

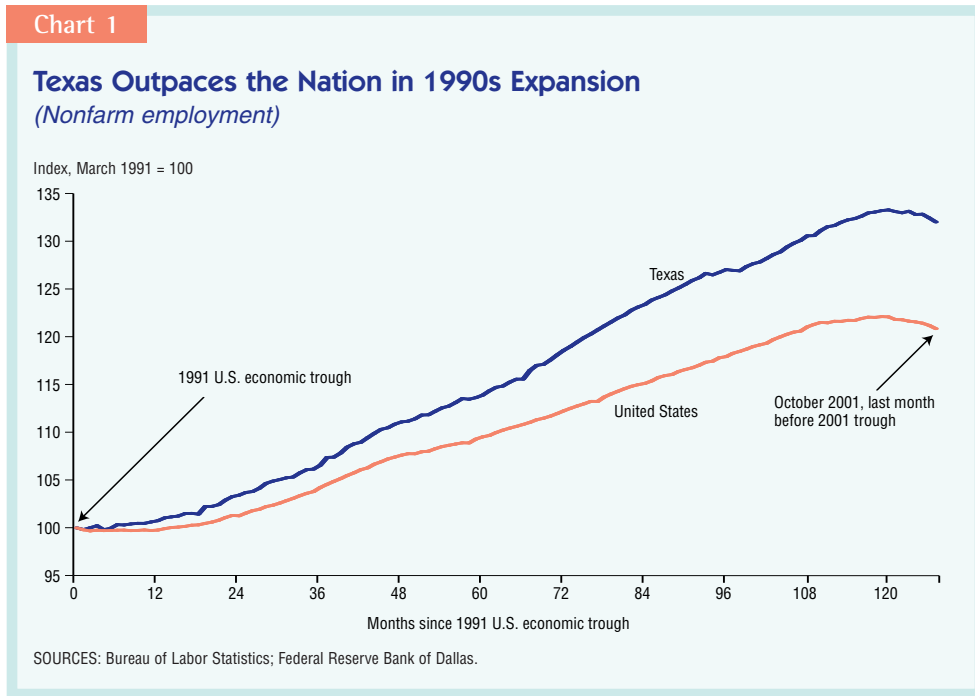
# Texas Finding Growth in Seeming Disadvantage

Oil booms in the 1970s and early '80s. A high-tech explosion in the 1990s. For more than three decades, Texas led the nation in employment growth by over 1 percentage point annually. The United States faced six recessions over this period, while Texas saw only three.

In the post-1991 recovery and expansion, Texas consistently outperformed the nation, posting a 2.7 percent annualized employment gain to the country's 1.8 percent (*Chart 1*). Overall, Texas employment grew a whopping 32 percent against the nation's 21 percent over the 127-month expansion that ran from March 1991 to November 2001. So in an economic contest with the nation, the maverick state dominated by multiple measures. Game, set, match: Texas?

Not quite. Economic progress ground to a halt with the 2001 recession, when both the Texas and U.S. economies lost thousands of jobs. But while the country hit bottom within eight months, the Texas recession dragged on until August 2003.

It seemed as though the rapid growth of the 1990s had set up the weakness that followed in the new



decade. The cornerstone of the recession was the dot-com bust, wherein overinvestment in and overexpectations from the nascent high-tech industry led to its downfall. Texas had seen some of the most rapid growth in high tech and then saw a steep plunge.

After the November 2001 U.S. economic trough, both the Texas and U.S. economies were lackluster in generating employment (*Chart 2*). But after keeping up with the nation on this front, Texas slipped behind.

So what is holding Texas back and preventing a '90s-style recovery today? Historically, Texas has found reliable drivers of economic growth to propel it above the national average. In the post-2001 recovery, however, some of these drivers seem to have been pulled over for speeding. A comparison of the propellers of economic growth enables a more thorough consideration of how the Texas economy performed during the 1990s expansion and the post-2001 recovery. Merely identifying the high-growth industries is not enough; it is important to understand how key industries combine as a central driving force

for the Texas economy and act as the economic base for its business cycles.

## The Economic Base

Economists take the perspective that a region cannot sustain strong growth by providing its own subsistence. Although a region may be able to survive as an entity solely on local production and consumption, strong growth is driven by outside income generated through the export of goods and services. The industries generating this export income form the region's economic base.

The Texas base consists of industries that meet two criteria: They produce tradable goods or services, and they command a higher share of Texas employment than their U.S. counterparts do of national employment.<sup>1</sup> For some sectors, such as manufacturing, tradability is fairly easily determined. For others, high geographic concentration (as measured by a Gini coefficient) indicates tradability. If it's also assumed that the productivity of Texas and U.S. workers is similar (and Texans and other Americans have similar tastes), a Texas industry producing tradables and with above-

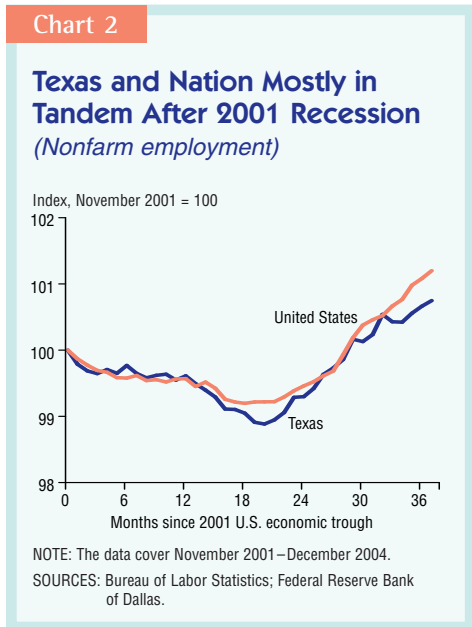
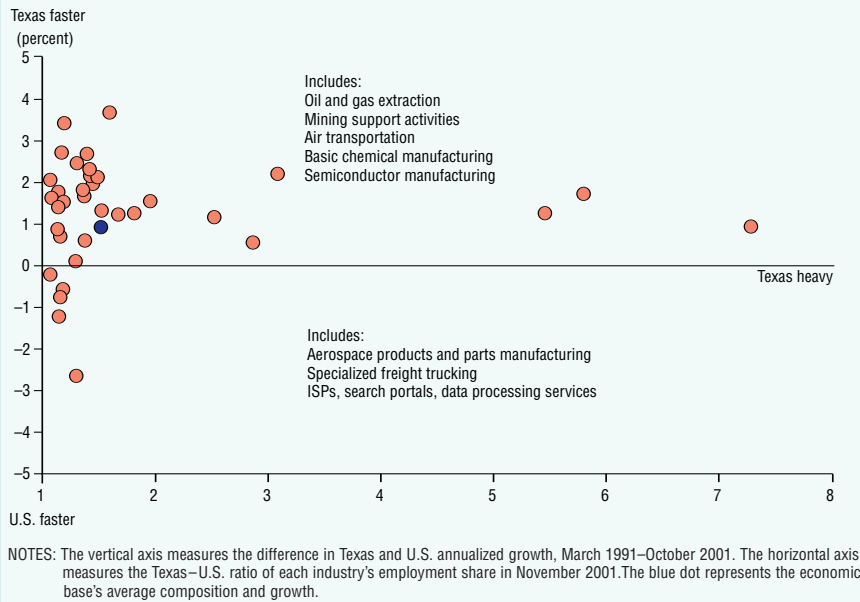


Chart 3

### Differences Between Texas and U.S. Job Growth Rates, 1990s Expansion

(Economic base industries)



SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors’ calculations.

average employment must be producing for export to other states.<sup>2</sup> Combined, these two criteria yield the 35 industries that make up the Texas economic base. (See Table 1 on page 13.)

On average, the industries in the Texas base have a 45 percent higher concentration of workers in the state than in the nation. The Texas base accounts for about 18 percent of private employment, or nearly 15 percent of the state’s total nonfarm employment. These industries account for about 12 percent of national private employment, or only 10 percent of total U.S. nonfarm employment.

### The 1990s Expansion

As Chart 3 shows, all but a handful of Texas base industries grew faster than their U.S. counterparts during the 1990s expansion. On average, the Texas industries grew faster by more than 1 percentage point a year—a 90 percent faster growth rate. The base set the pace and pulled Texas private-sector employment to a growth rate more than 45 percent stronger than the nation’s.

Nonetheless, the composition of the Texas base was not particularly favorable in the 1990s. At the national level, indus-

tries in the base fared worse than total U.S. tradables (Chart 4). Had Texas base industries grown at national rates, their combined growth would have fallen from an annualized rate of 2.1 percent to 0.6 percent. In contrast, their national counterparts grew at a 1.1 percent annual rate.

The state’s strong growth was the result of Texas industries outperforming their national counterparts. Texas base industries grew so fast in the 1990s that they more than made up for the state’s compositional handicaps relative to the United States. Even with those disadvantages, Texas base industries gradually edged the growth rates of U.S. tradables and propelled the state to a strong performance.

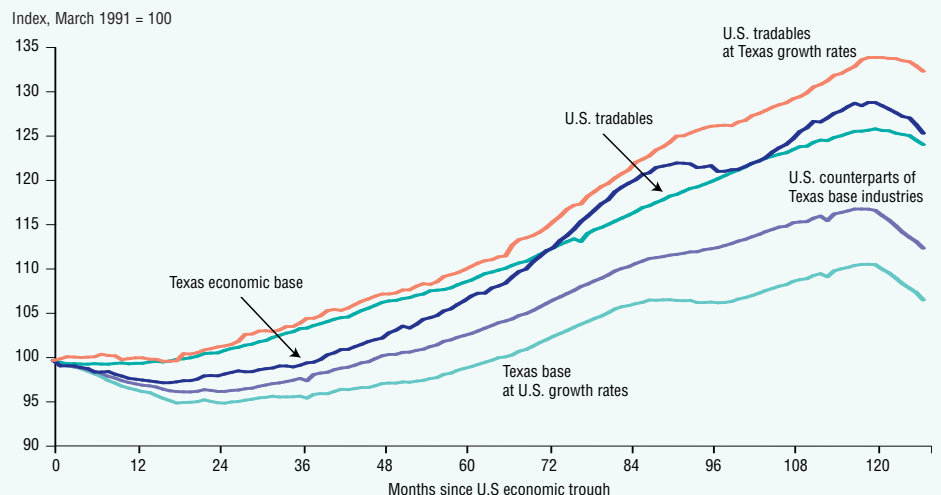
### The Post-2001 Recovery

After the 2001 recession, the picture was very different. Chart 5 shows a near-even split between industries in the Texas economic base growing faster in the state and those growing faster in the nation from November 2001 to December 2004. Taking into account the size and growth rates of the individual industries, however, employment in the Texas economic base fell by about 15 percent more than for its U.S. counterpart.

Once again, its economic base had put the state at a disadvantage. The national counterparts of Texas base industries did not generate employment as rapidly as total U.S. tradables (Chart 6). Moreover, had the industries in the Texas base grown at national rates, average annual growth would have been –1.9 percent, somewhat better than the actual Texas rate of –2.1 percent but only slightly worse than the –1.8 percent national average for these industries.

Chart 4

### The Texas–U.S. Gap, 1990s Expansion

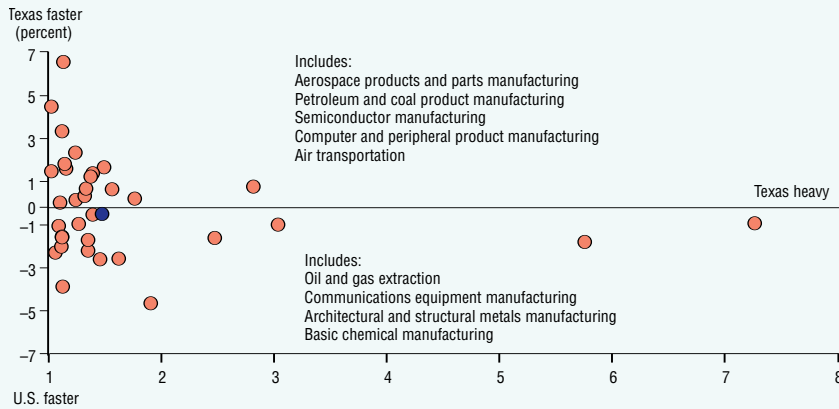


SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors’ calculations.

Chart 5

### Differences Between Texas and U.S. Job Growth Rates, Current Recovery

(Economic base industries)



NOTES: The vertical axis measures the difference in Texas and U.S. annualized growth, November 2001–December 2004. The horizontal axis measures the Texas–U.S. ratio of each industry's employment share in November 2001. The blue dot represents the economic base's average composition and growth.

SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors' calculations.

With the economic base performing poorly, what has kept Texas from slipping further behind is stronger growth in the industries that produce tradables but are not part of the base. The tradable industries that are performing badly nationally are doing worse in Texas, but those doing well nationally are doing better in Texas. In magnifying these national trends, Texas is adapting to changing market conditions. Such adjustments take time, but adaptability is important for long-term economic resilience.

### Advantage Texas

The Texas economy grew at lightning speed in the 1990s, but such a pace is often not sustainable for that long.<sup>3</sup> Although Texas may not resume that kind of pace in the near future, for now it seems set for growth rates similar to the nation's. The 1990s, however, provide evidence that Texas can generate superlative economic growth from a seeming disadvantage.

During the current recovery, the composition of its economic base has accounted for most of the state's weak performance. Texas has a large share of slow-growing industries in its economic base. In addition, most of those industries are not performing as well in Texas as they are in the nation. Like in the early

1990s, however, Texas is generating good growth from a weak mix of industries. Texas industries that produce tradables but are not in the economic base are outperforming their national counterparts. What is growing is coming to Texas.

To its advantage, Texas has a mix of amenities, property values and wages that attracts workers.<sup>4</sup> While the education system is a potential drag on the

economy, plentiful real estate, a large labor pool and generally business-friendly policies can accommodate a transition to a more vital economic base or another great driver of economic growth.<sup>5</sup> The Lone Star State seems to have all the elements needed for an economic resurgence.

—Raghav Virmani  
Stephen P. A. Brown

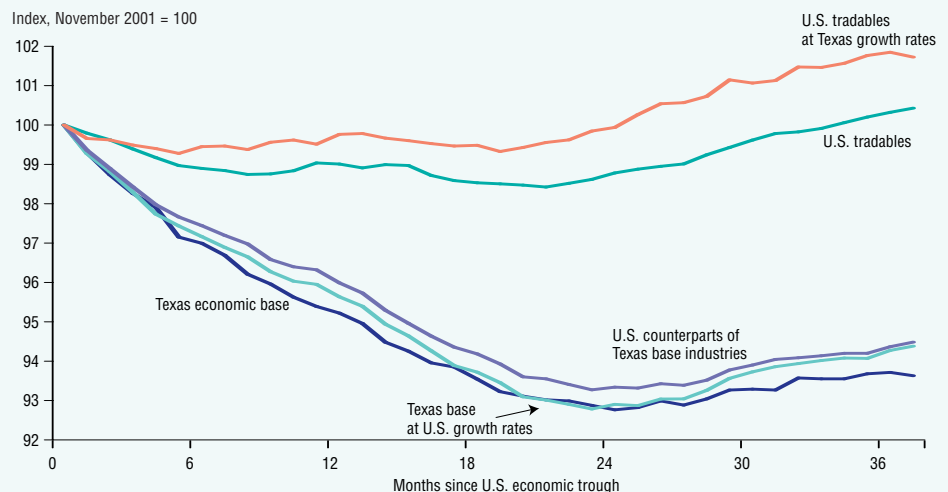
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### Notes

- <sup>1</sup> In this analysis, the U.S. economic trough of November 2001 is used as a fulcrum on which hinge two periods of growth: March 1991 (trough)—October 2001 (the last month before the next trough) and November 2001–December 2004 (the cutoff for data). Throughout this analysis, the Texas economic base is essentially chained to its November 2001 composition.
- <sup>2</sup> Because this regional methodology ignores exports outside the United States, it actually underestimates the economic base.
- <sup>3</sup> For a more detailed account of the reasons for the state's sluggish growth after the 2001 recession, see "A Texas Revival," by Fiona Sigalla, Federal Reserve Bank of Dallas *Southwest Economy*, July/August 2004.
- <sup>4</sup> See "What Wages and Property Values Say About Texas Cities," by Stephen P. A. Brown and Lori L. Taylor, Federal Reserve Bank of Dallas *Southwest Economy*, March/April 2003.
- <sup>5</sup> For more on education and the Texas economy, see "Don't Mess with Texas," by Fiona Sigalla, Federal Reserve Bank of Dallas *Southwest Economy*, January/February 2005.

Chart 6

### The Texas–U.S. Gap, November 2001–December 2004



SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors' calculations.

Table 1

## Components of the Texas Economic Base

Industry	November 2001 Employment Shares (percent)		Annualized Growth Rates (percent)			
	Texas	U.S.	1990s Expansion		Current Recovery	
			Texas	U.S.	Texas	U.S.
Oil and gas extraction	.68	.09	7.85	8.98	-.66	.03
Support activities for mining	.82	.14	4.16	.61	.05	2.09
Pipeline transportation	.19	.03	3.20	1.55	-12.48	-5.25
Basic chemical mfg.	.41	.13	6.92	4.95	-5.27	-4.47
Petroleum and coal products mfg.	.26	.09	6.64	5.81	-.94	-1.89
Agriculture, construction and mining machinery mfg.	.39	.16	1.66	2.21	-3.06	-1.60
Communications equipment mfg.	.31	.16	3.87	1.98	-15.20	-10.04
Air transportation	.76	.44	2.44	1.05	-3.03	-3.42
Architectural and structural metals mfg.	.50	.31	1.86	.91	-3.48	-1.11
Semiconductor and other electronic component mfg.	.69	.45	2.38	.32	-7.40	-8.28
Wholesale chemical and allied products	.15	.10	2.94	1.28	1.35	-.53
Cement and concrete product mfg.	.25	.18	3.59	1.03	-1.65	.74
Wholesale machinery, equipment and supplies	.73	.53	3.44	1.20	-1.82	-1.52
Wholesale professional and commercial equipment and supplies	.71	.52	5.35	2.54	0	-1.62
Computer and peripheral equipment mfg.	.28	.20	2.99	1.25	-5.98	-7.41
Telecommunications	1.29	.97	-4.66	-4.20	-8.50	-6.54
Synthetic rubber/fibers and filaments mfg.	.12	.09	4.39	.61	-5.06	-3.57
Funds, trusts and other financial vehicles	.09	.07	1.40	-.26	-.78	-1.67
Nondepository credit intermediation	.67	.51	-.11	-2.54	5.81	5.24
Wholesale electrical and electronic goods	.37	.30	1.24	1.02	-4.91	-4.17
ISPs, search portals and data processing services	.44	.36	.85	-.44	-5.29	-5.63
HVAC and commercial refrigeration equipment mfg.	.16	.13	3.10	1.76	-1.52	-4.08
Other wholesale durable goods	.43	.39	.46	-1.69	1.33	-.43
Wholesale hardware, plumbing and heating equipment	.20	.18	4.67	2.41	1.65	-.27
Aerospace product and parts mfg.	.43	.39	-1.49	-2.20	3.39	-3.38
Wholesale lumber and other construction materials	.19	.17	-.57	-2.87	1.80	3.30
Cable and other subscription programming	.08	.07	1.61	1.73	.42	-3.14
Specialized freight trucking	.33	.30	5.95	4.18	-.74	1.01
Software publishing	.22	.20	3.72	6.29	-6.07	-2.40
Wholesale grocery and related products	.56	.52	5.34	2.56	-.99	.21
Agencies, brokerages and other insurance-related activities	.66	.62	-1.29	-2.66	2.47	2.20
General freight trucking	.79	.74	2.55	1.22	-1.09	-.26
Wholesale motor vehicles, parts and supplies	.27	.26	-1.48	-2.17	-2.57	-.49
Animal slaughtering and processing	.40	.40	1.32	-.49	.68	-.99
Alumina and aluminum production and processing	.07	.07	-2.99	-4.04	-1.06	-5.71
<b>Total Texas economic base</b>	<b>14.90</b>	<b>10.28</b>	<b>2.13</b>	<b>1.11</b>	<b>-2.11</b>	<b>-1.82</b>
<b>Total private employment</b>	<b>83.01</b>	<b>83.70</b>	<b>2.76</b>	<b>1.90</b>	<b>.04</b>	<b>.35</b>
<b>Total nonfarm employment</b>	<b>—</b>	<b>—</b>	<b>2.66</b>	<b>1.81</b>	<b>.24</b>	<b>.39</b>

NOTES: The 1990s expansion covers March 1991–October 2001. Data for the current recovery are for November 2001–December 2004. *Other wholesale durable goods* includes furniture, furnishings, metals, minerals and miscellaneous durable goods.

SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas; authors' calculations.