



The Perryman Report & Texas Letter

IN THIS ISSUE

LONG-TERM TEXAS ECONOMIC FORECAST

While still facing challenges related to the pandemic, conditions have improved notably and effects of COVID-19 are likely to continue to dissipate. The Texas economy is expected to see long-term growth at a rate outpacing most parts of the United States. This issue highlights The Perryman Group's latest long-term forecast for the state.

THE SOUTH TEXAS REGION

The South Texas Region includes 28 counties and the metropolitan statistical areas (MSAs) of Brownsville-Harlingen, Corpus Christi, Laredo, and McAllen-Edinburg-Mission. With about 2.47 million residents, the area represents 8.43% of the state's total population.

ECONOMIC DEVELOPMENT NEWS

Cities and counties across the state are welcoming new economic development projects. Check out this section for complete details on these recent announcements.

The Long-Term Outlook for the Texas Economy

The COVID-19 pandemic led to a significant economic downturn, but the Texas economy continues to recover. While effects such as supply-chain issues will likely linger for over the coming months, the long-term outlook for the state remains favorable with underlying strengths such as the energy sector and a young population contributing to potential for expansion. This issue of The Perryman Report & Texas Letter summarizes The Perryman Group's latest long-term projections for the Texas economy.

RECENT PERFORMANCE AND SHORT-TERM OUTLOOK

The Texas economy has added jobs in 16 of the last 17 months. In September, the seasonally adjusted Texas unemployment rate was 5.6%, a decrease of 0.3 percentage points from

August 2021. The state added 95,800 total nonagricultural jobs in September, for a total gain since September 2020 of 711,500 jobs. Total employment remains modestly below pre-pandemic levels, but is improving.

Recovery is set to continue as the Delta surge wanes (as long as another major outbreak of serious cases can be avoided). The Perryman Group's most recent projections indicate Texas real gross product is expected to expand by a total of 4.40% this year on a year-over-year basis, with 5.44% growth in 2022. Job gains are projected to be approximately 439,200 through 2021, with a gain of 354,200 jobs next year.

The energy sector contributes about 13-14% of total business activity in Texas. The industry is a major source

of jobs and investment not only in producing areas, but across the state. Suppliers, service companies, headquarters operations, pipelines, refining and processing facilities, and a spectrum of other related operations lead to business activity in many Texas communities. Oil

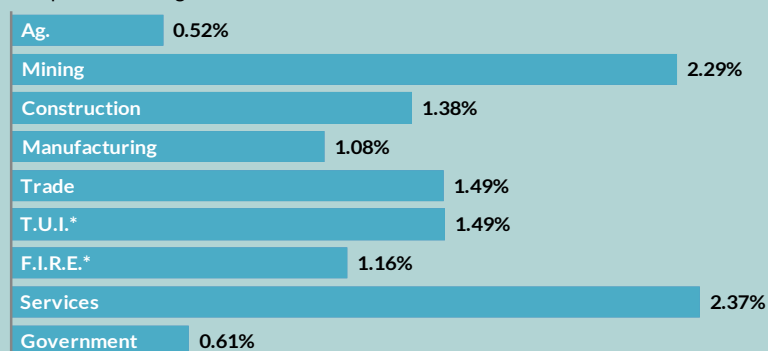
and gas are also key state exports. Even though the Texas economy is large and diverse, energy remains a major component, and the outlook for the sector is an important determinant of future overall performance.

Oil prices have more than doubled in the past year and have regularly closed above \$80 per barrel in recent weeks, something that had not happened since 2014. Although high oil prices ripple through the economy and contribute to inflation, they also encourage additional activity in the industry.

Activity in the energy sector has increased significantly since the depths of the pandemic, but the response has been somewhat muted. Through much of 2018, the last time prices were near this level, a \$65-\$75 range was sufficient to push Texas rig counts to well over 500. Recently, there were only about half as many rigs running (249 as of October 22).

Projected Annual Growth in Texas Employment

Compound annual growth rate for industries from 2020-2045

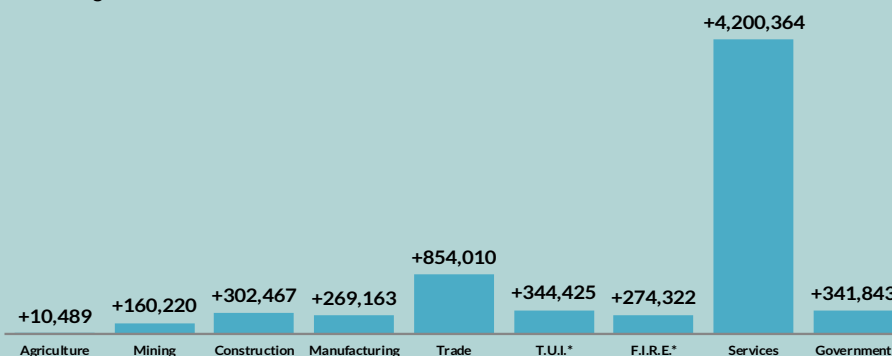


Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: Ag. is "Agriculture", T.U.I. is "Transportation, Utilities & Information," F.I.R.E. is "Finance, Insurance & Real Estate."

Projected Absolute Growth in Texas Employment

Absolute growth for industries from 2020-2045



Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: T.U.I. is "Transportation, Utilities & Information," F.I.R.E. is "Finance, Insurance & Real Estate."

There are myriad reasons for this phenomenon. Many firms are dealing with financial fallout from COVID-19 market chaos, and drilling programs require massive capital commitments. The green energy movement and potential policy initiatives have increased uncertainty.

Changes in drilling practices are also relevant, as are backlogs of wells drilled but not yet completed. The market is rife with complexities in the best of times, and the current environment adds even more layers.

Despite the slower response and uncertainties in the market, it is clear that oil and gas will remain crucial to future energy

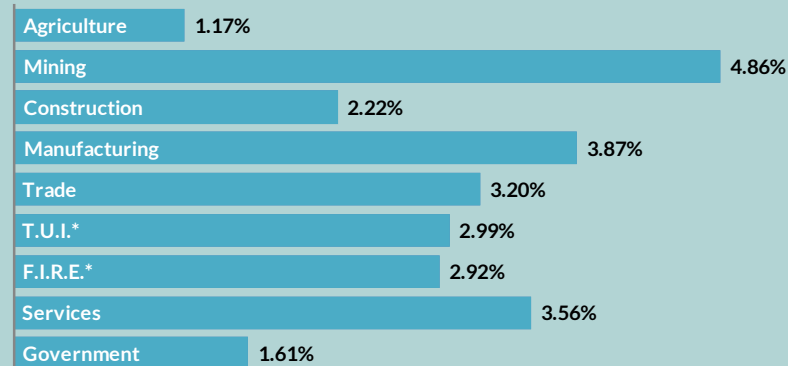
dynamics for decades to come (despite claims to the contrary), and petroleum supplies are essential to reliable and affordable energy in the world's advanced economies as well as developing nations. While renewables have a vital role and climate change is

very much a reality, any reasonable look ahead with an eye toward global needs indicates that conventional fuels (with lower emissions) will be essential to meeting future needs. Over the long term, the industry will grow, though the

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Projected Annual Growth in Texas Real Gross Product

Compound annual growth rate for industries from 2020-2045

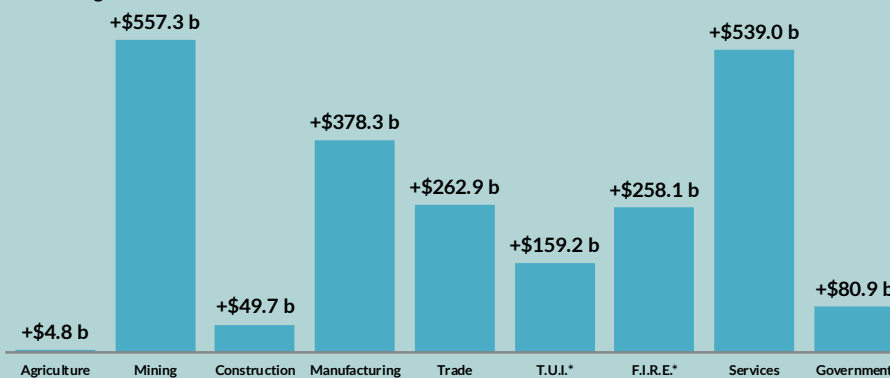


Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: T.U.I. is "Transportation, Utilities & Information," F.I.R.E. is "Finance, Insurance & Real Estate."

Projected Absolute Growth in Texas Real Gross Product

Absolute growth for industries from 2020-2045



Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: T.U.I. is "Transportation, Utilities & Information," F.I.R.E. is "Finance, Insurance & Real Estate."

THE SOUTH TEXAS REGION FORECAST 2020-2025

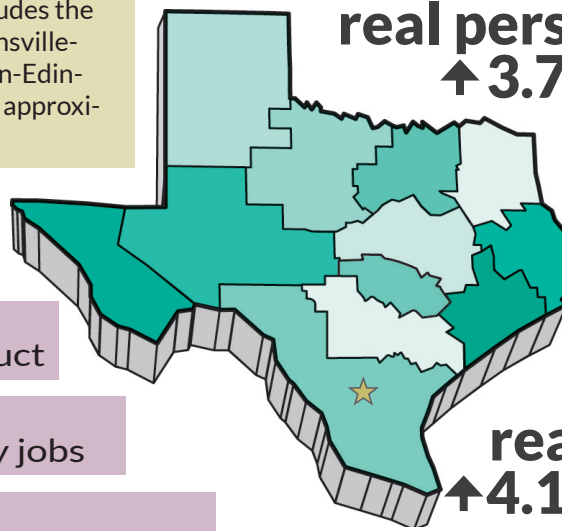
The state's 28-county South Texas Region includes the metropolitan statistical areas (MSAs) of Brownsville-Harlingen, Corpus Christi, Laredo, and McAllen-Edinburg-Mission. The area's current population is approximately 2.47 million.

8.43% of the state's population

4.02% of the state's real gross product

6.76% of the state's wage and salary jobs

5.39% of the state's real personal income



real personal income
↑ **3.72% annually**

population
+ **113,936**

jobs
+ **105,091**

real retail sales
↑ **4.14% annually**

EMPLOYMENT 2020-2025

Over the short-term period, the region's employment is expected to expand at a compound annual growth rate (CAGR) of 2.33%. Total employment for South Texas is projected to reach close to 1.3 million in 2025.

The services sector is expected to lead the pack in job growth. With a CAGR of 3.61%, this industry is likely to add about 73,000 jobs over the next five years.

Industry	2020-25 Growth	2020-25 Gain	2025 Percent
Agriculture	1.13%	737	1.39%
Mining	5.83%	4,903	2.05%
Utilities	0.84%	114	0.28%
Construction	1.61%	2,762	3.71%
Manufacturing	1.02%	1,310	2.74%
Trade	1.56%	10,076	14.00%
Transportation & Warehousing	1.81%	3,524	4.24%
Information	1.01%	347	0.73%
Finance, Insurance & Real Estate	0.94%	1,508	3.39%
Services	3.61%	73,004	46.40%
Government	0.68%	6,805	21.05%
All Industries	2.33%	105,091	100.00%

COUNTIES

Aransas	Kenedy	San Patricio
Bee	Kinney	Starr
Brooks	Kleberg	Uvalde
Cameron	La Salle	Val Verde
Dimmit	Live Oak	Webb
Duval	Maverick	Willacy
Edwards	McMullen	Zapata
Hidalgo	Nueces	Zavala
Jim Hogg	Real	
Jim Wells	Refugio	

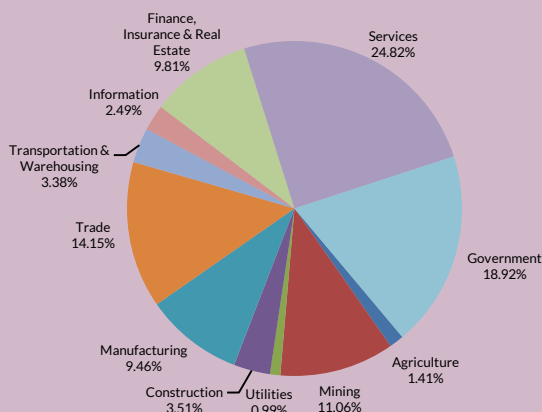
NEWS

The Great Lakes Dredge & Dock Company, LLC was recently awarded a \$139 million contract to finish the third phase of the major improvement project underway at the Port of Corpus Christi. The enhanced ship channel will lead to additional jobs and economic benefits for the region upon completion.

Industrial growth in the Weslaco area has resulted in \$19 million in new investment. Weslaco Economic Development Corporation is adding 15 acres to its growing industrial park. Mid-Valley Airport is undergoing an expansion, and projects of three private companies are creating about 100 jobs.

In Brownsville, the Texas A&M Rio Grande Valley Advanced Manufacturing/Training Innovation Now (TRAIN) initiative has taken off. With \$10 million in funding, the new program will help develop a skilled manufacturing workforce in the Rio Grande Valley at no cost to participants.

REAL GROSS PRODUCT 2025 COMPOSITION



The area's real gross product (RGP) is forecast to increase by around \$14.41 billion from 2020 to 2025. This gain represents a CAGR of 3.84%.

Industry sectors with the highest annual growth rates during this five-year span include mining (9.04%), services (4.76%), and information (4.31%).

ECONOMIC DEVELOPMENT NEWS FROM AROUND THE STATE

SULPHUR SPRINGS

Design-to-shelf packaging manufacturer D6 Inc. is relocating its headquarters from Oregon creating 231 new jobs. The project will represent a \$27 million capital investment.

SEGUIN

Tyson Foods is investing \$58 million in its local poultry plant. The company currently employs 550 workers and will be expanding by 40,000 square feet to increase production capacity.

NEW BRAUNFELS

The close to 100-year old Dittlinger building is about to get a major makeover. The downtown landmark will be transformed into a multi-use facility that will feature office, restaurant, and entertainment space.

MANSFIELD

Plans for a proposed business park on 146 acres continue to move forward. Mansfield Business Park is projected to have an economic impact to the community of \$112 million creating more than 4,600 jobs.

PORT ARTHUR

New projects are starting to transform the city's downtown. The Center for Business and Development, a 42,000 square foot building that will house multiple agencies and programs, is nearing completion. Ground has also been broken on The Renaissance at Lakeshore Apartments, a 108-unit housing complex.

WACO

S2A Modular has selected the city for one of its next megafactories, a 240,000 square foot project creating 250 jobs. Using cutting-edge technology, the company produces self-sustaining custom homes and commercial properties.

Cinemark has unveiled its new movie theatre in the area. The 14-screen facility is located at the 285,000 square foot Cottonwood Creek Market development that features a Topgolf and will soon include a Main Event entertainment complex.

AUSTIN

Tesla has announced that it will move its headquarters to the city from Palo Alto, California. This is in addition to the electric car maker's \$1 billion Gigafactory that is in the works.

LONGVIEW

Christus Good Shepherd Health System has unveiled its new \$8.5 million Heart and Vascular Institute. The cardiovascular care complex spans 21,500 square feet.

TEXARKANA

Texas A&M University is moving ahead with plans for a new academic building at its Bringle Lake campus thanks to \$45 million in funding from the state. The new structure will house business, engineering, and technology programs.

TAYLOR COUNTY

Economic development incentives have been approved for "Project Artemis." The proposed project would include a \$2.4 million investment and the creation of 57 jobs.

HAVE AN ANNOUNCEMENT TO MAKE?



Let our editors know what's taking place in your "neck of the woods."

Share the details of recent economic development happenings in your area with our readers by reaching out to us.

The Perryman Report & Texas Letter is read monthly by the state's most notable leaders.



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pattern is likely to be uneven.

DEMOGRAPHIC TRENDS

The 2020 Census indicates that US population growth is slowing, with the 2010-20 decade one of the slowest on record. The number of young people (under 18 years old) also declined, with over a million fewer in the age category in 2020 than there were in 2010.

In Texas, however, total population rose from 25.1 million in 2010 to 29.1 million in 2020,

a four-million-person increase. The state's 15.9% expansion is more than double the US rate, due partly to births and partly to in-migration from other parts of the US and elsewhere.

Of particular importance, the number of residents under 18 in Texas rose by nearly 413,000 (6%) between 2010 and 2020, in direct opposition to the substantial national loss. This strong growth in the number of young people positions the state well for future economic expansion opportunities as long as sufficient attention and resources

are directed toward ensuring top-quality education from public schools and beyond through higher education and technical training.

LONG-TERM OUTLOOK

The Perryman Group's long-term forecast for the Texas economy indicates growth in real gross product at a 3.43% annual pace, leading to an increase from approximately \$1.7 trillion in 2020 to over \$4.0 trillion in 2045. Nearly 6.8 million net new jobs are expected to be generated over the period, a 1.72% annual rate of growth. Total

PROJECTED KEY INDICATOR GROWTH

Economic Indicator	2020 Level	2045 Level	Annual Growth	2020-45 Increase
Real Gross Product	\$1,726.7 b	\$4,016.8 b	3.43%	+\$2,290.1 b
Real Personal Income	\$1,426.5 b	\$3,431.7 b	3.57%	+\$2,005.2 b
Real Retail Sales	\$405.0 b	\$953.3 b	3.48%	+\$548.3 b
Population	29.2 m	40.3 m	1.29%	+11,066,079
Employment	12.8 m	19.5 m	1.72%	+6,757,303
Housing Permits	218,523	165,517		-53,006

Source: US Multi-Regional Econometric Model, The Perryman Group

Note: Monetary values given in billions of 2012 US dollars.

employment in 2045 is projected to reach 19.5 million. Real retail sales and real personal income are expected to increase at 3.48% and 3.57% rates, respectively. (See the accompanying table for additional information.)

The services sector will continue to drive job growth; the sector includes professional and business services, education, healthcare,

accommodations, and food services. The wholesale and retail trade segment is also expected to add substantial numbers of jobs. Real gross product expansion will likely be concentrated in mining, services, and manufacturing.

CONCLUSION

Prior to the pandemic, Texas was among the fastest-growing states in

the nation. Although the economy has suffered a notable setback, much of the lost ground has been regained. The long-term outlook remains positive, though there are challenges (such as education, infrastructure, restrictive social legislation, and major demographic shifts), and Texas is likely to be among the strongest economies for decades to come.

PROJECTED INDUSTRY GROWTH

Industry Sector	Employment		Real Gross Product	
	2020-2045 Increase	Annual Growth	2020-2045 Increase	Annual Growth
Agriculture	+10,489	0.52%	+\$4.817 b	1.17%
Mining	+160,220	2.29%	+\$557.301 b	4.86%
Utilities	+2,348	0.18%	+\$11.133 b	1.48%
Construction	+302,467	1.38%	+\$49.716 b	2.22%
Manufacturing	+269,163	1.08%	+\$378.279 b	3.87%
Wholesale & Retail Trade	+854,010	1.49%	+\$262.871 b	3.20%
Transportation & Warehousing	+293,633	1.80%	+\$51.011 b	2.77%
Information	+48,444	0.90%	+\$97.066 b	3.58%
Finance, Insurance & Real Estate	+274,322	1.16%	+\$258.063 b	2.92%
Services	+4,200,364	2.37%	+\$538.959 b	3.56%
Government	+341,843	0.61%	+\$80.893 b	1.61%
Total, All Industries	+6,757,303	1.72%	+\$2,290.109 b	3.43%

Source: US Multi-Regional Econometric Model, The Perryman Group
Note: Real gross product given in billions of 2012 US dollars.



The Perryman Group is a focused team of analysts who know how to address complex economic information tasks and present our findings effectively.

Our in-house professionals bring expertise in **economics, finance, statistics, mathematics, real estate, valuation, systems analysis, engineering, technical communications, and marketing.** Dr. Ray Perryman, President and CEO, has 40 years of experience in developing systems, analyzing complex problems, and communicating effectively. We have considerable pride in what we do. Our enthusiasm is both unbridled and contagious; every day brings a new opportunity for us to tackle a different problem or create a product or service specifically tailored to our clients.

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We are at the cutting edge of econometrics and other advanced statistical methods and have provided innovative approaches for many complex applications.

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Dr. Perryman addresses dozens of audiences throughout the world every year, catering to a wide variety of events.

M. RAY PERRYMAN, PH.D.

Dr. Perryman is the President and CEO of the Perryman Group and Distinguished Professor of Economic Theory and Method at the International Institute for Advanced Studies. Over the past 40 years, Dr. Perryman has helped recruit corporations providing tens of thousands of jobs through economic development work, resolved billion-dollar legal issues, and revamped public policy through impact assessments and other studies. His firm has measured economic impacts for corporate locations and expansions involving billions in investments, and his economic forecasts are used by corporations and government agencies alike.



He has provided economic analysis and expert testimony for civil litigation across a wide range of practice areas including antitrust and competition, patent infringement and other intellectual property disputes, securities, and commercial and complex litigation. His work combines strong expertise in economic damages calculation, asset valuation, market analysis, and statistical methods and econometrics.

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