PRESTIGE ECONOMICS®

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NORTH TEXAS TECHNOLOGY AND ECONOMIC IMPACT REPORT

Overview

Texas has experienced strong growth, and it is projected to continue expanding significantly through 2050. One of the most important drivers of this long-term growth will be productivity gains fueled by technology, particularly from the accelerating impact of artificial intelligence as an economic multiplier. Fast-growing regions like Collin County are likely to outpace statewide growth, benefiting from concentrated innovation, high-skilled labor, and rapid population increases. By 2050, Collin County's real gross domestic product (GDP) is projected to exceed the 2024 GDP levels of several entire U.S. states, solidifying its role as a vital economic engine for Texas and the U.S. economy.

Growth Factors

Economic growth is driven by three key factors: capital, labor, and technology. Among these, technology has long played a critical role in boosting productivity and fueling expansion. By increasing the output per worker, technology acts as a powerful engine of economic growth.

Looking ahead, artificial intelligence holds even greater promise to accelerate productivity gains in the decades to come. Given AI's transformative potential, the productivity leverage of technology is not only sustained—it's poised to intensify. Importantly, the full economic impact of technological advances—particularly AI—has yet to be fully realized in national, state, and regional economies, including the United States, Texas, and the North Dallas region.

Texas Economic Forecasts

Texas has the second-largest state gross domestic product (GDP) in the United States, and it is projected to grow substantially through 2050. One of the key drivers of this growth will be technology, which is likely to play an increasingly important role in boosting productivity across sectors. The Texas Comptroller's office regularly publishes economic forecasts, and the latest Fall 2024 Forecasts are available online at https://comptroller.texas.gov/transparency/reports/forecasts/fall2024/.

The underlying data, which is available in downloadable Excel files, is sourced from S&P Global and the Texas Comptroller of Public Accounts. These forecasts include projections for job growth and real state GDP in 2017 dollars, which reflect inflation-adjusted statewide economic growth.

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Texas Real GDP and Workforce Forecasts

Forecasts for Texas real GDP and Texas employment through 2050 are strong. According to the Fall 2024 forecasts from the Texas Comptroller shown in Exhibit 1, Texas real GDP (in 2017 dollars) is projected to grow from $2.0 trillion in 2023 to $3.6 trillion in 2050—a 77% increase. During the same period, employment is forecasted to grow by 28%, rising from 13.9 million to 17.7 million workers by 2050.

While this job growth is substantial, the even larger increase in real GDP highlights the powerful, productivity-enhancing effects of technology. In other words, future Texas growth isn't projected to only come from more jobs. It's projected to come from workers doing higher-value activities in those jobs—activities that likely involve the use of a lot more technology, which is why job growth is forecasted to be 28% through 2050. Still, real GDP growth is anticipated to be a much stronger 77%.

The productivity impact on total state real GDP through 2050 is projected to be significant, and the increases in the real GDP contributions from the technology, manufacturing, and natural resources (including mining and oil and gas) industries in Texas are also forecasted to be significant. Technology's real economic impact (in 2017 dollars) is forecasted to grow from $111 billion in 2023 to $512 billion in 2050, which represents a 361% increase. That represents massive real growth at a pace that is much larger than the forecasted 7% increase in technology workers from 235,000 in 2023 to 251,000 in 2050.

Exhibit 1

Texas State Real GDP and Employee Forecasts with Key Sector Percentages

Texas GDP and Employment Forecasts

	Texas State GDP				
	Billions of Dollars, 2017 Dollars		Percent Change	Percent of Total GDP	
	2023 Actual	2050 Forecast	2023 to 2050	2023 Actual	2050 Forecast
All Industries	$ 2,033	$ 3,608	77%		
Technology	$ 111	$ 512	361%	5.5%	14.2%
Manufacturing	$ 218	$ 480	121%	10.7%	13.3%
Natural Resources/Mining/Oil and Gas	$ 140	$ 232	65%	6.9%	6.4%

	Texas State Employees				
	Thousands		Percent Change	Percent of Total	
	2023 Actual	2050 Forecast	2023 to 2050	2023 Actual	2050 Forecast
All Industries	13,912	17,746	28%		
Technology	235	251	7%	1.7%	1.4%
Manufacturing	956	936	-2%	6.9%	5.3%
Natural Resources/Mining/Oil and Gas	213	300	41%	1.5%	1.7%

Sources: S&P Global, Texas Comptroller of Public Accounts - Fall 2024 State Economic Forecast, Prestige Economics.

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Sources: S&P Global and the Texas Comptroller of Public Accounts.

Source: U.S. Census Bureau

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Manufacturing's real economic impact is also projected to outpace overall Texas real GDP growth. Manufacturing is forecasted to grow (in 2017 dollars) from $218 billion in 2023 to $480 billion in 2050, which represents a 121% increase. This is much larger than the forecasted growth rate of total real Texas state GDP, and the manufacturing real GDP impact is projected to grow despite the fact that a modest -2% decline is forecasted for the size of the Texas manufacturing workforce through 2050, with the total number of manufacturing workers falling slightly from 956,000 to 936,000. The reason the number of workers could fall slightly while the real GDP impact rises significantly stems from a likely increased use of technology that allows manufacturing workers to produce more. This hints at a potential future of manufacturing roles that will be very high-tech in nature, requiring skills in the use of automated solutions, advanced technologies, and robotics.

While some might view the forecast of a modest decline in the number of manufacturing workers as a potential negative, it is important to note that most companies in manufacturing are currently struggling to fill vacant roles amidst a shortage of skilled U.S. manufacturing workers. In fact, according to the U.S. Bureau of Labor Statistics, there were 381,000 open manufacturing jobs in April 2025.

Strong growth in the real economic impact of natural resources (including mining and oil gas) is also projected through 2050. Natural resources real GDP (in 2017 dollars) is forecasted to grow in Texas from $140 billion in 2023 to $232 billion in 2050, which represents a 65% increase. At the same time, the number of natural resource workers is projected to rise by a more modest 41%, growing from 213,000 workers in 2023 to 300,000 in 2050. Once again, the growth of real GDP in this sector is forecasted to greatly outpace job growth as technological productivity gains drive worker output.

Projections for these three sectors reflect real GDP growth rates that are significantly greater than the forecasted growth in their sector-specific labor forces, which is because technology is adding significant leverage for workers in those sectors to have outsized economic impacts for the Texas economy.

Looking across the data in Exhibit 1, the most important positive takeaway is that the growth in real GDP (in 2017 dollars) is anticipated to be strong for the state and in the three categories we have highlighted. Additionally, job growth is also forecasted to be positive for the state and in these categories, except in manufacturing, where only a modest decline is forecasted. However, this is a forecasted decline in a sector that is currently struggling to find workers to fill open roles, which is one of the reasons increased automated solutions, AI, robotics, and other high-value technologies are likely to be deployed and utilized to boost growth, output, and profitability in the future.

Technology Boosts Productivity Across Industries

Future productivity gains from technology are not going to be limited to the information technology sector. Technology is acting as a broad-based economic multiplier, creating ripple effects across industries such as manufacturing, professional services, and business operations—amplifying output far beyond the scale of job growth alone.

Source: U.S. Census Bureau

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In the technology sector, productivity is likely to rise dramatically. The number of workers is projected to increase between 2024 and 2050. However, the technology share of Texas employment is forecasted to decline, as shown in Exhibit 1.

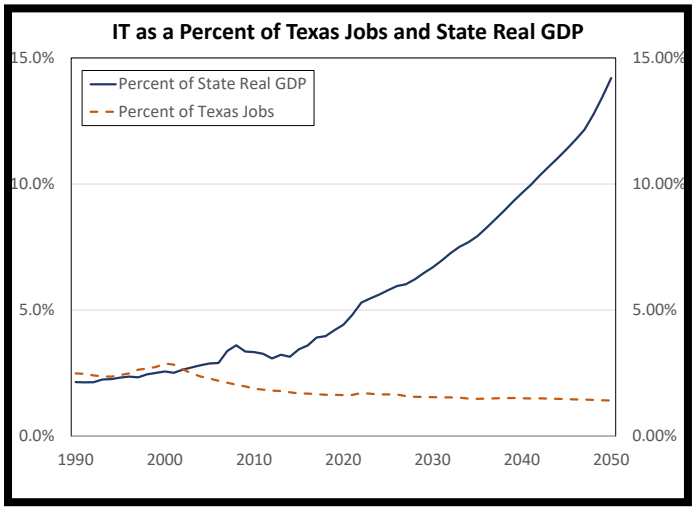
The Fall 2024 forecast from the Office of the Comptroller shows that information jobs made up 1.7% of the total Texas workforce in 2023, although that percentage is projected to decline to 1.4% by 2050. This is graphically shown in Exhibit 2. This means that the number of technology jobs is going up, and the technology share of Texas real state GDP is forecasted to rise, although the percentage of the Texas workforce comprised of workers officially categorized in the information sector is projected to fall.

The information sector's share of real GDP has grown from 2.1% in 1990 to 5.5% in 2023, and it is projected to surge to 14.2% of real state GDP by 2050. Meanwhile, the number of workers in information is forecasted to grow by 7% between 2023 and 2050, but the pace of job gains is slower than the overall projected pace of job gains across the entire Texas economy. As such, information is projected to make a much bigger contribution to state GDP in 2050 with more information workers, even though the percentage of information workers is projected to be a smaller proportion of the total Texas workforce. This means that future information technology workers will be hitting above their weight class in terms of generating economic output for future real Texas GDP.

A similar trend is emerging in manufacturing, as shown in Exhibit 3. Although manufacturing's share of Texas employment has fallen significantly from 13.3% in 1990 to 6.9% in 2023, it is forecasted to fall further to a low 5.3% of the Texas workforce by 2050—even as its contribution to state GDP increases. Manufacturing's share of Texas real GDP fell from 11.1% in 1990 to 10.7% in 2023, but it is forecasted to grow to 13.3% in 2050. We again see forecasts of a potential modest drop in the number of manufacturing workers, which is likely to make manufacturing a much smaller part of a state-wide workforce that is otherwise growing. On the upside, the economic output of this sector will make each of these workers more critical to the future of Texas growth.

Exhibit 2

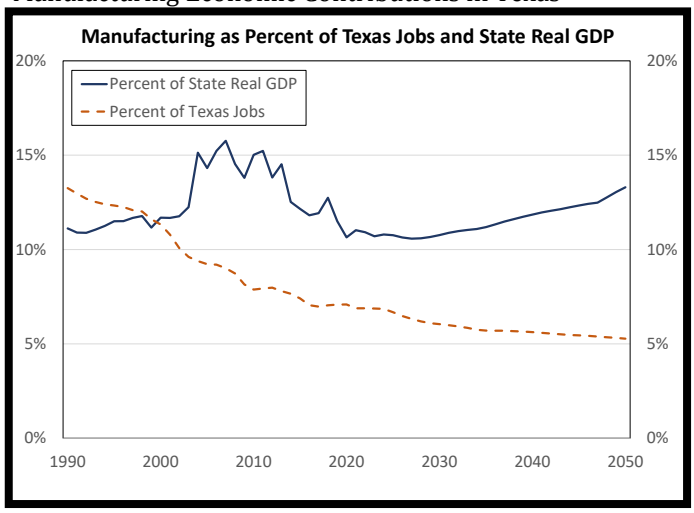
Information Economic Contributions in Texas



Sources: S&P Global and the Texas Comptroller of Public Accounts.

Exhibit 3

Manufacturing Economic Contributions in Texas



Sources: S&P Global and the Texas Comptroller of Public Accounts.

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The divergence across sectors where real GDP output is projected to rise significantly even as the percentage of the workforce represented by these sectors is projected to fall highlights the transformative role of technology, automation, and artificial intelligence in driving output in traditional industries. As a result, sectors like manufacturing, with physically demanding roles, are poised to deliver outsized contributions to economic growth.

Technology offers incredible opportunities to boost output beyond what humans could do alone. Consider the impacts of construction equipment on the ability to construct buildings. Workers using that equipment are infinitely more productive. In the realm of e-commerce, supply chain activities and speed occur at a pace that would be unimaginable without the use of robots, automated solutions, and AI.

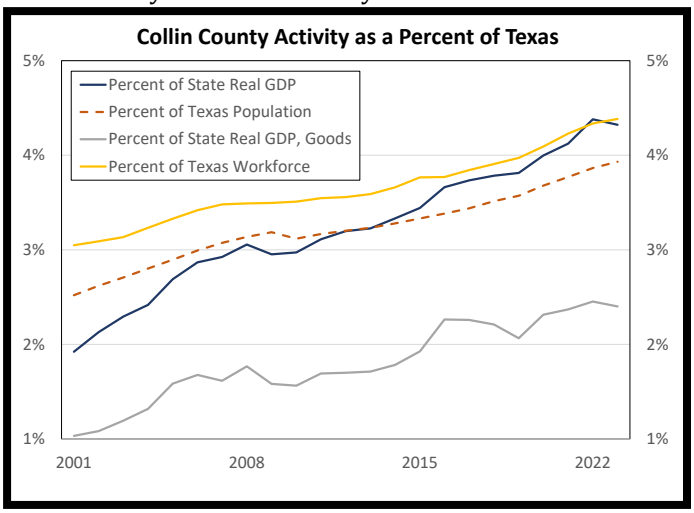
Collin County Data

The economic outlook for the state of Texas is very positive, and the same is true for many of its regions, including Collin County. Over the past two decades, Collin County has emerged as a major contributor to Texas's population and economic growth—outpacing the state in key metrics, which can be seen in Exhibit 4. From 2001 to 2023, Collin County's share of Texas population growth rose from 2.5% to 3.9%, a 56% increase in its relative contribution. Similarly, Collin County's share of the Texas workforce rose from 3.0% in 2001 to 4.4% in 2023, reflecting a 44% increase in the county's relative importance to the Texas workforce.

Collin County's share of real state GDP more than doubled—from 1.9% in 2001 to 4.3% in 2023—a 125% increase. The growing importance of Collin County for the state of Texas has been especially pronounced in the goods-producing sector, where Collin County's share of Texas's real GDP for goods increased from 1.0% in 2001 to 2.4% in 2023—a 132% rise. This growth reflects Collin County's rising productivity, not just its population gains, revealing the region's rising economic significance, including its role in technology-driven productivity and output.

Exhibit 4

Collin County Economic Activity as a Percent of Texas



Sources: S&P Global and the Texas Comptroller of Public Accounts.

Source: U.S. Census Bureau

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Expectations for Collin County

Looking ahead, Collin County's importance to Texas's economy, workforce, and population growth is set to accelerate. As one of the fastest-growing regions in the state, Collin County is emerging not just as a contributor but as a strategic driver of statewide economic momentum. With its expanding base of high-skilled labor, business investment, and innovation-focused industries, the county is uniquely positioned to amplify the productivity-enhancing effects of technology.

The asymmetric importance of technology and artificial intelligence (AI) as levers for productivity in the Texas economy is likely to be even more pronounced in Collin County's rapidly growing cities, including Frisco, Plano, McKinney, Allen, and Prosper. Their extraordinary population gains are fueling economic momentum that will shape the region's future in the decades ahead.

Frisco grew from under 34,000 residents in 2000[1] to almost 243,000 at the time this report was written,[2] making Frisco one of the fastest-growing cities in America.

Allen almost tripled in size over the same period, growing from nearly 44,000 in 2000[3] to almost 114,000 in 2023.[4]

McKinney more than quadrupled in size, expanding from over 54,000 in 2020[5] to over 224,000 residents.[6]

Plano, the county's most populous city, is a major business and technology hub, home to companies like Toyota North America, JPMorgan Chase, and Hewlett Packard Enterprise.

These cities have experienced explosive growth in population, a surge in educated workers, and the development of a strong tech ecosystem. This unique combination of factors will drive demand for AI-powered solutions in sectors like finance, healthcare, logistics, and professional services.

Beyond population growth, Collin County boasts high levels of income and educational attainment. According to the University of Texas at Dallas, Frisco and Plano are two of the top ten cities in Texas for bachelor's degree attainment and high-income households.[7]

With a powerful mix of rapid growth, skilled talent, and a high concentration of tech-adopting firms, Collin County is poised to generate outsized economic gains from the use of AI and advanced technologies. As AI reshapes productivity dynamics across Texas, Collin County's cities are likely to lead that transformation, reinforcing the region's status as a critical engine of innovation and economic growth for the state.

Sources

[1] https://www.tsl.texas.gov/ref/abouttx/popcity2000.html
[2] https://www.friscotexas.gov/1454/Demographics
[3] https://www.tsl.texas.gov/ref/abouttx/popcity2000.html
[4] https://www.allenedc.com/labor-demographics
[5] https://www.tsl.texas.gov/ref/abouttx/popcity2000.html
[6] https://www.mckinneytexas.org/294/Demographics-Census-Reports
[7] https://economicengine.utdallas.edu/analysis/cities/grads/

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A graphic depiction of the Prestige Economics forecasts for Collin County's share of Texas economic, population, and labor force activity can be seen in Exhibit 5.

To put a finer point on these forecasts, Prestige Economics expects the population in Collin County to exceed 2.3 million, with a workforce that exceeds 1.2 million in 2050, and a county real GDP contribution of almost $360 billion in 2017 dollars. Prestige Economics also expects the contribution of goods to Collin County's real GDP is likely to total over $50 billion in 2017 dollars.

As a point of comparison, we expect Collin County's 2050 real GDP is likely to reach levels comparable to the entire state of Missouri's real GDP in 2024, highlighting the extraordinary scale of the county's projected economic growth. Collin County's economy in 2050 is forecasted to be roughly three times the size of Oklahoma's entire real GDP in 2024. This comparison underscores the county's transformation from a fast-growing regional hub into a national economic heavyweight—driven by rapid population growth, a highly skilled workforce, and the outsized productivity impacts of technology and artificial intelligence across key sectors. Collin County's growing concentration of high-productivity sectors will help position it as one of the most dynamic and economically significant regions in Texas over the coming decades.

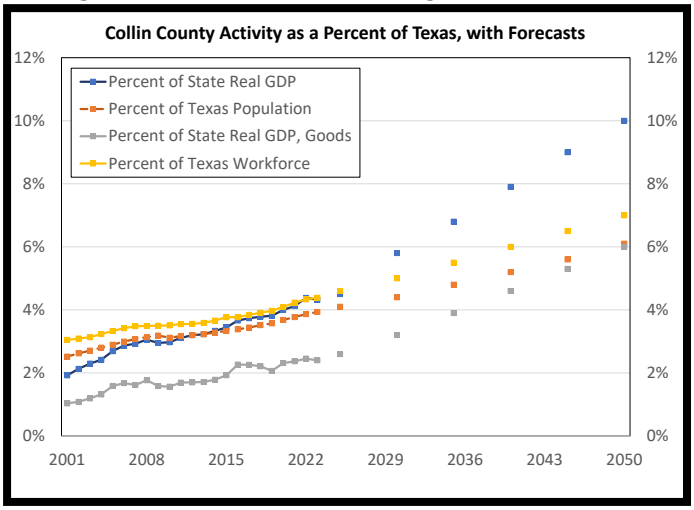
Summary

By 2050, Collin County is likely to emerge as a major economic powerhouse within Texas, contributing 10% of the state's total real GDP and 6% of its real GDP from goods-producing sectors—up dramatically from just 1.9% and 1.0% in 2001, respectively. This projected real GDP for Collin County in 2050 will rival that of Missouri in 2024 and be nearly three times the size of Oklahoma's real GDP in 2024, marking its transformation into a region with growing economic significance. We expect growth to be fueled by the outsized impact of technology and artificial intelligence, which are driving productivity gains that far outpace job growth, especially in sectors like manufacturing and information.

Exhibit 5

Collin County Economic Activity as a Percent of Texas

Prestige Economics Forecasts Through 2050



Sources: Prestige Economics, S&P Global, and the Texas Comptroller of Public Accounts.

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Prestige Economics Forecasts for Collin County

Prestige Economics expects the trend of Collin County's rising importance to the Texas economy to continue through at least 2050. Based on current trajectories in population growth, workforce expansion, and economic output, we forecast that by 2050, Collin County will account for:

- **6% of the Texas population**
- **7% of the Texas workforce**
- **10% of total Texas state real GDP**
- **6% of Texas real GDP in goods-producing sectors**

These projections highlight Collin County's evolving leadership in both traditional industries and advanced, technology-driven sectors, along with its growing importance for the future of the Texas economy.

With a projected population exceeding 2.3 million and a workforce topping 1.2 million by 2050, Collin County's expansion is likely to be underpinned by high-skilled workers and the rise of innovation-driven industries. As a result, the region—anchored by cities like Frisco, Plano, and McKinney—is well positioned to lead Texas's next era of economic leadership.

While Collin County's long-term economic outlook is highly favorable, several key risks and dependencies could influence the trajectory of its growth. Rapid population and economic expansion will require significant investments in infrastructure—transportation, utilities, and digital networks—to avoid bottlenecks that could limit productivity. Rising housing demand may strain affordability, and maintaining a high-skilled workforce will depend on sustained investment in education and training aligned with technology and AI-driven sectors. Pro-growth policy stability at the state and federal levels will also be critical to preserving a strong business climate. Finally, broader macroeconomic and geopolitical uncertainties—including inflation, interest rates, global supply chain disruptions, and international conflict—could present headwinds to investment and growth.

For high-technology industries across Texas, access to reliable and affordable power through ERCOT will be essential to support continued growth. Statewide power demand is likely to rise sharply as data center and AI-related energy needs expand. Fortunately, Texas's status as the energy capital of the world offers a strategic advantage in meeting these challenges.

If the challenges and risks above are effectively managed, the long-term outlook for Collin County will remain exceptionally strong through 2050.

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About Prestige Economics

Prestige Economics helps clients understand what to expect from the economy, financial markets, geopolitics, and technology trends to defensively and aggressively plan ahead. We serve public corporations, private companies, central banks, institutional investors, and governmental bodies. We also perform forecasting, risk management, geopolitical, and strategic consulting projects. Based on rankings from Bloomberg News, Prestige Economics is one of the most accurate market forecasting firms in the world. Our commentary is unbiased, and we are based in Austin, Texas.

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