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The 40th Annual
Perryman Economic Outlook Conference
Outlook for the US, Texas, and the Tyler Area

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The United States

While the US economy is facing some significant challenges, a major recession appears increasingly unlikely unless several risk factors converge. In addition to the tragic loss of life, the recent invasion of Israel by Hamas has caused both an increase in uncertainty and increases in oil and other fuel prices. If the conflict spreads to other parts of the Middle East, the economic fallout will worsen.

The Federal Reserve has been taking action to slow inflation, including raising interest rates at a historically rapid pace. Even though there have been notable difficulties across a spectrum of industries, the economy has shown remarkable resilience. The Perryman Group's latest analysis indicates that while the pace of growth has certainly slowed and a downturn is still possible, a path to a "soft landing" was becoming clearer as inflation trended downward without extreme negative effects for the labor market. A major escalation in the conflict in the Middle East could change the situation, making it more difficult to deal with inflation.

Rising costs have had a significant negative effect on household and corporate budgets. There have been wage increases, but they have been insufficient to keep real (inflation-adjusted) wage rates from falling. Much of the surplus money available to households due to pandemic-related stimulus payments is now dissipated, and credit card and other debt levels have risen. Even so, consumer spending continues at a relatively healthy pace, driving a substantial component of the economy.

Although Federal Reserve actions to slow inflation have clearly been necessary, higher interest rates are causing problems in industries ranging from banking to real estate development. The housing market is also struggling with a lack of homes for sale, as owners who locked in extremely low mortgage rates are finding it difficult to afford to sell and purchase different homes at current interest levels. The recent pause in rate hikes indicates a "wait and see" approach to upcoming data releases.

The fact that the economy has been able to maintain an expansionary pattern despite challenges to date is notable, and The Perryman Group's latest projections indicate that growth is likely to continue (barring a major escalation in the Middle East). Business cycles are inevitable, and the path may be somewhat bumpy, but a major meltdown currently appears unlikely.

PROJECTED KEY INDICATORS

| Economic Indicator	2023 Level	2028 Level	Level Change	Growth Rate
Real Gross Product	$20.5 tr	$23.3 tr	+$2.9 tr	+2.65%
Real Personal Income	$17.9 tr	$20.1 tr	+$2.2 tr	+2.34%
Population	334.664 m	343.484 m	+8.821 m	+0.52%
Employment	156.138 m	170.023 m	+13.885 m	+1.72%
Industrial Production Index	106.0	120.7	+14.6	+2.61%
Consumer Price Index	132.6	147.6	+15.1	+2.18%
20-Year Treasury Bond	4.38%	3.10%	-1.28	N/A

The Perryman Group's most recent short-term forecast for the US economy indicates significant growth over the next five years.

Real gross product is projected to increase at a 2.65% annual pace, reaching a level of $23.3 trillion in 2028.

About 13.9 million net new jobs are forecast to be added, for a total 2028 employment of 170.0 million.

Consumer price increases and interest rates are expected to moderate from recent levels over the next five years.

The State of Texas
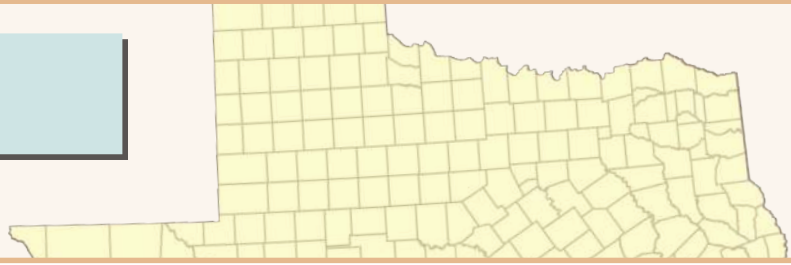
The Texas economy has been leading the way, outpacing US growth rates. The state has been setting records over the past several months for the number of jobs, number of people employed, and size of the civilian labor force. Total nonfarm employment has increased every month except one since the spring of 2021, when the economy began to normalize after the worst of the pandemic, and is now over 14 million. As expected, recent increases have been at a slower pace than in prior months.

The state has benefitted from increased activity in oil and natural gas, which is also a major export sector. However, growth has been broad based, with most major industry groups expanding.

Texas is clearly affected by national trends such as inflation, higher interest rates, and worker shortages. In addition, there are challenges dealing with population and economic growth and the resulting need for investment in education, health care, and infrastructure of all types. On the other hand, the Lone Star State has attracted more major corporate locations and expansions than any other state for more than a decade and has also seen significant in-migration from other parts of the US (including highly skilled workers). These factors help set the stage for continued strong performance, though business cycles are inevitable. The Perryman Group's latest forecast calls for notable growth over the next five years.

PROJECTED KEY INDICATORS

Economic Indicator	2023 Level	2028 Level	Level Change	Growth Rate
Real Gross Product	$2.0 tr	$2.3 tr	+$351.9 b	+3.36%
Real Personal Income (By Residence)	$1.5 tr	$1.7 tr	+$248.1 b	+3.15%
Real Earnings (By Place of Work)	$1.1 tr	$1.2 tr	+$167.3 b	+2.93%
Total Employment	20,096,039	22,473,206	+2,377,167	+2.26%
Wage and Salary Employment	14,452,109	16,069,142	+1,617,033	+2.14%
Population	30,478,627	32,748,667	+2,270,039	+1.45%
Consumer Price Index	133.5	150.3	+16.7	+2.39%
Industrial Production Index	122.2	145.6	+23.4	+3.57%
Real Retail Sales	$476.7 b	$544.3 b	+$67.6 b	+2.69%

PROJECTED INDUSTRY GROWTH 2023-2028

| Industry Sector	Real Gross Product		Employment	
	Level Change	Growth Rate	Level Change	Growth Rate
Agriculture	+$1.0 b	+1.73%	+3,046	+0.82%
Mining	+$44.2 b	+3.71%	+22,664	+1.99%
Utilities	+$1.7 b	+1.31%	+2,121	+0.77%
Construction	+$5.6 b	+1.77%	+62,052	+1.47%
Manufacturing	+$46.0 b	+3.67%	+91,518	+1.83%
Wholesale Trade	+$28.7 b	+3.63%	+80,399	+2.26%
Retail Trade	+$14.0 b	+2.75%	+131,217	+1.77%
Logistics	+$7.2 b	+2.33%	+72,442	+2.14%
Information	+$31.9 b	+4.84%	+21,076	+1.67%
Finance and Insurance	+$20.3 b	+3.50%	+97,932	+2.68%
Real Estate	+$39.9 b	+3.41%	+28,103	+2.12%
Professional and Business Services	+$59.8 b	+4.11%	+317,052	+2.79%
Educational Services	+$2.5 b	+3.42%	+38,979	+2.98%
Health and Social Services	+$21.7 b	+3.45%	+226,249	+2.60%
Amusement and Recreation Services	+$3.6 b	+5.09%	+25,509	+3.14%
Accommodation and Food Services	+$7.7 b	+3.26%	+204,890	+2.90%
Other Services	+$3.8 b	+2.25%	+68,317	+1.93%
Government	+$12.4 b	+1.40%	+123,468	+1.12%
All Industry Total	**+$351.9 b**	**+3.36%**	**+1,617,033**	**+2.14%**

Tyler

metropolitan statistical area

The Tyler area has been experiencing significant expansion, with gains across most industry groups. Growth has been particularly strong in the mining, logging, and construction segment of the economy, with notable job additions also occurring in education and health services over the past year.

The Perryman Group's latest outlook for the area calls for growth at a solid pace over the next five years. The rate of expansion in employment is expected to outpace the nation and state, with job growth of 2.18% per year through 2028. The health and social services, accommodation and food services, and professional and business services sectors will likely generate the largest numbers of net new jobs.
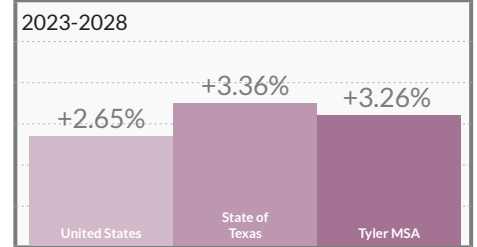
SMITH COUNTY
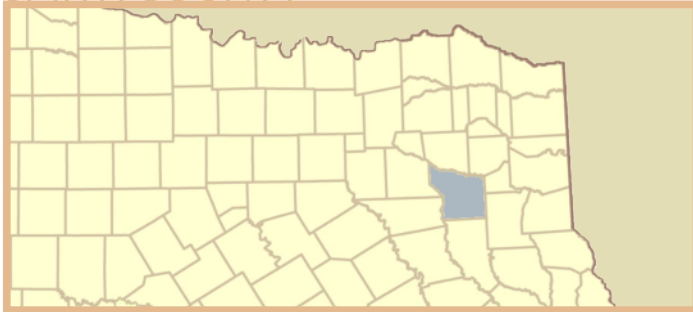
PROJECTED KEY INDICATORS

Economic Indicator	2023 Level	2028 Level	Level Change	Growth Rate
Real Gross Product	$11.7 b	$13.7 b	+$2.0 b	+3.26%
Real Personal Income	$12.0 b	$14.0 b	+$2.0 b	+3.18%
Real Retail Sales	$4.4 b	$5.1 b	+$633.4 m	+2.71%
Population	244,623	262,996	+18,372	+1.46%
Employment	118,622	132,122	+13,500	+2.18%

PROJECTED INDUSTRY GROWTH 2023-2028

Industry Sector	Real Gross Product Level Change	Real Gross Product Growth Rate	Employment Level Change	Employment Growth Rate
Agriculture	+$0.9 m	+1.75%	+31	+0.84%
Mining	+$73.2 m	+3.68%	+166	+1.95%
Utilities	+$2.2 m	+1.32%	+13	+0.78%
Construction	+$41.7 m	+1.88%	+473	+1.58%
Manufacturing	+$285.6 m	+3.69%	+705	+1.85%
Wholesale Trade	+$113.9 m	+3.69%	+746	+2.32%
Retail Trade	+$172.0 m	+2.82%	+1,361	+1.84%
Logistics	+$49.6 m	+2.40%	+656	+2.21%
Information	+$147.9 m	+4.88%	+138	+1.72%
Finance and Insurance	+$102.0 m	+3.50%	+544	+2.68%
Real Estate	+$283.7 m	+3.48%	+138	+2.19%
Professional and Business Services	+$229.9 m	+4.07%	+1,665	+2.75%
Educational Services	+$15.4 m	+3.34%	+286	+2.90%
Health and Social Services	+$338.2 m	+3.46%	+3,336	+2.62%
Amusement and Recreation Services	+$16.6 m	+5.03%	+160	+3.08%
Accommodation and Food Services	+$51.8 m	+3.24%	+1,731	+2.88%
Other Services	+$24.1 m	+2.21%	+452	+1.90%
Government	+$82.4 m	+1.40%	+900	+1.12%
All Industry Total	**+$2,031.1 m**	**+3.26%**	**+13,500**	**+2.18%**

REAL GROSS PRODUCT
2023-2028

United States +2.65%
State of Texas +3.36%
Tyler MSA +3.26%

POPULATION
2023-2028

United States +0.52%
State of Texas +1.45%
Tyler MSA +1.46%

EMPLOYMENT
2023-2028

United States +1.72%
State of Texas +2.14%
Tyler MSA +2.18%
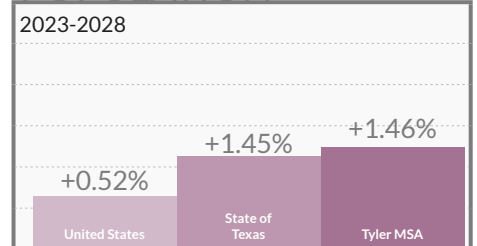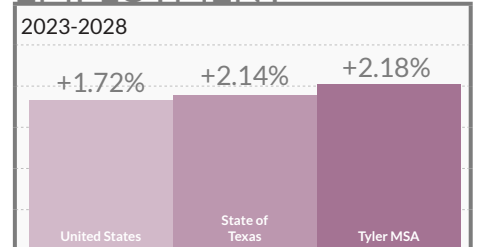
Real Gross Product: Also called "output;" the final value of all goods and services produced in an economy during a given period of time (adjusted for inflation, 2012 US$).

Personal Income (by place of residence): The total income accruing to households where the income-earner resides rather than works (adjusted for inflation and given in 2012 dollars).

Retail Sales: The total volume of retail goods sold (adjusted for inflation, in 2012 US$).

Population: The total number of persons residing in a specific area.

Employment: (Wage and salary) a measure of the number of persons in the workforce excluding proprietors, but including agricultural workers and military personnel.

Annual Growth: Growth rate compounded annually, meaning that it reflects changes in the base from which growth is calculated.

Industrial Production Index: A measure of output in the core production sectors of the economy expressed as an index with 2012=100.

Consumer Price Index: A measure of inflation, the escalation of prices of consumer goods, expressed as an index with 2012=100.

Interest Rates: The rate set on the 20-year Treasury note.

Agriculture includes farming, ranching, commercial fishing, forestry, hunting and trapping, and related services.

Mining includes companies primarily involved in the extraction of minerals occurring naturally (largely oil and gas in Texas).

Utilities includes electric, water, and sanitary services (including all establishments of the US Postal Service).

Construction includes new work, additions, alterations, and repairs of buildings, water systems, highways, utility plants, and other projects.

Manufacturing involves both non-durable items consumed in a short time period such as paper, bread, chemicals, and clothing as well as durable goods typically consumed over a period of several years such as automobiles, washing machines, industrial machinery, and computers.

Wholesale & Retail Trade comprises establishments engaged in wholesaling & retailing merchandise.

Transportation & Warehousing includes transporting passengers and goods, warehousing and storing goods, and providing similar services.

Information includes establishments that create, disseminate, or provide the means to distribute information including data processing; newspaper, book, and periodical publishers; software publishers; broadcasting and telecommunications producers and distributors; motion picture and sound recording industries; and information services.

Finance, Insurance, & Real Estate includes depository and credit institutions, holding companies, insurance carriers and agents, real estate buyers and sellers, real estate agents, and real estate developers.

Services includes companies providing services to individuals, businesses, or government entities such as health care, business services (excluding finance, insurance, and real estate), hotels, and amusements.

Government includes federal, state, local, and international governments and military activity.

METHODOLOGY

Economic and population projections were derived using the **US Multi-Regional Econometric Model**, which was developed by Dr. M. Ray Perryman, President and CEO of The Perryman Group, 40 years ago and has been consistently maintained, expanded, and updated since that time. It is formulated in an internally consistent manner and is designed to permit the integration of relevant global, national, state, and local factors into the projection process. It is the result of more than three decades of continuing research in econometrics, economic theory, statistical methods, and key policy issues and behavioral patterns, as well as intensive, ongoing study of all aspects of the global, US, Texas, and Texas metropolitan area economies. It is extensively used by scores of federal and state governmental entities on an ongoing basis, as well as hundreds of major corporations. The overall methodology, while certainly not ensuring perfect foresight, has been peer-reviewed on numerous occasions and permits an enormous body of relevant information to impact the economic outlook in a systematic manner.

Effective economics, accessible analysis

The Perryman Group provides the economic insights you need for the board room, the courtroom, the hearing room, or any other room where decisions are made.

We are an economic and financial analysis firm that provides clients with thoroughly researched, well-documented, carefully considered answers to complex questions.

Led by Dr. M. Ray Perryman, The Perryman Group covers numerous practice areas including **litigation & regulatory services, impact assessment, economic modeling & forecasting, valuation, economic development & strategic planning**, and **public policy**. In addition, our in-house professionals also provide **market & industry analysis, statistical modeling & analysis, survey & demographic studies, economic statistics**, and other services in a comprehensive manner. The firm has served the needs of more than 3,000 clients ranging from major corporations to small startups and local communities to national governments.

The Perryman Group analyzes and clearly communicates complex issues. The experienced team has a superlative track record in working with both defendants and plaintiffs in hundreds of significant assignments over more than 40 years, and Dr. Perryman has frequently provided successful testimony in numerous high-profile judicial, legislative, and regulatory proceedings. **Deadlines are met, problems are solved, and messages are delivered.**

ABOUT DR. M. RAY PERRYMAN

Dr. Ray Perryman, the founder and CEO of The Perryman Group, has guided clients, subscribers, and audiences through the complexities of economic life for more than 40 years. He holds a BS in Mathematics from Baylor and a PhD in Economics from Rice. He has held numerous academic positions; authored several books, more than 400 academic papers and 3,000 trade articles; and received hundreds of prestigious awards for his academic and professional efforts. Some of his most gratifying work has been in the fields of economic development and social policy, where he has played a role in the creation of hundreds of thousands of jobs, trillions of dollars in investments, and numerous initiatives to address pressing human needs.

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