

The 35th Annual Perryman Economic Outlook Conference

The United States



The US economy is expanding at a relatively strong pace, with significant hiring and output growth. The Perryman Group expects this upward trend to continue, despite some slowing of momentum.

The US unemployment rate is below what most economists would call “full employment,” and there are notably more job openings than unemployed persons. Wages have begun to increase as a result of the tight labor market, and some areas and industries are experi-

encing shortages.

The global economic outlook is favorable, but recent projections from the Organisation for Economic Co-operation and Development (OECD) indicate that uncertainty is dampening performance to some extent. The OECD expects global growth to ease, with downside risks intensifying as expansion becomes less broad based and more uneven.

Looking ahead to the next five years, the United States is well positioned to

deal with future changes, recently ranking as the most competitive economy due in part to the nation’s capacity for innovation and entrepreneurial thinking. At the same time, an escalation of trade difficulties or faster-than-expected normalization of monetary policy could curtail growth.

On balance, the national economic outlook is positive, but uncertainty is growing. The more effectively trade disputes are dealt with, the better the outlook.

PROJECTED KEY INDICATORS

Economic Indicator	2018 Level	2023 Level	Annual Growth	Five Year Increase
Real Gross Product	\$18.6 tr	\$21.1 tr	2.61%	\$2.6 tr
Real Personal Income	\$16.3 tr	\$18.3 tr	2.38%	\$2.0 tr
Population	328.2 m	340.0 m	0.71%	11.8 m
Employment	149.0 m	160.6 m	1.51%	11.6 m
Industrial Production Index	107.6	126.1	3.21%	18.4
Consumer Price Index	109.6	121.8	2.12%	12.1
Interest Rates	3.09%	5.65%	12.84%	2.56%

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 2.61% annual pace, reaching a level of \$21.1 trillion in 2023.

About 11.6 million net new jobs are forecast to be added, for total 2023 employment of 160.6 million.

Consumer prices and interest rates are expected to trend upward slightly over the next five years.

The economy is not only at full employment, but also making history. The US has the lowest jobless rate since the 1960s, the fewest people filing initial claims for unemployment in 50 years, more job openings than ever before, and a million more openings than the total number of unemployed persons.

While good news, the very tight labor

market is also a challenge. Long-term demographic trends point to the potential for more frequent and intense labor shortages in the future. The solution to the problem includes technological advances such as automation, machine learning, and other actions to increase productivity as well as more rational immigration policy.

The State of Texas

The unemployment rate in Texas is below 4% and is the lowest it has been in four decades. Strong growth has been ongoing across most industry groups, with particularly rapid expansion in the mining (largely oil

and natural gas), construction, and professional and businesses services segments.

The state remains one of the top destinations for business expansion and relocation, with more major

locations than any other state for a number of years.

Texas is likely to continue to experience relatively healthy expansion and is projected to outpace the nation over the next five years.

PROJECTED INDUSTRY GROWTH THROUGH 2023

Industry Sector	Employment		Real Gross Product	
	2018-2023 Increase	Annual Growth	2018-2023 Increase	Annual Growth
Agriculture	1,406	0.34%	\$0.808 b	1.03%
Mining	33,728	2.55%	\$72.640 b	4.78%
Utilities	2,383	0.91%	\$3.878 b	2.26%
Construction	51,050	1.29%	\$10.288 b	2.44%
Manufacturing	38,090	0.85%	\$51.011 b	3.83%
Wholesale & Retail Trade	173,487	1.70%	\$47.904 b	3.78%
Transportation & Warehousing	47,855	1.81%	\$9.886 b	3.47%
Information	14,668	1.41%	\$15.817 b	4.74%
Finance, Insurance & Real Estate	54,033	1.32%	\$40.972 b	3.22%
Services	825,440	2.87%	\$91.850 b	4.44%
Government	104,778	0.99%	\$18.618 b	2.16%
All Industries	1,346,917	1.99%	\$363.671 b	3.78%

Oil and gas exploration and production is contributing to the strong pace of Texas' economic expansion. Rig counts are well over 500, almost double the level of two years ago. In addition, billions are being invested in related pipelines and facilities ranging from natural gas liquefaction trains to petrochemical plants and port facilities.

Services industries will drive job gains, with wholesale and retail trade businesses also forecast to see notable hiring.

Real gross product in all major industry groups is projected to expand through 2023, with the services and mining segments likely to experience the largest growth in annual real gross product.

DETAILED INDUSTRY RANKINGS BY PROJECTED GROWTH THROUGH 2023

Employment			Real Gross Product		
#1	Food Services and Drinking Places	+139,740 jobs	#1	Oil and Gas Extraction	\$67.9 b
#2	Ambulatory Health Care Services	+126,754 jobs	#2	Professional, Scientific, and Technical Services	\$27.5 b
#3	Professional, Scientific, and Technical Services	+121,823 jobs	#3	Real Estate	\$23.0 b
#4	Administrative and Support Services	+118,437 jobs	#4	Ambulatory Health Care Services	\$14.4 b
#5	Local Government	+71,437 jobs	#5	Administrative and Support Services	\$12.8 b

The Texas population is forecast to grow by 2.1 million over the next five years.

An estimated 1.3 million net new jobs are projected for the Texas economy by 2023, representing a 1.99% annual rate of growth over the period.

PROJECTED KEY INDICATORS

Economic Indicator	2018 Level	2023 Level	Annual Growth	Five Year Increase
Real Gross Product	\$1,782.0 b	\$2,145.6 b	3.78%	\$363.7 b
Real Personal Income	\$1,277.7 b	\$1,520.2 b	3.54%	\$242.5 b
Real Retail Sales	\$419.4 b	\$495.7 b	3.40%	\$76.4 b
Population	28.7 m	30.8 m	1.44%	2.1 m
Employment	13.0 m	14.4 m	1.99%	1.3 m
Housing Permits	187,905	178,190	-1.06%	-9,715

Tyler

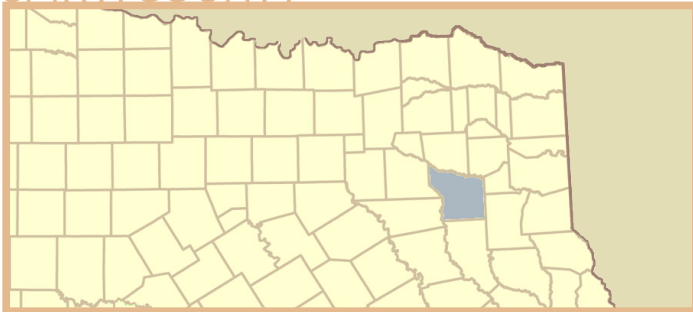
metropolitan statistical area

The Tyler area has seen strong growth over the past year, with employment expanding by more than 4% and thousands of jobs added. The

expansion has been broad based, with gains in trade, transportation, and utilities; education and health services; and leisure and hospitality.

The energy sector is also contributing to the strong pace of hiring. The Perryman Group's current forecast calls for ongoing growth.

SMITH COUNTY

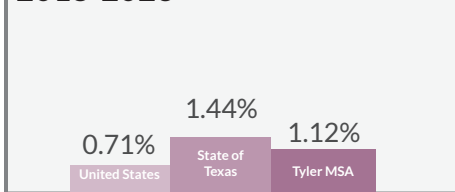


PROJECTED KEY INDICATORS

Economic Indicator	2018 Level	2023 Level	Annual Growth	Five Year Increase
Real Gross Product	\$18.9 b	\$23.1 b	4.09%	+\$4.2 b
Real Personal Income	\$11.1 b	\$13.2 b	3.46%	+\$2.1 b
Real Retail Sales	\$3.8 b	\$4.6 b	3.45%	+\$0.7 b
Population	0.2 m	0.2 m	1.12%	+0.0 m
Employment	0.1 m	0.1 m	2.08%	+0.0 m
Housing Permits	453	425	-1.27%	-28

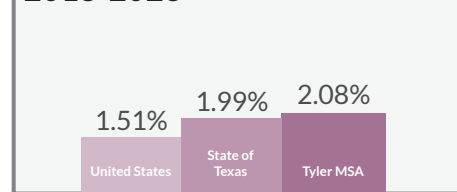
POPULATION

2018-2023



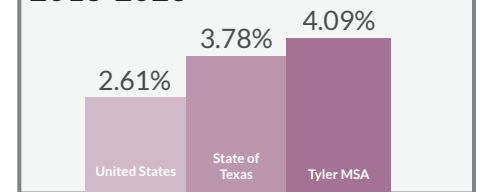
EMPLOYMENT

2018-2023



REAL GROSS PRODUCT

2018-2023



PROJECTED INDUSTRY GROWTH THROUGH 2023

Industry Sector	Employment		Real Gross Product	
	Absolute Change	Annual Growth	Absolute Change	Annual Growth
Agriculture	+11	0.30%	+\$0.005 b	0.99%
Mining	+222	2.41%	+\$2.124 b	4.64%
Utilities	+13	0.85%	+\$0.019 b	2.21%
Construction	+288	1.23%	+\$0.051 b	2.38%
Manufacturing	+169	0.60%	+\$0.240 b	3.57%
Wholesale & Retail Trade	+1,547	1.64%	+\$0.425 b	3.80%
Transportation & Warehousing	+388	1.68%	+\$0.070 b	3.34%
Information	+160	1.44%	+\$0.137 b	4.77%
Finance, Insurance & Real Estate	+434	1.34%	+\$0.298 b	3.34%
Services	+7,935	2.92%	+\$0.708 b	4.39%
Government	+784	1.03%	+\$0.118 b	2.21%
All Industries	+11,951	2.08%	+\$4.195 b	4.09%

Growth in the Tyler area is expected to occur at a pace faster than the nationwide rate.

Employment is projected to grow by nearly 12,000 net new positions, led by the services sector.

Real gross product is forecast to expand at a 4.09% annual pace, resulting in a gain of almost \$4.2 billion by 2023. Key growth sectors are likely to be information and mining.

DEFINITIONS

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 and given in 2012 dollars).

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 and given in 2012 dollars).

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.

Housing Permits: Reflects the total number of permits for single and multi-family housing during a given period.

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.

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

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

Trade includes wholesale and retail trade.

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.

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.

Other 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.

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

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

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

METHODOLOGY

Economic and population projections were derived using the **Texas 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 economic research tailored for you

The Perryman Group provides the economic insights you need for the board room, courtroom, or hearing room.

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We are a focused team of analysts who know how to address any economic information task and present our findings effectively.

Our in-house professionals bring expertise in **finance, statistics, economics, real estate, valuation, systems analysis, mathematics, engineering, technical communications, and marketing**. Dr. Ray Perryman, President and CEO, has over 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 conta-

gious; every day brings a new opportunity for us to tackle a new problem or create a new product or service tailored to our clients.

We also understand that the effective use of economic information can be a key ingredient in fostering the betterment of society and humankind. Our commitment to the world in which we live and work is why we also provide major pro bono analyses to promote initiatives that help to improve people's lives.

ABOUT DR. M. RAY PERRYMAN

Dr. Ray Perryman is President and CEO of The Perryman Group, an economic research and analysis firm based in Waco, Texas. His firm has served the needs of more than 2,000 clients ranging from major corporations to small startups and from local communities to the federal government.

Dr. Perryman has helped recruit corporations providing hundreds of thousands of jobs through economic development work, aided in the resolution of 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 hundreds of corporations and government agencies. Dr. Perryman has provided economic analysis and expert testimony for civil litigation across a wide range of practice areas including antitrust and competition, patent infringement, securities, and complex commercial litigation and frequently testifies in legislative hearings.

Some of his most gratifying work has been in the field of economic development; he also dedicates a significant portion of his time to pro bono work aimed at helping to solve pressing social problems such as hunger, indigent health care, and child maltreatment.