	Retail Sales*
Jul '22	3.90	1.26	2.24	1.65
Jun '22	4.02	1.32	1.71	-0.42
May '22	4.44	1.83	2.28	0.17

* Adjusted for inflation

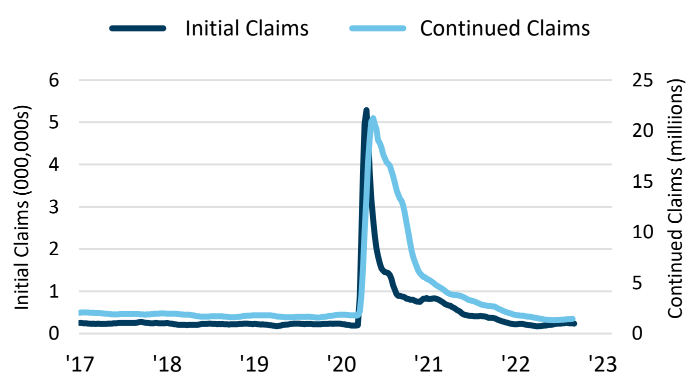
Sources: Board of Governors of the Federal Reserve System, U.S. Bureau of Economic Analysis, Federal Reserve Bank of St. Louis

Growth in nonfarm payroll employment, noted earlier, stands out as the strongest signal the nation is not in recession. The nation added 293,000 jobs in June, 500,000 in July, and another 300,000 in August. Prior to the pandemic, U.S. job growth averaged 200,000 per month.

The best indicators, or at least the ones easiest to comprehend, are those tied to the workforce. Are employers hiring? How many open jobs do employers need to fill? Have layoffs picked up? If someone has lost their job, are they having difficulty finding a new one? The answers to these questions indicate the economy is still expanding.

- The nation added 1.6 million jobs in Q1 and 1.0 million in Q2. That's more than the average *annual* job growth (2.2 million) of the past 10 years.
- The Bureau of Labor Statistics estimates employers had 11.2 million open positions they were actively trying to fill at the end of July. In the 10 years prior to the pandemic, job openings averaged 5.2 million.
- Initial claims for unemployment benefits, a proxy for layoffs, averaged 235,000 a week since June. In the 10 years before the pandemic, they averaged 215,000. Early in the pandemic, they averaged 4.1 million.
- Continued claims, a proxy for difficulty in finding employment after being laid off, have averaged 1.36 million per week since early June. In the 10 years prior to the pandemic, they averaged 1.74 million. At one point in the pandemic, they exceeded 21.2 million.

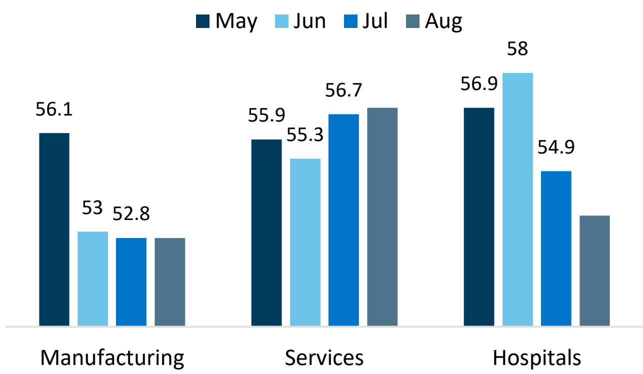
CLAIMS FOR UNEMPLOYMENT BENEFITS



Source: U.S. Employment and Training Administration

Finally, the Institute for Supply Management's Purchasing Managers Index (PMI) provides an additional gauge of the nation's economic health. The manufacturing, services, and hospitals PMIs all signal expansion in their sectors of the economy, albeit manufacturing activity has slowed considerably in recent months. In the table which follows, readings above 50 signal expansion in those sectors of the U.S. economy, below 50, contraction.

U.S. PURCHASING MANAGERS INDEXES
Readings Above 50 Signal Expansions



Source: Institute for Supply Management

How likely is the U.S. to end up in a recession?

The U.S. Federal Reserve began raising interest rates in March and has signaled it will continue raising them until inflation recedes to an acceptable level. With higher rates, any financed purchase—housing, vehicles, real estate, machinery, inventory—becomes more expensive. As costs go up, businesses and households consume less. Supply eventually catches up with demand and prices stabilize. Economists worry that the fed will raise rates so high that demand crashes and the U.S. slides into recession. That's been the pattern in four of the last six recessions. In his recent remarks, Fed chairman Jerome Powell has acknowledged that the nation will suffer economic pain before inflation is in check.

More recent concerns have focused on the possibility of recession in Europe and the dramatic slowdown in China. The European Union imposed sanctions on Russia over its invasion of Ukraine; Russia retaliated by shutting off natural gas deliveries to Europe and threatening to stop shipments of crude and refined products as well. The resulting energy shortage and price shocks will likely tip the EU into a recession.

Also worrying is the considerable slowdown in the Chinese economy. Fifteen years ago, China's economy grew at double-digit rates. Over the last five years, growth slowed to between 6.0 and 8.0 percent. Economists expect growth of 2.0 to 3.0 percent this year. The nation continues to lockdown large swaths of its economy during COVID outbreaks, impacting consumers and businesses. China is also hobbled by an overbuilt real estate market that may lead to widespread loan defaults, further stifling the economy.

Both an E.U. recession and China's turmoil threaten the ongoing U.S. expansion. At the very least, the U.S. would experience slower employment growth and weaker trade.

What might the next recession look like?

History offers some clues. Except for the COVID-induced recession, most have been short and shallow. The COVID recession was short but deep.

Dates	Duration (months)	Drop in GDP (%)	Job Losses (millions)	Unemp Peak (%)
Jan '80 - Jul '80	6	2.2	1.154	7.8
Jul '81 – Nov '82	16	2.6	2.684	10.8
Jul '90 – Mar '91	8	1.4	1.560	7.8
Mar '01 – Nov '01	8	0.4	2.560	6.3
Dec '07 – Jun '09	18	4.0	8.705	10.0
Feb '20 – Apr '20	2	10.1	21.991	14.7

Sources: National Bureau for Economic Research, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, and Partnership calculations

What do the big investment banks think?

UBS believes that the odds of a U.S. recession have surged to 60 percent when accounting for Treasury bill yields, credit data, and broad macro indicators.

JP Morgan Chase CEO Jamie Dimon believes the chances of a "soft landing" to be 10 percent, of "mild recession" to be 20 to 30 percent, a "harder recession" at 20 to 30 percent, and "something worse" at 20 to30 percent.

Bank of America, citing a hot labor market, improving retail sales, and underlying momentum in GDP, has postponed when it believes a recession will start from late this year to sometime next year.

Goldman Sachs believes the U.S. may avoid a recession entirely because inflation has begun to moderate, job growth remains strong, and declines in spending and income have begun to taper off.

A point of note: The normal state of the U.S. economy is expansion, not contraction. Since January 1980, it has been in growth mode for 512 months, in contraction for only 58 months.

If the U.S. slips into a recession, will Houston follow?

Likely yes, but not certainly. Houston's economy is growing faster than that of the nation and may have enough momentum so that any losses would be minimal.

The downturn associated with 9/11 and Enron ('01-'03) saw employment erode over two years and the region lost 31,500 jobs peak to trough, or 1.4 percent of total employment. Once the recovery began, Houston recouped the job losses in 15 months.

The downturn associated with the Global Financial Crisis ('08-'09) cost the region 121,000 jobs peak to trough, or 4.6 percent of the pre-recession employment. Once the recovery began, Houston recouped the job losses in 22 months. In both instances, Houston's rising oil prices and a drilling boom accelerated the recovery.

How would a downturn impact Houston?

To paraphrase the warning on most investment prospectuses, past performance is no guarantee of future results. That holds true for economic downturns as well. The path in and out of the next recession might look quite different from the one trodden in the past. But this is what would most likely happen:

Growth falters and job seekers have less incentive to move to Houston. Population growth slows. Weaker population growth reduces the demand for housing. Apartment rents and home prices stabilize. In a few locales, prices decline. Consumers, worried about their financial futures, postpone major purchases, like automobiles, furniture, and appliances. Businesses, to conserve cash, postpone major purchases and investment decisions. Property values continue to rise but eventually flatten as market realities catch up to appraisals. With business and consumer spending down, sales tax collections taper off.

Over the past 30 years, the typical (i.e., non-COVID) downturn in Houston has been mild (no greater than a 4.6 percent employment loss) and lasted six to 18 months. Let's hope the next downturn is a typical one.

LOCAL JOB GROWTH CONTINUES

Metro Houston created 900 jobs in July '22, according to the Texas Workforce Commission (TWC). This bucks a near 40-year trend for the month. In a typical July, the region loses 15,000 to 20,000 jobs, with the losses concentrated in government (i.e., public education) as schools are closed for the summer. This July saw the loss of 19,000 government jobs, but those losses were more than offset by significant gains in other sectors of the economy.

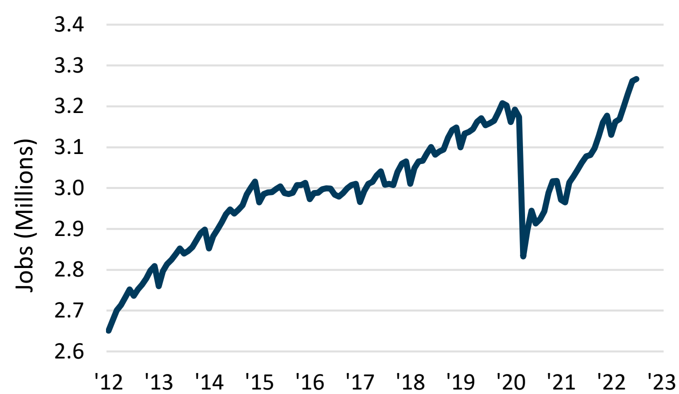
All but a handful of sectors added jobs in July. The largest gains occurred in health care and social assistance (+4,100 jobs), professional, scientific, and technical services (+3,600), construction (+2,500), wholesale trade (+2,400), manufacturing (+2,200), energy (+2,000), and retail (+1,500).

In addition to the job losses in public education, Houston saw minor losses in private education services (-1,000 jobs), restaurants and bars (-800 jobs), and other services (-400).

The July employment report shows that construction finally recouped its pandemic job losses. Only six sectors have yet to fully recover. Those sectors and the jobs still missing are real estate (300), information (400), hotels (2,200), other services (4,400), energy (7,600), and manufacturing (9,100). With the next employment report, TWC will likely report real estate and information have fully recovered. Hotels and other services will likely recover by the end of the year. Energy and manufacturing may never return to pre-pandemic levels of employment.

With the July employment report, payroll employment in Houston topped 3,267,000, well above the previous peak of 3,207,900 reached in November '19. Houston has achieved that feat without a recovery in energy or manufacturing.

PAYROLL EMPLOYMENT, METRO HOUSTON



Source: Texas Workforce Commission

Clara Richardson and Patrick Jankowski contributed to this issue of Economy at a Glance.

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KEY ECONOMIC INDICATORS

Aviation — The Houston Airport System (HAS) handled 5.02 million passengers in July ’22, up 0.6% percent from 4.99 million in July ’21. This marked the highest monthly passenger count since December ’19.

Construction — Metro Houston construction starts totaled $15.3 billion through July of this year, up from $13.1 billion over the comparable period in ’21, according to the latest data from Dodge Data & Analytics. Nonresidential activity increased from $4.4 billion, to $6.3 billion, residential activity from $8.7 billion to $9.1 billion.

Crude Oil — The closing spot price for West Texas Intermediate (WTI), the U.S. benchmark for light, sweet crude, averaged $93.67 per barrel in August ’22, up from $67.73 for the same period in ’21. WTI has consistently traded above $90 per barrel since early February ’22. The U.S. Energy Information Administration forecasts WTI to average $98.07 per barrel this year and $90.91 in ’23.

Foreign Trade — The Houston-Galveston Customs District handled 144.4 million metric tons of goods and commodities through July of this year, a 12.2 percent increase over the comparable period in ’21. Those shipments were valued at $173.1 billion, a 51.3 percent increase over ’21. This year-over-year increase was largely due to increased shipments of mineral fuels, oil, and refined products; organic chemicals; industrial equipment and plastics.

Home Sales — In the 12 months ending July, Houston area realtors closed on 130,767 homes, compared to 132,887 for the 12 months ending in June, and 134,063 for the 12 months ending in May. In July ’22, active listings of all property types (single-family, townhomes, condos, duplexes) were up 23.6 percent over July of ’21. They are still 25.0 percent below where they stood in ’19.

Inflation — Inflation, as measured by the Consumer Price Index for all Urban Consumers (CPI-U), rose 8.5 percent nationwide in the 12 months ending July ’22. That’s down slightly from June’s 9.1%, but still above the 5.4 percent registered in July ’21. The peak of the last 50 years was in March ’80 when the annual rate topped 14.6 percent.

Natural Gas — August’s natural gas prices averaged $8.80 per million British thermal units (MMBtu), up 116 percent from $4.07 in August the year before. Prices briefly topped $9.56 in the last week of August.

Purchasing Managers Index — Economic activity in Houston expanded in August at a slightly slower rate than July, according to the most recent Houston Purchasing Managers Index (PMI). The August ’22 PMI registered 54.2, down from 55.6 in July. Readings over 50 generally indicate expansion in the economy, below 50, contraction.

Rig Count — The Baker Hughes count of active domestic rotary rigs hit 765 the last week of August, up 257 rigs from the same week the year before, according to data recently released by the company. The rig count is 27 shy of where it stood in mid-March ’20 prior to the pandemic. However, the rig count peaked at 1,083 the last week of December ’18. The pandemic only accelerated the decline.

Unemployment — The unemployment rate for metro Houston was 4.8 percent in July ’22, holding steady from June ’22 but down from 6.6 percent in July ’21. The Texas rate was 4.3 percent, down from 4.4 percent in June and 5.8 percent in July of last year. The U.S. rate was 3.8 percent, the same as the month before but down from 5.7 percent last July. The rates are not seasonally adjusted.

Vehicle Sales — New car, truck, and SUV sales are down 3.1 percent through June of this year compared to the same period in ’21. Truck and SUV sales continue to dominate the market, accounting for one in four (77.3 percent) of all vehicles sold to date.

The Partnership sends updates for the most important economic indicators each month. If you would like to opt-in to receive these updates, please click here.

HOUSTON MSA NONFARM PAYROLL EMPLOYMENT (000)

				Change from		% Change from	
	July 22	June 22	July 21	June 22	July 21	June 22	July 21
Total Nonfarm Payroll Jobs	**3,267.0**	**3,266.1**	**3,078.1**	**0.9**	**188.9**	**0.0**	**6.1**
Total Private	***2,854.5***	***2,834.6***	***2,667.6***	***19.9***	***186.9***	***0.7***	***7.0***
Goods Producing	***539.5***	***532.8***	***482.4***	***6.7***	***57.1***	***1.3***	***11.8***
Service Providing	***2,727.5***	***2,733.3***	***2,595.7***	***-5.8***	***131.8***	***-0.2***	***5.1***
Private Service Providing	***2,315.0***	***2,301.8***	***2,185.2***	***13.2***	***129.8***	***0.6***	***5.9***
Mining and Logging	70.8	68.8	59.2	2.0	11.6	2.9	19.6
Oil & Gas Extraction	34.4	33.3	29.2	1.1	5.2	3.3	17.8
Support Activities for Mining	34.4	33.5	28.6	0.9	5.8	2.7	20.3
Construction	240.8	238.3	209.8	2.5	31.0	1.0	14.8
Manufacturing	227.9	225.7	213.4	2.2	14.5	1.0	6.8
Durable Goods Manufacturing	141.3	139.4	130.8	1.9	10.5	1.4	8.0
Nondurable Goods Manufacturing	86.6	86.3	82.6	0.3	4.0	0.3	4.8
Wholesale Trade	175.8	173.4	162.2	2.4	13.6	1.4	8.4
Retail Trade	321.2	319.7	306.1	1.5	15.1	0.5	4.9
Transportation, Warehousing and Utilities	177.2	175.9	163.6	1.3	13.6	0.7	8.3
Utilities	17.8	17.7	17.4	0.1	0.4	0.6	2.3
Air Transportation	19.5	19.3	17.8	0.2	1.7	1.0	9.6
Truck Transportation	29.4	29.2	27.4	0.2	2.0	0.7	7.3
Pipeline Transportation	12.8	12.7	12.2	0.1	0.6	0.8	4.9
Information	32.3	32.0	30.8	0.3	1.5	0.9	4.9
Telecommunications	12.3	12.3	12.3	0.0	0.0	0.0	0.0
Finance & Insurance	109.7	109.7	108.8	0.0	0.9	0.0	0.8
Real Estate & Rental and Leasing	63.2	62.7	62.0	0.5	1.2	0.8	1.9
Professional & Business Services	531.1	525.2	509.1	5.9	22.0	1.1	4.3
Professional, Scientific & Technical Services	254.2	250.6	243.3	3.6	10.9	1.4	4.5
Legal Services	*31.0*	*30.5*	*29.7*	*0.5*	*1.3*	*1.6*	*4.4*
Accounting, Tax Preparation, Bookkeeping	*27.0*	*26.4*	*25.4*	*0.6*	*1.6*	*2.3*	*6.3*
Architectural, Engineering & Related Services	*72.3*	*71.7*	*66.3*	*0.6*	*6.0*	*0.8*	*9.0*
Computer Systems Design & Related Services	*39.6*	*39.0*	*38.1*	*0.6*	*1.5*	*1.5*	*3.9*
Admin & Support/Waste Mgt & Remediation	231.5	229.6	222.6	1.9	8.9	0.8	4.0
Administrative & Support Services	*220.3*	*219.1*	*211.1*	*1.2*	*9.2*	*0.5*	*4.4*
Employment Services	*86.3*	*85.9*	*81.5*	*0.4*	*4.8*	*0.5*	*5.9*
Educational Services	70.9	71.9	63.1	-1.0	7.8	-1.4	12.4
Health Care & Social Assistance	364.8	360.7	346.5	4.1	18.3	1.1	5.3
Arts, Entertainment & Recreation	40.8	41.6	36.1	-0.8	4.7	-1.9	13.0
Accommodation & Food Services	313.3	313.9	286.5	-0.6	26.8	-0.2	9.4
Other Services	114.7	115.1	110.4	-0.4	4.3	-0.3	3.9
Government	412.5	431.5	410.5	-19.0	2.0	-4.4	0.5
Federal Government	32.1	31.4	31.0	0.7	1.1	2.2	3.5
State Government	94.2	95.2	92.5	-1.0	1.7	-1.1	1.8
State Government Educational Services	*53.5*	*54.8*	*52.6*	*-1.3*	*0.9*	*-2.4*	*1.7*
Local Government	286.2	304.9	287.0	-18.7	-0.8	-6.1	-0.3
Local Government Educational Services	*193.8*	*210.9*	*192.7*	*-17.1*	*1.1*	*-8.1*	*0.6*

SOURCE: Texas Workforce Commission