FEBRUARY 2022
FISCAL NOTES

Understanding GDP

By Nia Bradley and Shannon Halbrook

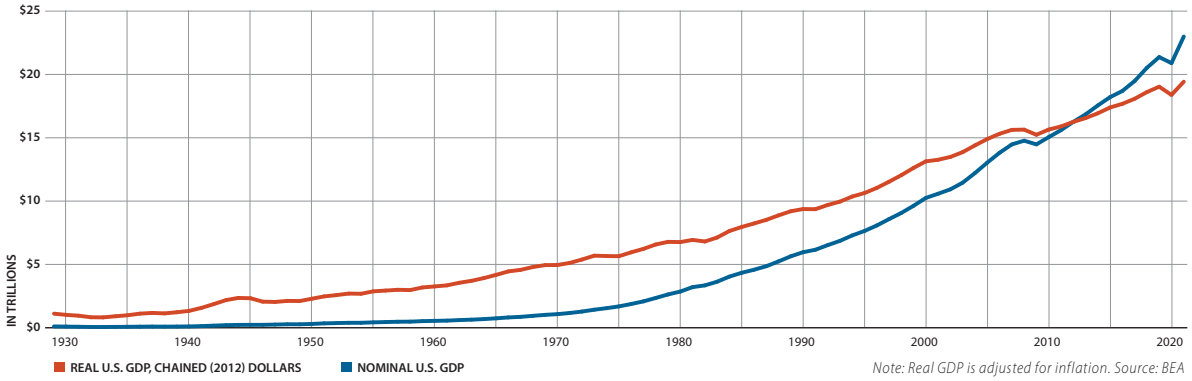
Each quarter, a flurry of data tells us about the state of the U.S. economy. One of the most frequently cited statistics is the country's gross domestic product (GDP). The U.S. Bureau of Economic Analysis (BEA), which publishes the official U.S. GDP figure, calls it the "most comprehensive measure of U.S. economic activity" and "the most popular indicator of the nation's overall economic health."

On Jan. 1, 2022, the U.S. GDP was approximately $23.99 trillion, with an annualized increase of 14.3 percent over the fourth quarter of 2021 (**Exhibit 1**). But what does GDP really tell us (or not tell us) about the economy, incomes, spending and quality of life? And what other measures can be used to determine the health of the U.S. economy?

(CONTINUED ON PAGE 3)

EXHIBIT 1

U.S. REAL AND NOMINAL GDP, 1929-2021 (ANNUAL)



Note: Real GDP is adjusted for inflation. Source: BEA

A Message from the Comptroller

On a leisurely weekend, it may not be that tough to imagine a world without data and statistics, but I cannot overstate the value of data to inform policymakers and taxpayers of the complex economic forces at play in Texas. From the standpoint of our agency, regularly crunching and publishing data help the public better understand the economic nuances that can affect their pocketbooks. At the same time, these data can help lawmakers make informed decisions about how best to improve the lives of Texas taxpayers.

In this issue of *Fiscal Notes*, we'll take you back to Economics 101 with an overview of gross domestic product (GDP) — the "thermometer" that gauges the ups and downs of our economy. GDP represents the monetary value of all the final goods and services produced within a country over a specific period.

GDP is a popular tool for good reasons: The data are readily available, easily understood and can be compared from one year or quarter to the next. Gross state product is GDP's state-level counterpart. According to the U.S. Bureau of Economic Analysis, Texas recorded the second-highest value of goods and services produced in 2020, behind only California. All of this may ring a bell.

It's also important to recognize that during times of hardship, like the global pandemic we're experiencing right now, GDP alone may not paint the clearest picture of the economy. That's why GDP is best used alongside other statistics such as job counts to give us a more accurate and well-rounded economic summary.

Most government-sourced economic data are released monthly or quarterly, which has risked lagging the rapidly shifting economy during the pandemic. Fortunately, private interests such as airlines and credit card companies have stepped in to provide more time-sensitive data to supplement the official government data and help us better understand the pandemic's impacts.

In this issue, you can read about a type of data updated more often than traditional economic measures like GDP. High-frequency data, as it's called, have proven especially useful following the first wave of the COVID-19 pandemic, which caused a recession, and in turn, a high demand for real-time analyses of public health and the economy.

As always, I hope you enjoy this issue, which you may notice has a new look!

Glenn Hegar

Texas Comptroller of Public Accounts

TEXAS SUPPLY CHAIN

SEMICONDUCTOR

ONE IN A SERIES OF REPORTS THE COMPTROLLER HAS PREPARED ON TEXAS SUPPLY CHAINS

Supply chains – the networks between a company and its suppliers that produce and distribute products to the final consumers – have been disrupted during the COVID-19 pandemic as industries in Texas and around the world struggle to maintain production and inventories.

The semiconductor industry's supply chain has been greatly affected; the pandemic curtailed supply amid unanticipated demand, creating widespread ripple effects throughout the economy.

Semiconductor Supply Chain Shortages and Risks

IN MAY 2021, AVERAGE WAIT TIMES FOR SEMICONDUCTOR ORDERS WERE **18 WEEKS** AND AFFECTED NEARLY **170 INDUSTRIES**.

BASIC CHIPS CAN TAKE **3-4 MONTHS TO PRODUCE** – AND ADVANCED UNITS CAN TAKE UP TO **6 MONTHS**.

Chip production is susceptible to a variety of supply chain risks and vulnerabilities:

- Overconcentration of chip production in one region or country.
- Trade disputes and geopolitical tensions.
- Geophysical events like earthquakes and droughts.
- Cyberattacks.

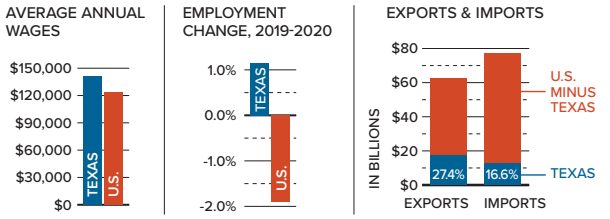
Global Semiconductor Production

Semiconductors are the fourth most highly traded product in the world behind crude oil, motor vehicles and parts and refined oil, accounting for $2.0 trillion in global trade in 2020.

Texas' Semiconductor Industry

Texas is among the national leaders in semiconductor and other electronic component manufacturing.

SEMICONDUCTOR MANUFACTURING IN TEXAS AND U.S., 2020



Sources: JobsEQ; U.S. Census Bureau, USA Trade Online

Note: Data reflect NAICS 3344, Semiconductor and Other Electronic Components Manufacturing

SEMICONDUCTOR MANUFACTURING IN TEXAS, 2020

EMPLOYMENT
41,569

TOTAL WAGES
$5.9 BILLION

GROSS DOMESTIC PRODUCT
$15.3 BILLION

Note: Data reflect NAICS 3344, Semiconductor and Other Electronic Components Manufacturing

TEXAS LED THE NATION IN SEMICONDUCTOR EXPORTS AT **$17.3 BILLION**, MORE THAN ONE-QUARTER OF THE U.S. TOTAL.

Sources: JobsEQ; Texas Comptroller of Public Accounts

IN 2020, THE SHARE OF INDUSTRY JOBS IN TRAVIS AND GRAYSON COUNTIES WAS **MORE THAN SIX TIMES THE NATIONAL AVERAGE**.

TO SEE INFORMATION ON TEXAS SUPPLY CHAINS AND THE TEXAS ECONOMY:
comptroller.texas.gov/economy/economic-data/supply-chain/

*If you would like to receive a paper copy of **Fiscal Notes**, contact us at **fiscal.notes@cpa.texas.gov**.*

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GDP BASICS

GDP is a monetary measure of all the goods and services produced within a country during a certain period. Intermediate goods such as automobile parts are not counted. This is the main difference between *GDP* and *total economic output*.

Simon Kuznets first introduced this measure in 1937 while writing a report on the Great Depression. At the time, gross national product (GNP), which measured overall worldwide production of a country's citizens and corporations, was the standard measure. It was replaced by GDP in 1991.

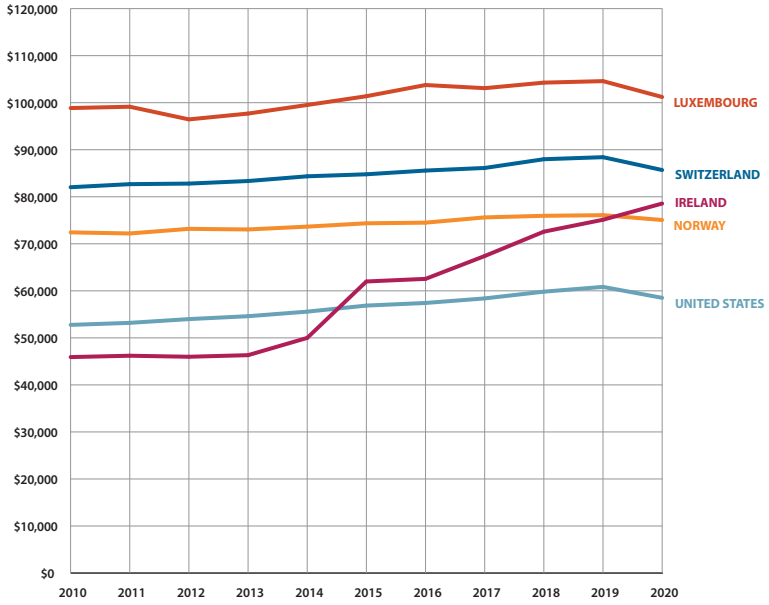
Each quarter, the BEA calculates several estimates of GDP: an advance release three weeks after a quarter ends, followed by second and third releases. Each release contains increasingly complete data and therefore higher accuracy. The bureau also provides GDP per capita, with and without seasonal adjustments, and estimates it at the state, county, metropolitan-area and industry levels, which are useful for making comparisons.

The BEA additionally produces nominal and real estimates of GDP. Nominal calculations are based on current prices and do not adjust for inflation, so they may be misleading when used for comparisons over time. To compensate for the omission, calculations for real GDP adjust for inflation by incorporating a base year as a reference point to compare output over time.

Similarly, the World Bank issues annual estimates of every country's GDP. In 2020, the total global GDP was around $84.7 trillion. The United States had the fifth-largest real GDP per capita that year, with 28 percent of the world total (**Exhibit 2**).

EXHIBIT 2

REAL GDP PER CAPITA, TOP 5 COUNTRIES, 2010-2020



Note: Real GDP is shown in 2015 U.S. dollars. Source: World Bank

CALCULATING GDP

Calculating GDP can take three different approaches. When calculated correctly, all approaches yield the same GDP value.

- *The **Expenditure Approach** adds all spending by the various groups that participate in the economy: consumer spending, business investment, government transfers and other spending and net exports.*
- *The **Production Approach** adds up the total economic output of a country and subtracts all the intermediate costs accumulated during the process.*
- *The **Income Approach** calculates income earned by all factors of production (e.g., labor wages, rent).*

Source: Investopedia.com

GDP USES

GDP has become a vital statistic that businesses, government officials, investors and trade associations can use to assess the economic health of a country, state or region. In part, this is because GDP is frequently issued, readily available and easy to understand and follow from one quarter to the next. Even with a time lapse, the statistic can impact markets if the published numbers conflict with expectations.

Keith Phillips, who was assistant vice president and senior economist at the Federal Reserve Bank of Dallas (Dallas Fed) until his retirement in January, explains that when economists assess GDP, they are not simply looking at a static value. Instead, they examine how the growth rate of GDP has changed over time and what those changes may indicate.

"It's a measure of the dynamics of the economy — how is it changing?" Phillips says. "It's not a very good measure of how we're doing at any point in time."

Just as doctors monitor a patient's vital signs over time, for instance, economists look for steady GDP growth as an indicator of healthy, sustainable economic activity. A sharp growth rate may signal an accelerating economy, suggesting higher interest rates are needed to cool it down. Alternatively, a shrinking GDP rate may signal distress, motivating policymakers to consider lower interest rates or fiscal stimulus.

"If something hurts, pain will radiate through your body," says JoJo Estrada, an economist in the Comptroller's Revenue Estimating Division. "Different segments of the economy interact or send signals to each other like the nervous system. If one segment of the economy isn't doing well, GDP tells us something isn't clicking."

"No one just looks at GDP. Economists use it in conjunction with other measures. They understand that it's imperfect."

– Keith Phillips

GDP LIMITATIONS

GDP is not without faults. As early as the 1950s, 13 years after the measure was introduced, some economists and policymakers criticized the use of GDP as an absolute indicator of a country's success.

One major drawback of GDP is that it can disassociate from the social progress of a country. In the aftermath of a natural disaster, a country can experience an increase in GDP because of the increased spending needed to repair damaged infrastructure. The rise does not take into consideration public welfare or account for production losses due to lives lost and work disruptions.

In the absence of context, GDP increases can be misunderstood as signs of growth. Exaggerated GDP growth can occur, for example, during wartime when the government's increased spending for weapon production or other commodities may not benefit the standards of living for individuals. And indeed, GDP's ability to assess a country's standard of living is another limitation.

Case in point: To address the inconsistency in population sizes of countries around the world, statisticians sometimes will compare GDP per capita, which divides a country's GDP among the population to examine individual contributions from citizens. Doing so unfortunately yields a simple average that may lead to an inaccurate depiction. Some countries boast a high GDP, despite their wealth being concentrated among a small, select group of people instead of being more evenly distributed among the population.

According to Estrada, some studies suggest that inequality may be a powerful incentive for lower-income workers to invest in skills and education, growing their incomes and wealth. "However," he says, "if the opportunities or access to these investments are not present, it stymies their ability" — that is, to earn more, spend more and contribute more to GDP.

JoJo Estrada

Keith Phillips

"No one just looks at GDP," Phillips says. "Economists use it in conjunction with other measures. They understand that it's imperfect."

Employment data are a useful supplement to GDP, he says. "The most common indicator used at the regional level is jobs. People understand job numbers." In particular, he points to the industry detail, accuracy and timeliness of the Current Employment Statistics (CES) series, compiled by the U.S. Bureau of Labor Statistics (BLS).

As it becomes more apparent that GDP is not the definitive measure of success, other countries have started exploring alternative metrics to supplement economic analysis. The Human Development Index (HDI) is a popular measure that assesses factors impacting social well-being (e.g., a long and healthy life, education and a decent standard of living). Although more insightful socially, HDI comes with its own set of limitations related to factors such as poverty and security and does not reflect shorter-term trends or inequalities within a population.

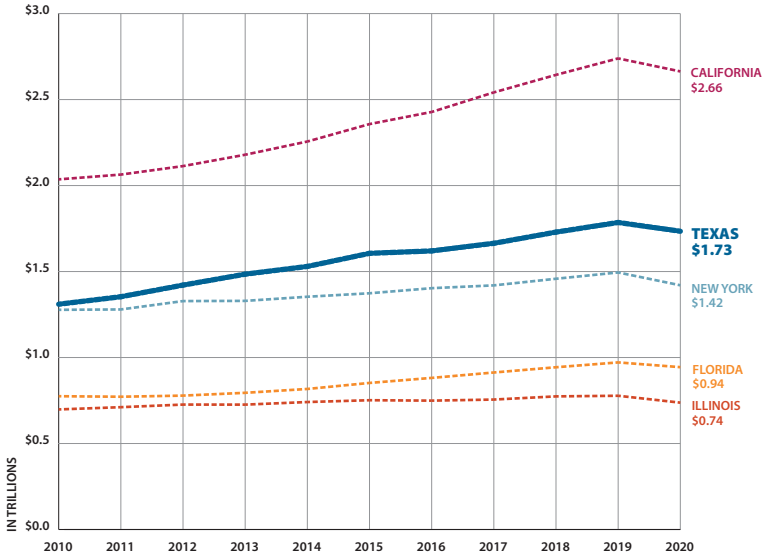
GROSS STATE PRODUCT AND REGIONAL GDP

Gross state product (GSP) is the state-level analog of U.S. GDP. As of 2020, Texas had the second-highest GSP in the nation, after California (**Exhibit 3**). If Texas were a country, it would have the ninth-largest economy in the world.

State- and local-level GDP data are useful for providing comparisons. States have seen different rates of recovery from the pandemic, for example, affecting GSP growth over the past year (**Exhibit 4**). Early in the third quarter of 2021, the Texas GSP rose 3.5 percent to just over $2 trillion in current dollars ($1.8 trillion in real 2012 dollars), making up 8.6 percent of the total U.S. GDP.

EXHIBIT 3

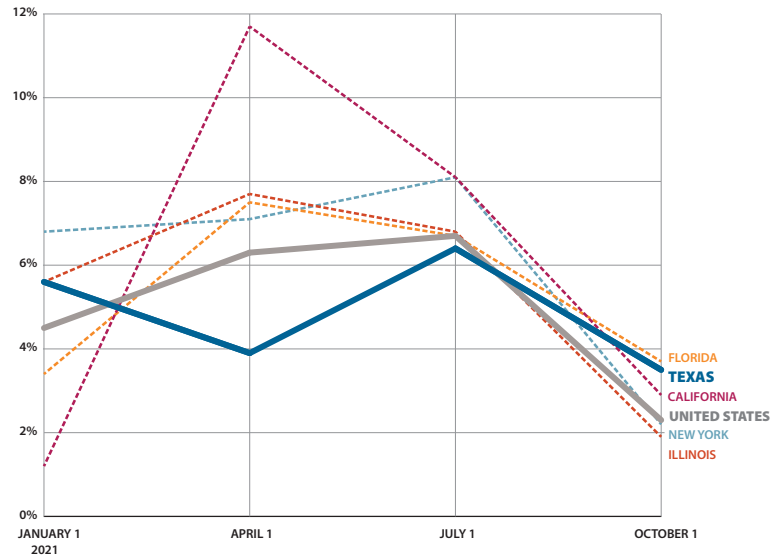
REAL GSP OF LARGEST STATES, 2010-2020



Note: GSP is shown in adjusted 2012 dollars. Source: BEA

EXHIBIT 4

QUARTERLY REAL GDP PERCENT GROWTH, U.S. AND LARGEST STATES, 2021



Source: BEA

To complement GSP statistics, Phillips and his former Federal Reserve colleagues improved the reliability of the employment figures for the state and its metro areas by benchmarking the series every quarter as the QCEW (Quarterly Census of Employment and Wages) data were released, instead of waiting for the annual benchmark performed by the BLS.

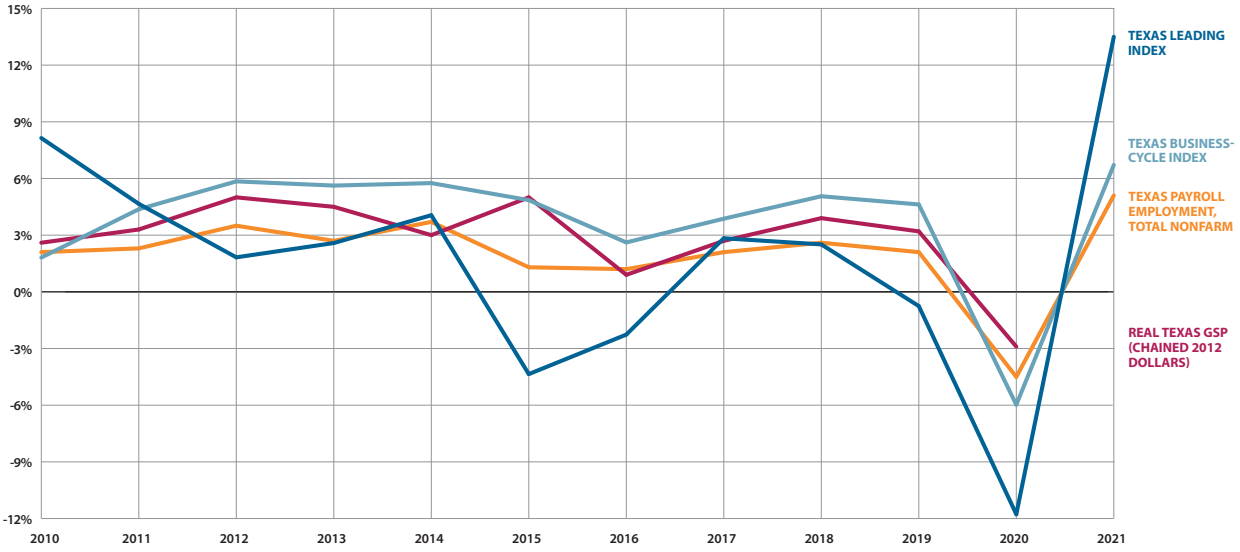
"While the BLS early job estimates for Texas are revised less than any other states, the early benchmarking performed by the Dallas Fed makes them even more accurate," he says. "We also improved the data by using a special two-step seasonal adjustment technique that the BLS later adopted for use with regional employment data."

In addition, says Phillips, the Dallas Fed produces its own business cycle indexes that "smooth out the noise across several important economic series to find out how the [Texas] economy is moving." These include the Texas Leading Index and the Texas Business-Cycle Index, which are both updated monthly (**Exhibit 5**).

The Comptroller's office watches GSP closely as it observes the state economy. The GSP metric plays an important part in the agency's production of the Biennial Revenue Estimate (BRE) before each legislative session. Each BRE includes a detailed overview of current economic conditions, as indicated by GSP, in addition to employment, personal income, population growth and other state and national statistics. These metrics are all useful in estimating various tax and non-tax collections in the subsequent biennium. Between BRE releases, the Comptroller's office tracks these and other indicators on its Key Economic Indicators webpage, including inflation, consumer confidence, sales tax collections and fuel prices.

EXHIBIT 5

ANNUAL CHANGE IN TEXAS GSP AND OTHER INDICATORS, 2010-2021



Sources: Federal Reserve Bank of Dallas; BEA (GSP)

"The more regionalized a GDP measure, the more prone to error and the less reliable it is."

– Brad Reynolds

Revenue estimators at the Comptroller's office have found that GSP tends to mirror certain sources of state tax revenue.

Tom Currah

"Sales tax revenues derived from business expenditures are highly correlated with nominal GSP," says Brad Reynolds, chief revenue estimator at the Comptroller's office. "The franchise tax base is correlated with nominal GSP, and diesel fuel tax with real GSP."

Tom Currah, associate deputy comptroller for fiscal matters at the Comptroller's office, emphasizes that the COVID-19 crisis has altered some of these relationships. "To the extent relationships existed, they got blown up in the pandemic," says Currah. "Consumers' habits were different. We had to adjust some of our usual assumptions." Wherever possible, estimators have also been supplementing those assumptions with additional data.

And though metro and local GDP statistics are provided by BEA, Reynolds warns they should be taken with a grain of salt. "The more regionalized a GDP measure, the more prone to error and the less reliable it is," he says.

Phillips concurs, and as an example points out quirks in the reporting process for real output in the oil and gas industry that can distort Texas' GSP.

GDP STILL KING

The pandemic has highlighted the time lag that exists in GDP data, with new data only available every three months. As the pandemic rapidly unfolded throughout 2020 and 2021, economists and policymakers found themselves looking to more frequent, less conventional measures to assess the economy. Yet GDP remains the king of economic data, and each release has helped clarify the sharp impact of the COVID-19 crisis and the rapid recovery. **FN**

*Dive into the TexIndex webpage (**Comptroller.Texas.Gov/economy/texindex/feature.php**) produced by the Comptroller's Data Analysis and Transparency Division to see other statistics for the state and its 12 economic regions.*

High-Frequency Data

By David Green

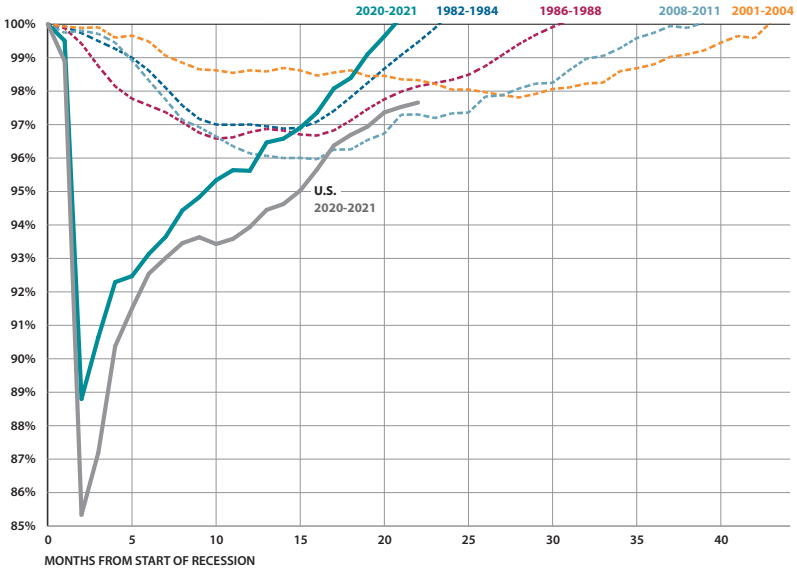
USING REAL-TIME DATA TO TRACK THE TEXAS ECONOMY

The 2020 economic recession and its subsequent recovery were unlike any previous economic downturn. The extraordinary efforts to contain the coronavirus — from stay-at-home orders to business and school closures — led to staggering initial economic losses. According to the U.S. Bureau of Economic Analysis (BEA), gross domestic product (GDP) fell by annualized rates of 37.9 percent in Texas and 32.4 percent in the U.S. between the second and third quarters of 2020. As the economy reopened, Texas and U.S. GDP rebounded by 45.3 percent and 38.7 percent, respectively, between the third and fourth quarters.

The pandemic's effect on jobs revealed a similar story. The U.S. Bureau of Labor Statistics found that Texas employment levels fell by 11.2 percent (1.5 million jobs) in just two months between February and April 2020. These job losses were much faster and deeper than previous recessions. Yet, like the GDP rebound, the jobs recovery was accelerated compared to past economic downturns. In November 2021, Texas employment levels reached pre-pandemic highs, 21 months after initial job losses. The Texas jobs recovery in the Great Recession of 2008, by comparison, required 39 months to recover lost jobs (**Exhibit 1**).

EXHIBIT 1

TEXAS JOB LOSSES IN RECENT RECESSIONS AS A SHARE OF EMPLOYMENT; U.S. JOB LOSSES IN 2020 RECESSION



Sources: U.S. Bureau of Labor Statistics; Texas Comptroller of Public Accounts

In terms of losses and recovery, the 2020 recession resembled a recession caused by a natural disaster more than a typical recession caused by business cycle fluctuations. "It was as if a hurricane or earthquake hit the country all at once," says Keith Phillips, an economist recently retired from the Federal Reserve Bank of Dallas.

The relatively fast economic recovery was aided by an unprecedented emergency response from the federal government, including enhanced unemployment benefits, direct payments to individuals and families and loans to businesses.

HIGH-FREQUENCY DATA OFFER TIMELY PERSPECTIVE ON TEXAS

With the unprecedented drop in the economy and employment, Comptroller Glenn Hegar and his staff needed real-time data to provide guidance to the public and legislators who were desperate to learn the magnitude of the economic events consuming our lives. Hegar explains:

> *In the beginning of the pandemic, people were very nervous and near the edge of panic. I needed real-time data so I could first remind everyone that Texas entered the pandemic in a very strong economic position, and then to convey what we knew and were seeing. The data showed that certain industries faced unprecedented challenges, while for a variety of factors, other industries were better able to manage the crisis. High-frequency data points gave us real-time facts and data to tell the story of the economy as we saw it unfolding. Even with this data, we regularly reminded everyone that we needed a few more months of data to provide an indication of the future trajectory of the Texas economy.*
>
> *While some of those data points were very grim, others told the story that Texas would get through this challenge. We still use this information today, even as the economy continues its recovery, because it helps show trends and gives me real data to tell the story of our remarkable entrepreneurs, as well as helps provide a snapshot of the Texas economy in real time.*

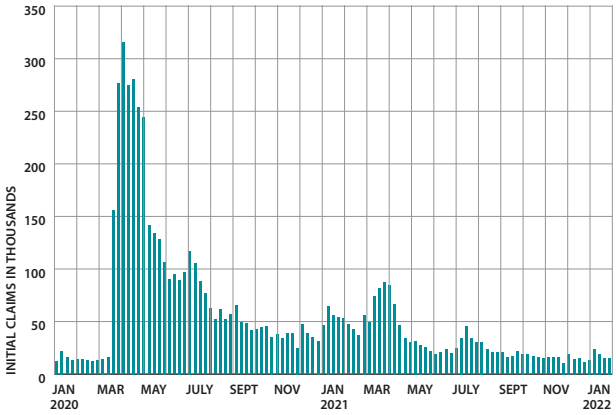
Economists and policymakers around the nation also turned to high-frequency data — that is, data that are available more often than monthly data — to track the rapidly changing developments of the pandemic. In this environment, traditional measures of economic health — monthly jobs reports or quarterly GDP reports — were outdated upon release. The real-time analysis, as noted by Hegar, helped inform policy responses and efficiently target those impacted by the recession.

High-frequency data from government sources also proved very useful in assessing the severity of the pandemic and the nature of the recovery. One of the most closely watched indicators was the tally of weekly unemployment insurance claims. Texas' weekly claims spiked to more than 315,000 in early April 2020. Compared to the January/February 2020 average, the number of claims gradually decreased but remained elevated until October 2021 (**Exhibit 2**).

Economists also monitored airline travel data from the U.S. Transportation Security Administration (TSA) to track the health of the airline industry and the public's willingness to travel during the pandemic. Following a precipitous drop, passenger levels gradually rebounded. At the end of 2021, however, passenger travel remained about 20 percent below the same period in 2019 (**Exhibit 3**).

EXHIBIT 2

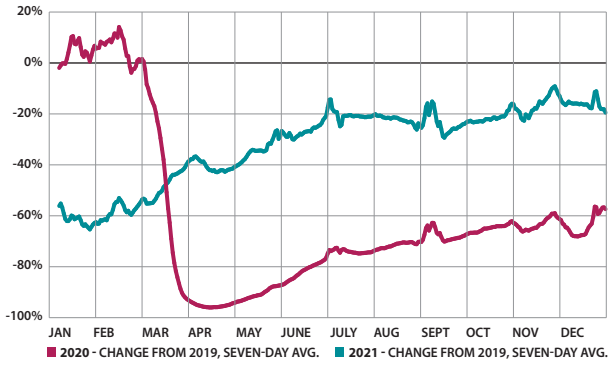
TEXAS WEEKLY UNEMPLOYMENT INSURANCE CLAIMS, 2020-2021



Note: Not seasonally adjusted. Source: U.S. Department of Labor

EXHIBIT 3

TSA THROUGHPUT, CHANGE IN DAILY CHECKED TRAVELERS



Source: U.S. Transportation Security Administration

MORE EXAMPLES OF HIGH-FREQUENCY DATA

The recent emergence of high-frequency data for measuring economic strength comes largely from private companies. These data are used to track aspects of the economy that include movements in consumer spending, mobility, job openings, infections and lockdown measures before "official" government data are published.

Opportunity Insights, a research organization at Harvard University, launched its real-time Economic Tracker in May 2020 to assist policymakers in understanding the scope of the downturn and to inform recovery efforts. The tracker incorporates several high-frequency data sets and harnesses *big data* capabilities (see inset box next page) to produce highly granular analyses.

High-Frequency Data

Big data *describes data sets that are far too large and complex to analyze with traditional data analysis methods. Some main characteristics of big data include massive volume (millions or trillions of records), the speed at which information is generated and processed (within seconds or days) and data type (structured/unstructured, numeric/text, audio/video, etc.). Companies mine big data for many reasons, including to better understand customers, target marketing efforts, manage fraud and similar risks and address supply chain issues.* *Sources: SAS Institute Inc.; Forbes*

The tracker, for example, uses data from Affinity Solutions, which provides daily purchase data from consumer credit and debit card spending and offers an array of insights into consumer spending. Spending data are seasonally adjusted and can be traced to types of merchants, including apparel and general merchandise, entertainment and recreation, grocery, health care, restaurants and hotels and transportation. In addition, transactions are linked to ZIP codes, allowing Affinity to impute spending by levels of median household income.

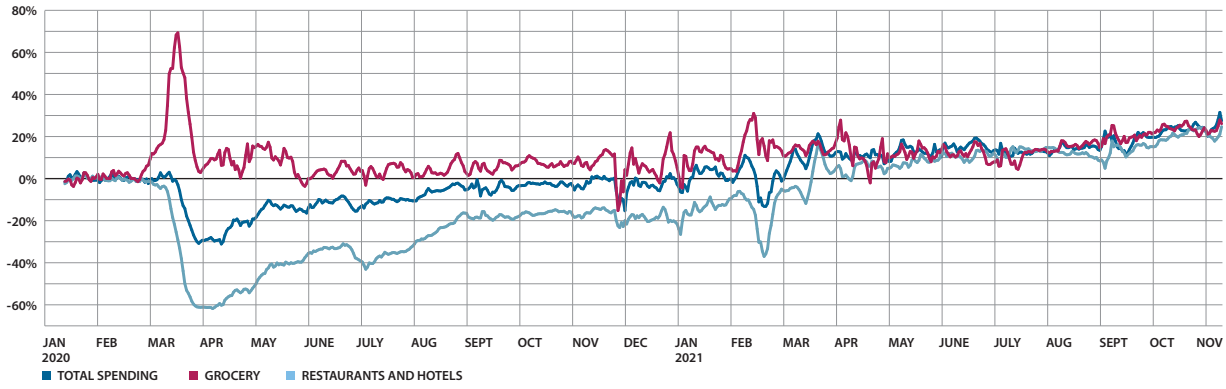
Opportunity Insights' Economic Tracker allows users to explore the economic downturn and recovery by those industry and income categories. **Exhibit 4** illustrates how spending varied widely by type of industry at the onset of the pandemic, including a precipitous drop at restaurants and a sharp increase at grocery stores. For the week ending Nov. 14, 2021, total consumer spending was up 27.5 percent in Texas compared to Jan. 15, 2020.

Google provides COVID-19 Community Mobility Reports that chart people's movements outside the home. The reports show daily movement trends over time by geography and across different destinations, such as parks, grocery stores, retail and restaurants, transit and workplaces. These trends illuminate behavioral changes and inform public health officials and policymakers, especially as trends relate to surges in COVID-19 cases and to policies aimed at combating the virus.

Opportunity Insights also incorporates the mobility data into its tracker. **Exhibit 5** shows that Texans' time spent outside the home has not reached the same levels as in pre-pandemic January 2020. Importantly, the tracker highlights decreases in mobility that coincide with surges in COVID-19 cases, including the latest omicron surge, as well as a decrease in February 2021 due to Winter Storm Uri.

EXHIBIT 4

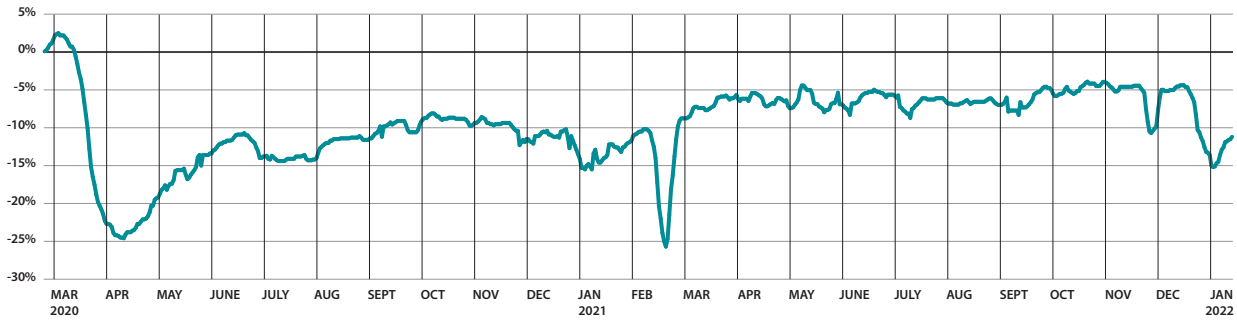
PERCENT CHANGE IN CONSUMER SPENDING, COMPARED TO JANUARY 2020



Sources: Affinity Solutions; Opportunity Insights

EXHIBIT 5

PERCENT CHANGE IN TIME SPENT OUTSIDE HOME, TEXAS



Sources: Google COVID-19 Community Mobility Reports; Opportunity Insights

High-Frequency Data

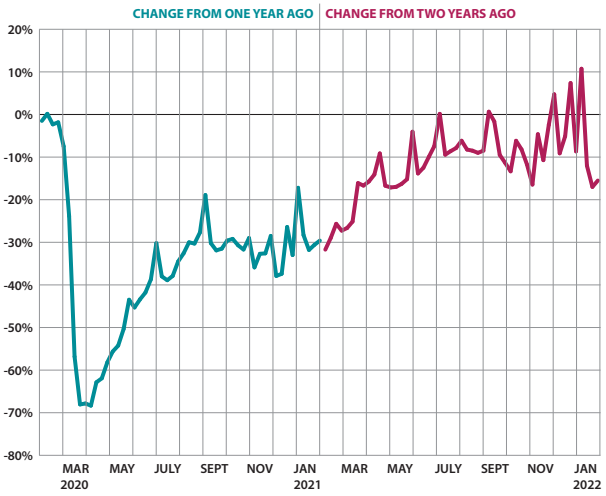
Restaurants and entertainment incurred huge economic losses during the pandemic, and high-frequency data were used to track their fallout as well. In March 2020, OpenTable, the online restaurant reservation service, launched a State of the Industry site. It demonstrates how the pandemic impacted restaurants across the globe, including in U.S. states and cities. For entertainment, Box Office Mojo provides daily and weekly U.S. movie box office receipts.

These two data sets produced some of the most astounding developments of the pandemic, as restaurant reservations and movie theater receipts fell by 100 percent in March 2020. OpenTable reservations didn't return to pre-pandemic levels until March 2021.

High-frequency data have been used to track hotel stays as well. Data from STR — an analytics firm and hospitality industry consultant — reveal the pandemic's detrimental effects on the U.S. hotel industry. Hotel occupancy rates fell by nearly 70 percent early in the pandemic. Only in recent months have hotel stays approached comparable pre-pandemic levels (**Exhibit 6**).

EXHIBIT 6

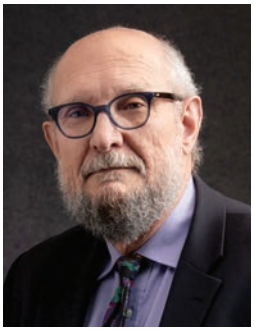
CHANGE IN WEEKLY HOTEL OCCUPANCY



Source: STR

USE WITH CARE

High-frequency data are highly useful in providing timely analysis of COVID-19's impact on public health and the economy. The data sets provide detailed insights into the types of people and industries most affected by the recession and the areas of the U.S. most deeply impacted.



Brad Reynolds

These data, however, are just one piece of the puzzle in the vast economic landscape. The limitations of high-frequency data must be considered, including data samples that are biased, not seasonally adjusted or are benchmarked to a single day, week or month. Any one of those characteristics can lead to consumers misinterpreting trends.

Google's mobility reports, for example, only report data from Google users who have enabled the Location History setting. OpenTable only tracks reservations for seated restaurant dining and does not track orders to go. OpenTable also does not account for restaurants that permanently closed during the pandemic.

Looking only at the real-time restaurant reservation data could distract from key developments within the restaurant industry. For instance, sales tax data from the Texas Comptroller in May 2020 showed steep drops in overall collections from restaurants but large increases in receipts from restaurants that could easily pivot to takeout and delivery services.

"High-frequency data provide a valuable perception of consumer behavior," says Brad Reynolds, chief revenue estimator at the Texas Comptroller's office. "As the restaurant delivery and takeout experience demonstrate, these data should be interpreted along with other pertinent data."

LOOKING AHEAD

High-frequency data usage emerged by necessity to track the fallout from COVID-19 in real time. It provided useful, early insights into people's behaviors and spending habits and continues to help monitor the economic recovery.

As economists and policymakers return to conventional indicators, the most critical high-frequency data variables may be those tied to public health outcomes. Data on daily COVID cases and hospitalizations may reveal the first indicators of a return to normalcy in public health, and other economic data may follow. **FN**

To learn more about economic recoveries, visit ***Comptroller.Texas.Gov/economy/fiscal-notes/*** *and watch the* Line Items *video, "The Recovery After a Recession" — episode one in the new* Fiscal Notes *series, "It's Simple. Kind of."*

State Revenue Watch

This table presents data on net state revenue collections by source. It includes most recent monthly collections, year-to-date (YTD) totals for the current fiscal year and a comparison of current YTD totals with those in the equivalent period of the previous fiscal year. These numbers were current at press time. For the most current data as well as downloadable files, visit **comptroller.texas.gov/transparency**.

Note: Texas' fiscal year begins on Sept. 1 and ends on Aug. 31.

NET STATE REVENUE – ALL FUNDS, EXCLUDING TRUST

Monthly and Year-to-Date Collections: Percent Change from Previous Year

(IN THOUSANDS)

TAX COLLECTIONS BY MAJOR TAX	JANUARY 2022	YEAR TO DATE: *Total*	YEAR TO DATE: *Change from Previous Year*
SALES TAX	$3,851,535	17,524,337	**23.31%**
Percent Change from January 2021	25.26%		
MOTOR VEHICLE SALES AND RENTAL TAXES	$480,041	2,618,989	**20.66%**
Percent Change from January 2021	17.63%		
MOTOR FUEL TAXES	$296,304	1,584,756	**7.28%**
Percent Change from January 2021	0.68%		
FRANCHISE TAX	-$100,996	-47,333	**4052.07%**
Percent Change from January 2021	3404.57%		
OIL PRODUCTION TAX	$427,122	2,158,291	**100.10%**
Percent Change from January 2021	67.78%		
INSURANCE TAXES	$35,977	144,234	**15.69%**
Percent Change from January 2021	125.51%		
CIGARETTE AND TOBACCO TAXES	$96,712	488,028	**-14.16%**
Percent Change from January 2021	-3.07%		
NATURAL GAS PRODUCTION TAX	$369,419	1,554,107	**296.50%**
Percent Change from January 2021	259.68%		
ALCOHOLIC BEVERAGES TAXES	$140,061	656,139	**49.13%**
Percent Change from January 2021	49.47%		
HOTEL OCCUPANCY TAX	$49,240	253,170	**65.99%**
Percent Change from January 2021	82.79%		
UTILITY TAXES 1	$98,464	234,097	**35.88%**
Percent Change from January 2021	98.49%		
OTHER TAXES 2	$15,305	-29,308	**-158.63%**
Percent Change from January 2021	52.96%		
TOTAL TAX COLLECTIONS	**$5,759,184**	**27,139,506**	**30.25%**
Percent Change from January 2021	**30.07%**		

REVENUE BY SOURCE	JANUARY 2022	YEAR TO DATE: *Total*	YEAR TO DATE: *Change from Previous Year*
TOTAL TAX COLLECTIONS	$5,759,184	27,139,506	**30.25%**
Percent Change from January 2021	30.07%		
FEDERAL INCOME	$5,056,734	26,794,549	**4.94%**
Percent Change from January 2021	-15.16%		
LICENSES, FEES, FINES AND PENALTIES	$701,813	2,835,614	**3.48%**
Percent Change from January 2021	5.37%		
STATE HEALTH SERVICE FEES AND REBATES	$551,224	2,922,483	**42.05%**
Percent Change from January 2021	37.49%		
NET LOTTERY PROCEEDS	$257,450	1,245,297	**-2.63%**
Percent Change from January 2021	-32.50%		
LAND INCOME	$269,135	1,583,093	**137.96%**
Percent Change from January 2021	80.90%		
INTEREST AND INVESTMENT INCOME	$384,860	765,739	**-3.03%**
Percent Change from January 2021	18.90%		
SETTLEMENTS OF CLAIMS	$5,394	485,018	**5.83%**
Percent Change from January 2021	-6.41%		
ESCHEATED ESTATES	$10,735	83,816	**-32.59%**
Percent Change from January 2021	-26.99%		
SALES OF GOODS AND SERVICES	$19,164	131,647	**0.49%**
Percent Change from January 2021	-46.02%		
OTHER REVENUE	$126,136	1,093,783	**5.75%**
Percent Change from January 2021	-15.35%		
TOTAL NET REVENUE	**$13,141,829**	**65,080,545**	**16.95%**
Percent Change from January 2021	**5.02%**		

1. *Includes public utility gross receipts assessment, gas, electric and water utility tax and gas utility pipeline tax.*
2. *Includes taxes not separately listed, such as taxes on oil well services, coin-operated amusement machines, cement and combative sports admissions as well as refunds to employers of certain welfare recipients.*
3. *Includes various health-related service fees and rebates that were previously in "license, fees, fines and penalties" or in other non-tax revenue categories.*
4. *Gross sales less retailer commission and the smaller prizes paid by retailers.*

Notes: Totals may not add due to rounding. Excludes local funds and deposits by certain semi-independent agencies.Includes certain state revenues that are deposited in the State Treasury but not appropriated.

FISCAL NOTES

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