

the Southwest ECONOMY

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Back in the Saddle Again

The Texas Economy 10 Years After the Bust

On the 10th anniversary of Texas' sharpest employment decline in four decades, what appears to be enduring is the resilience of the Texas economy. Economic activity has bounced back with gusto, and today, after nine years of expansion, Texas' employment growth again ranks among the fastest in the nation.

An important producer of high-tech equipment and petrochemicals, Texas manufacturing is strong. Construction of huge factories, homes and highways has revived a long-dormant real estate industry. Banks are profitable, and Texas remains a major energy producer.

The great oil price shock of 1986 and the boom that preceded it overshadowed many forces that have been driving Texas' economic growth since the turn of the century. When the bottom fell out of the energy market, Texas still had a low-cost business climate, large labor pool, strategic location, efficient distribution network and eager high-tech industry to help rebuild its economy. These factors stimulated

the state's economy before the boom and bust and continue to encourage growth today.

A Changing Structure

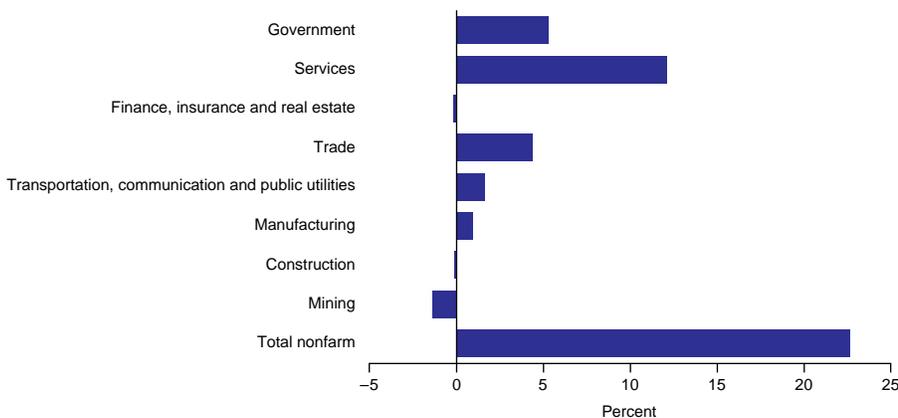
For most of this century, the Texas economy has been slowly changing, away from resource-based industries toward more knowledge-based industries. This transformation was put on hold during the energy boom, when rising oil prices during the 1970s and early 1980s encouraged the Texas economy to shift to profit from the increased value of one of its abundant natural resources (*Table 1*).

Texas has returned to long-run trends since the bust.¹ Since 1940, services have played an increasingly important role both in Texas and the nation. Technological changes in agriculture and manufacturing have raised productivity and held down prices, allowing consumers to spend more of their incomes on services. In the past 10 years, more than half of Texas job growth has been in the service sector (*Chart 1*).

While increasing productivity in manufacturing has held down job growth, Texas employ-

Chart 1

Net Contributions to Texas Employment Growth by Sector, December 1985–December 1995



I N S I D E

A Look at America's
Corporate Finance Markets

—
New Business Cycle
Indexes for Mexico Point
To Economic Expansion

Table 1
The Rise, Fall and Resurgence of Key Sectors in the Texas Economy

Boom	1973–85	Bust	1986	Today	1996
Energy	<ul style="list-style-type: none"> Oil prices rise in 1973 after OPEC restricts supplies. By 1981, prices have surged nearly tenfold to \$37 per barrel. In 1982, oil and gas extraction employment peaks at 5 percent of Texas' total, and the industry's output peaks at 19 percent of total gross state product. 	<ul style="list-style-type: none"> Oil prices plunge by two-thirds, from \$37 to about \$12. Within a year, over 50,000 Texas workers lose their jobs. Another 50,000 jobs disappear in the aftermath. 	<ul style="list-style-type: none"> The industry has refocused toward downstream industries that use refined crude and natural gas as inputs. Oil and gas extraction jobs represent about 2 percent of Texas employment. The energy industry contributes roughly 6 percent of the dollar value of output. 		
Construction and real estate	<ul style="list-style-type: none"> The mirage of "\$85 in '85" oil prices and tax breaks for apartment and office building under 1981 tax reforms create incentives to build with little regard for demand. 	<ul style="list-style-type: none"> As oil prices fall and tax breaks disappear, real estate property values plummet. Billions of dollars worth of development sit empty for years. Some properties are bulldozed and written off. Construction is nil. 	<ul style="list-style-type: none"> Texas real estate market is much healthier today. Recent growth is based on the fundamental strengths of the Texas economy. 		
Banking	<ul style="list-style-type: none"> Early '80s banking laws result in a larger pool of funds to lend. Bank portfolios are not geographically diversified. Texas banks number 1,936 before the bust. 	<ul style="list-style-type: none"> During the 1980s, 368 banks fail in Texas. Of the 10 largest Texas holding companies, all but one either failed or was acquired by out-of-state companies. 	<ul style="list-style-type: none"> Texas banks number 935. Bank consolidation has resulted from the repeal of Texas unit banking laws and scale economies from new technology and interstate bank combinations. 		

ment in that sector has grown more than in the rest of the country. In the early 1970s, the share of employment in the manufacturing sector was significantly higher in the United States than in Texas. Since that time, Texas' share of manufacturing employment has become more like the nation's by increasing slightly while U.S. manufacturing employment was declining rapidly.

One reason Texas' manufacturing sector has been increasing relative to the nation's is a rapid expansion of high-tech industries. Texas has become a leader in the production of computers, semiconductors and telecommunications equipment.² In fact, Texas has been a leader in high-tech industries since the 1970s, boosted by a buildup of defense-related manufacturing and technological advances from the oil and gas industry. The 1980s were difficult years for high-tech industries, with defense spending cuts and global competition pushing down prices for computer chips.³ After the bust, however, Texas high-tech

industries flourished as companies that were consolidating and downsizing moved to Texas, attracted by a large supply of low-cost land and labor. In Texas, employment at high-tech firms has grown twice as fast as the state's overall economy during the past 10 years. The share of Texas private employment in high-tech industries has risen from about 1 percent in the mid-1970s to 3.1 percent in 1994.⁴

Texas' growth in high-tech industries has been an important force in helping the state become more integrated with the global economy. In 1987, exports contributed roughly 10 percent of gross state product (GSP). Today, exports represent a significant share of Texas' economy, contributing roughly 21 percent of total GSP. Texas is a leading exporter of chemicals, electronics, computers, transportation equipment and agricultural products. In 1994, Texas' \$60 billion in exported goods constituted about 51 percent of the state's total manufacturing sales.

More than 50 countries regularly purchase Texas products. Texas' neighbor to the south is its leading export market. Over the past decade, exports to Mexico have more than tripled. Texas' other major export markets include Canada, Japan, the United Kingdom, Taiwan, China, Singapore, Korea, Venezuela and the Netherlands.

Reinventing the Energy Industry

While high-tech industries have been gaining strength, the energy industry has been rebounding. The energy industry, while still important to Texas, looks very different from Texas' energy industry 10 years ago. Oil and gas extraction output is about one-third its former size. Still, Texas continues to be the nation's number one combined oil and gas producer; 26 percent of the crude oil and 33 percent of the natural gas produced in the nation come from Texas. Since 1986, new technology—including 3-D seismic, horizontal drilling, coiled tubing and sophisticated fracturing—has caused a drop in oil production costs, encouraging drilling in places that were previously cost-prohibitive.

Texas still benefits from rising oil prices, although the state's economic well-being is less tied to oil prices than it was 10 years ago.⁵ During the 1990–91 Persian Gulf war, oil supply disruptions from the Middle East sent oil prices to more than \$30 per barrel for several months, helping push the nation into recession. The Texas economy avoided recessions however, thanks to a mini-boom in oil and gas extraction. The state remains susceptible to changing oil prices. Each sustained dollar change in oil prices changes Texas employment by about 18,000 jobs.⁶

After the oil bust, the state's energy industry shifted from upstream oil and gas extraction industries toward downstream industries. The 1986 plunge in prices was good news for the producers of downstream products, which use refined crude oil and natural gas as inputs.⁷ High pre-

bust oil prices had limited demand and profits for such downstream products as gasoline, petrochemicals, plastics and rubbers. Lower prices and a rebounding economy stimulated demand and led to a building boom along the Gulf Coast.

Today, the chemical industry generates one-fourth of Texas' manufacturing shipments and is a leading export industry. Texas processes more natural gas than any country in the world.⁸ In fact, the world price of natural gas liquids is set in Mont Belvieu, a Houston suburb. With the nation's largest refining capacity, Texas and Louisiana are the only refining states to export a significant amount of product to other parts of the country, particularly the East Coast.

Texas has become a multinational supplier of oil field equipment and engineering and construction expertise. Texas ships oil field equipment and services to help other countries extract oil and gas. Texas engineering and construction firms build major industrial facilities, roads, highways, airports, hotels and resorts around the world. In 1994, four of the top 10 industrial contractors in the world were based in Texas—Centex, Raytheon Engineers, John Brown/Davy and Brown & Root—and generated \$11.1 billion in revenues.⁹

Construction and Banking On More Solid Ground¹⁰

Just as Texas' energy industry had to be reinvented, Texas' construction and banking sectors needed to regain solid footing. Expansion of the economy in the 1980s went beyond what the economic fundamentals could support, pushed by the expectations of higher oil prices and distortionary tax and banking policy.

In 1982, most analysts expected that the Organization of Petroleum Exporting Countries (OPEC) would keep world oil prices artificially high and, at the worst, that oil prices would stagnate around \$30 per barrel. Respected forecasters at

Data Resources Inc.¹¹ and the University of Texas were projecting that oil prices could reach as high as \$60 to \$90 per barrel by the year 2002.¹² Analysts put the bottom of their forecast range around \$20 per barrel and considered that outcome very unlikely. Forecasters did not anticipate the surge of cheap oil that would send prices near \$10 per barrel.¹³

Distortionary public policy also encouraged overbuilding. The Economic Recovery Tax Act of 1981 created tax breaks for apartment and office building investors, giving investors and builders incentives to build without much regard for demand. At the same time, banking laws passed in the early 1980s gave financial institutions a larger pool of funds to lend investors.

In 1986, falling oil prices and elimination of tax breaks for real estate led to massive job losses, plunging property values and widespread bank failures. Risk-taking contributed to the severity of the financial losses. Banks that adopted relatively risky management strategies in the form of both high reliance on commercial and industrial loans and construction loans, and greater use of large certificates of deposit for funding, suffered much greater difficulties than did their more conservative counterparts.¹⁴ Large banks were particularly hard-hit, suffering greater losses than small banks.¹⁵ The banking industry had negative returns on average assets from 1986 through 1989. In 1989, 65 percent of total U.S. bank failures were in Texas, and less than one-fourth of Texas thrifts were both profitable and solvent. The number of thrift closures would have been extremely high, but inadequate funding of the Federal Savings and Loan Insurance Corporation (FSLIC) prevented thrift regulators from aggressively closing insolvent thrifts through most of the 1980s.¹⁶

While dreams of \$80-per-barrel oil died quickly, investments made to chase those dreams were not as easily liquidated. Although Texas

employment growth began to accelerate in 1987, it took several years for the excess supply of real estate to be absorbed to the point that real estate values began to strengthen. Construction activity continued to decline throughout the late 1980s.

Today, the Texas real estate market is much healthier than it was 10 years ago. Recent growth is based on the fundamental strengths of the Texas economy.¹⁷ The rebound has been uneven, however. The warehousing industry is strong across most of the state, but office markets remain weak in many places. Although improving, office vacancy rates in downtown Dallas and Houston are still among the highest in the nation.

Return to Trend

When oil prices are relatively stable, as in the 1990s, Texas economic growth is propelled primarily by the same factors that stimulate economic growth throughout the rest of the country. As Chart 2 shows, Texas employment growth has been following a pattern similar to that of the nation's for more than five decades. The energy boom during the 1970s and the bust in 1986 now appear as deviations from the long-run trend.

Although the pattern is similar, Texas employment has grown faster than the nation's for 43 of the past 55 years. Several factors attract firms to Texas.¹⁸ Real estate and labor are

Chart 2
Texas Payroll Employment Growth, 1940–95
(December over December)

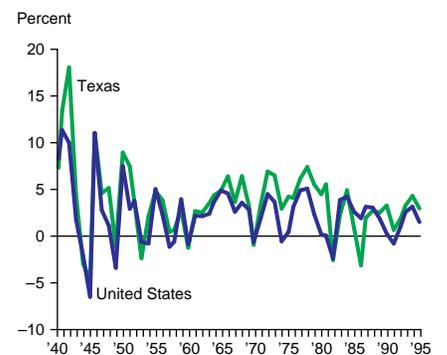
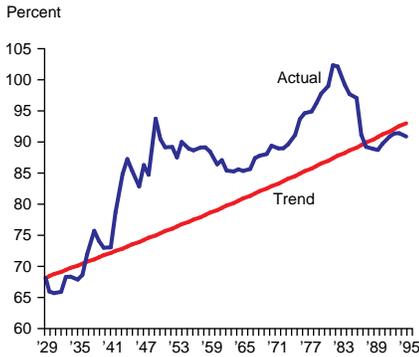


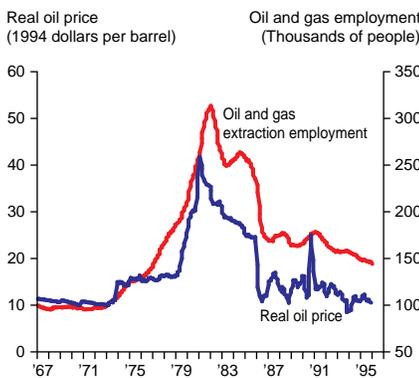
Chart 3
Texas Per Capita Personal Income
As a Percentage of U.S. Per Capita
Personal Income



relatively less expensive in the state. Texas has an efficient distribution network and is strategically located in the center of North America, a factor of increasing importance since the passage of the North American Free Trade Agreement. The oil bust made Texas an even cheaper destination for expanding companies, by freeing up labor and real estate and attracting bargain-hunting developers.

While Texas employment has been growing faster than the nation's, Texas per capita income has historically been below the national average. Texas per capita personal income has been slowly inching closer to the national average, however, as shown in Chart 3. In early 1970, before the oil boom, Texas per capita personal income was around 88 percent of the national

Chart 4
Real Oil Price and Texas Oil and Gas
Extraction Employment



average. During the oil boom, Texas per capita income accelerated and briefly matched the U.S. average, but then declined in the mid-1980s. And, in recent years, Texas per capita income as a percentage of U.S. income has returned to its long-run trend rate of growth, increasing around 0.1 percent per year.

Conclusion

Although the oil bust 10 years ago will always be an important part of Texas history, visible signs of this economic shock are fading. Today, the mining industry has shrunk. As Chart 4 shows, oil and gas extraction has returned to the same share of employment as in 1972, prior to the first big jump in oil prices. Inflation-adjusted oil prices are back to pre-oil-embargo levels, and the Texas economy has returned to the trends that were evident before rising oil prices sent the economy skyrocketing.¹⁹ High-tech industries have accelerated expansion. Increased exports have helped Texas become more of a more globally focused economy. The service sector has resumed rapid growth, and Texas continues to grow faster than the nation. Although per capita personal income is below the national average, Texas is again slowly converging to the national average.

—Fiona Sigalla

Notes

- 1 See Beverly J. Fox and Keith R. Phillips, "The Texas Economy: Beyond the Boom and Bust," Federal Reserve Bank of Dallas *Southwest Economy*, January/February 1992 and Federal Reserve Bank of Dallas, "The Service Sector: Give It Some Respect," *Annual Report*, 1994.
- 2 See D'Ann M. Petersen and Michelle Thomas, "From Crude Oil to Computer Chips: How Technology Is Changing the Texas Economy," Federal Reserve Bank of Dallas *Southwest Economy*, Issue 6, 1995.
- 3 See *Forces of Change*, "Industry: High Tech and Defense," Texas Comptroller of Public Accounts, Austin, 1994.

- 4 High-tech does not include most defense- and oil and gas-related industries. For a definition of high-tech industries, see Petersen and Thomas.
- 5 Mine K. Yücel and Stephen P. A. Brown, "The Energy Industry: Past, Present and Future," Federal Reserve Bank of Dallas *Southwest Economy*, Issue 4, 1995.
- 6 Stephen P. A. Brown and Mine K. Yücel, "Energy Prices and State Economic Performance," Federal Reserve Bank of Dallas *Economic Review*, Second Quarter 1995.
- 7 Thanks to Bill Gilmer for his assistance with this section.
- 8 With the exception of the United States.
- 9 According to *Engineering News Record*.
- 10 Thanks to Kelly Klemme and Ken Robinson for their assistance with information about Texas banking.
- 11 Data Resources is now DRI/McGraw Hill.
- 12 P. R. Hughes, "Texas' Future," *Dallas Morning News*, December 21, 1982.
- 13 See Yücel and Brown.
- 14 See Jeffery W. Gunther, "Texas Banking Conditions: Managerial Versus Economic Factors," Federal Reserve Bank of Dallas *Financial Industry Studies*, October 1989.
- 15 See Robert Moore, "Financial Shakeouts' Slow Erosion of Small Bank Market Share," Federal Reserve Bank of Dallas *Financial Industry Issues*, Second Quarter 1995.
- 16 See Kenneth J. Robinson, "The Performance of Eleventh District Financial Institutions In the 1980s: A Broader Perspective," Federal Reserve Bank of Dallas *Financial Industry Studies*, May 1990.
- 17 See D'Ann M. Petersen, Keith R. Phillips and Mine K. Yücel, "The Texas Construction Sector: The Tail that Wagged the Dog," Federal Reserve Bank of Dallas *Economic Review*, Second Quarter 1994.
- 18 Fiona D. Sigalla, "Another Strong Year in the Eleventh District," Federal Reserve Bank of Dallas *Economic Review*, First Quarter 1995.
- 19 Although current oil prices are near \$20 per barrel, real (inflation-adjusted) oil prices are at pre-OPEC-restricted levels of 1973.