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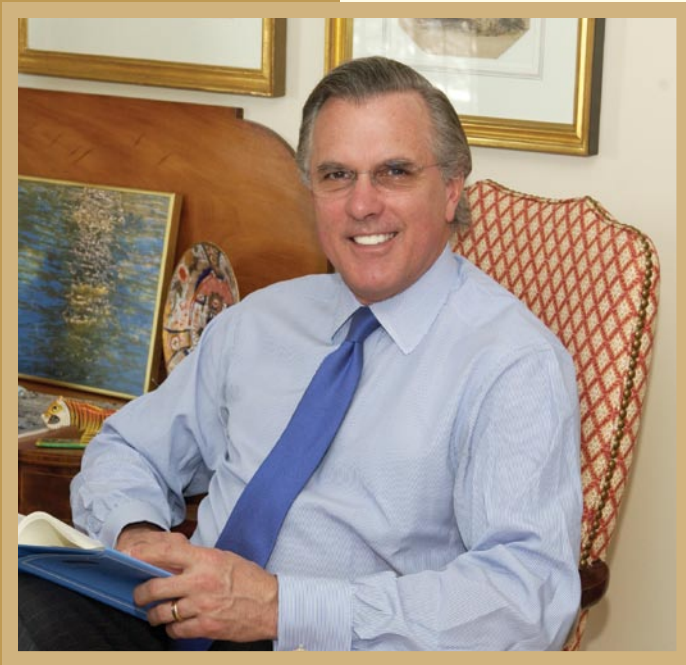
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President's Perspective



What happens around the world today affects us in the Southwest, just as what happens here influences economic activity around the world.

Until the Industrial Revolution, economies were largely confined to cities and towns. Then came factories, railroads, telephones, cars, airplanes, highways, televisions, computers and the Internet. Each of these innovations triggered fundamental changes in economic behavior and allowed markets to expand, first beyond towns, then beyond states, regions, countries and continents.

Each outward ripple offered consumers more choices and presented more challenges for companies, workers and governments to adapt to new technologies, new competition and deepening economic integration.

Sir Anthony Eden, the British prime minister, once said, "Every succeeding scientific discovery makes greater nonsense of old-time conceptions of sovereignty." He spoke those words in 1945, but they ring even truer today. So intertwined are the world's economies that

disentangling the web that ties the world together would be disastrously expensive, counterproductive and entirely fruitless.

What happens around the world today affects us in the Southwest, just as what happens here influences economic activity around the world. A fierce hurricane in the Gulf of Mexico causes destruction and dislocations that ripple across the globe as oil and gas activity shuts down and world energy prices rise. A U.S. company moves its factory to Mexico, laying off local workers, but other Americans benefit as newly hired Mexican workers earn more money and buy U.S. goods at their local Wal-Mart.

As an avowed free-trader, I am alarmed by calls for punitive tariffs and trade barriers, efforts to block foreign investment and pleas for "economic patriotism."

Protectionism is not a path to prosperity. It is a one-way road to economic catastrophe. Economists and wise leaders have long made the more compelling argument in favor of free trade. Yes, foreign competition harms some industries and workers, but protectionism poisons the overall economy, resulting in higher prices and diminished access to goods for all of us. And yes, some U.S. workers have been hurt, but our dynamic economy has shown an amazing capacity for creating more and better jobs.

Protectionism will not produce better American jobs and higher incomes. Rather than shielding workers from foreign competition, our focus should be on preparing them to face it head-on with top-notch education and transition mechanisms that prepare them for better, higher-paying jobs. We will be far better off if we embrace competition and exploit it to make our economy even stronger.

Richard W. Fisher
President and CEO
Federal Reserve Bank of Dallas



Industry Clusters Shape Texas Economy

By Laila Assanie and Mine Yücel

Firms benefit from being close to others in the same or related industries because of access to specialized labor, vital resources and intermediate input suppliers.

Texas' economy flourished in the 1990s, took a hard hit in the 2001 recession and bounced back beginning in mid-2003. The state's four major metros and its border cities also went through the expansion and contraction, albeit at different paces.

Many characteristics contribute to an area's economic performance in the long run, including amenities, natural resources, labor force characteristics and industrial mix. Another important factor is industry agglomeration, or clusters. They're geographically concentrated groups of companies related by the technologies they use, the markets they serve, the goods and services they produce and the labor skills they require.

Firms benefit from being close to others in the same or related industries because of access to specialized labor, vital resources and intermediate input suppliers. These positive spillovers lower costs and raise productivity. Hence, firms are more likely to locate in cities that already have high concentrations of employment in their industries.

Texas has several clusters. An abundance of oil and gas has traditionally made energy the state's major industry cluster. Since World War II, Texas has also evolved into a major high-tech center, surpassing the nation in share of high-tech manufacturing output and employment. The energy and high-tech clusters continue to dominate, but Texas' central location and proximity to Mexico have also boosted the concentration of the transportation industry.

Industry clusters provide a key to understanding Texas metros' varying fortunes. These clusters have significant effects on average earnings and earnings growth. Clustered industries generally have higher wages than ones that aren't as geographically concentrated. Clusters don't necessarily have faster job growth.

Texas Clusters

Just about every area has an economic base of several dominant industries that ex-

ceed the nation in employment, output or earnings. In cluster analysis, these concentrations are called local export industries.

In a 2000 article, Robert W. Gilmer and Thomas Wang explain why: "The term local export encompasses any export that leaves the local area, whether it's going to a neighboring state or halfway around the world. Exports are critical because they pay for imports from other cities—such as financial services from New York or cars from Detroit—and they support such local activities as dry cleaners and grocery stores."¹

Economic-base analysis provides a way to identify industry clusters. We use employment to measure Texas' industry shares and compare them with the nation's. The data come from the Census Bureau's *County Business Patterns* report, which compiles annual statistics at the national, state and county levels.

The data set covers employment and earnings for a large part of the private sector but excludes the self-employed and workers in farming, railroad and household jobs. We're limited to 1998 through 2005, the time span with detailed industry-level data by North American Industry Classification System code.²

To determine local-export goods and services for Texas and its metros, we calculate location quotients, a commonly used tool for analyzing a region's economic base. Location quotients compare an area's economy with a larger, more diversified one—for example, Dallas with the U.S.—to identify areas of specialization. We compute the quotients as follows:

$$LQ_i = \frac{\text{local employment in industry } i / \text{U.S. employment in industry } i}{\text{total local employment} / \text{total U.S. employment}}$$

Location quotients above 1 indicate industries with concentrations above the national average. These industries are part

Energy-related activities account for four of the state's top five industry clusters. The oil and gas industry is nearly six times more concentrated in Texas than the U.S., and petrochemical production is nearly three times more concentrated.

of the area's economic base and deemed local exports. The higher the location quotient, the higher the industry's concentration. We refer to nonexport goods and services as local—that is, purchased or consumed by people living within the area.

What are Texas' industry clusters? Energy-related activities account for four of the state's top five clusters (Table 1). The oil and gas industry (extraction and support activities for mining) is nearly six times more concentrated in Texas than the U.S., and petrochemical production is nearly three times more concentrated. These industries' shares haven't changed from 1998 to 2005, while the pipeline industry increased its location quotient by a third—from 3.1 to 4.3.

Texas has also become a high-tech center. The industry took off in Texas after World War II as Dallas-based Texas Instruments and other military-electronics manufacturers branched into civil electronics.

Houston became the base of firms specializing in geophysical instrumentation and automation systems, drawing upon the expertise of the oil industry. Dallas continued to prosper in defense-related telecommunications, electronic hardware and transmission systems, but it developed a more diversified electronics base. In Austin, the University of Texas was the catalyst for the high-tech sector, providing know-how and skilled engineers and landing government contracts.

The high-tech industry drove the state's strong growth rates in the 1990s. Although high-tech manufacturing employment fell between 1998 and 2005, the state's share grew, implying that the sector's job losses were greater in the nation than in Texas.

In 2005, local export industries made up nearly 21 percent of Texas employment (Table 2). More than three-fourths of that total is in services. The metros vary in their local-export industry concentration, ranging from a high of almost 40 percent in McAllen to lows of 26 percent in Houston and San Antonio. Houston and El Paso have the high-

Table 2
Share of Total Employment, 2005
(Percent)

Area	Local export industry		Local industry	
	Goods	Services	Goods	Services
Major Metros				
Austin	5.3	23.2	10.0	60.8
Dallas–Fort Worth	5.4	24.9	12.0	57.7
Houston	6.8	19.5	12.4	61.3
San Antonio	1.6	24.5	11.5	62.2
Border Metros				
Brownsville	2.2	32.6	8.9	55.5
El Paso	6.0	32.5	8.4	52.8
Laredo	.7	37.0	6.0	55.7
McAllen	1.9	37.9	9.0	51.1
Texas	4.1	16.7	13.8	64.2

NOTE: Percentages do not add up to 100 because some workers in the data set are not categorized in an industry.

SOURCES: Census Bureau, *County Business Patterns* data; authors' calculations.

est employment share of goods industries that are local exports, while the border cities have the greatest concentration of service exports.

Metro Clusters

The major and border metropolitan areas account for more than three-fourths of Texas' total employment. Their economies aren't carbon copies of the state's, however. Each metro has a distinct set of industries, diversifying and strengthening Texas' economy.

Austin. The state capital bounced back from the technology bust, and its top local-export industry—computer and electronics manufacturing—maintained an employment concentration four times greater than the nation's (Table 3).

Other major clusters—publishing, and information and data processing services—reflect the area's strengths in government and education. Most of Austin's location quotients changed little from 1998 to 2005, but information and data processing services rose by almost two-thirds, reflecting the increased clustering of high-tech services firms in the metro area compared with the nation.

Dallas–Fort Worth. Activity in the Barnett Shale has recently made oil and gas exploration Dallas–Fort Worth's top local export industry (see "Noteworthy" on page 14). The industry had three times the U.S. employment share in 2005. Air transportation, information and data processing services, and computer and electronic product

Table 1
Texas' Top Industry Clusters, 2005

Rank	Industry	Location quotient
1	Oil and gas extraction	5.90
2	Support activities for mining	5.60
3	Pipeline transportation	4.33
4	Funds, trusts and other financial vehicles	2.78
5	Petroleum and coal products manufacturing	2.78
6	Air transportation	1.67
7	Leather and allied product manufacturing	1.54
8	Support activities for transportation	1.51
9	Information and data processing services	1.42
10	Fishing, hunting and trapping	1.32
11	Computer and electronic product manufacturing	1.24
12	Wholesale trade, durable goods	1.21
13	Broadcasting and telecommunications	1.20
14	Management of companies and enterprises	1.18
15	Nonmetallic mineral product manufacturing	1.15

SOURCES: Census Bureau, *County Business Patterns* data; authors' calculations.

manufacturing are other industries with major clusters in the area.

Although the tech bust decimated the area's high-tech industries, the overall decline has been less than in the nation because Dallas-Fort Worth's share of computer and electronics manufacturing and information and data processing increased from 1998 to 2005.

Houston. The nation's energy capital has more than 10 times the U.S. concentration of pipeline transportation and nearly nine times the U.S. share in oil and gas exploration. Petroleum and coal products manufacturing and mining support activities are also important local export industries. Its energy concentration helped Houston weather the 2001 recession better than other major Texas metros.

Other key Houston clusters are air and water transportation. The Port of Houston ranks first in the nation in foreign water-

borne tonnage and second in total tonnage. When such assets as Continental Airlines' headquarters are added, Houston's water and air transportation shares rise to more than three times the national average.

San Antonio. The Alamo City's clusters include such white-collar industries as information and data processing services, management of companies and enterprises, and insurance carriers, all with at least 1.7 times the nation's employment concentration. In recent years, the health care industry has been growing rapidly, reaching 1.5 times the nation's share.

Although ambulatory health care wouldn't usually be included as a local export sector, San Antonio has emerged as a regional health care center for Southwest Texas and serves a large number of patients from Mexico and Latin America. In fact, the city has broadened its package deals for out-of-town visitors to include health care as well as shopping. The relatively noncyclical health care and insurance clusters helped San Antonio fare better than most other Texas metros during the 2001 downturn.

The city's high location quotient for leather products reflects the industry's collapse in the U.S. more than its expansion locally. San Antonio saw its employment share in leather manufacturing increase from five times the nation's in 1998 to eight times the nation's in 2005. However, the city's employment in leather products in 2005 was 20 percent less than in 1998. The leather industry has been moving out of San Antonio and into the border cities and Mexico.

Border metros. Strong cultural and economic ties to Mexico shape the industry composition of Brownsville, McAllen, Laredo and El Paso. Many Mexican citizens cross the Rio Grande to shop for clothing and other goods in the U.S., a fact that helps create clusters around retail trade in these cities (*Table 4*).

Shopping isn't usually classified as an export industry, but a Dallas Fed study estimates that Mexican customers' share of retail trade is 51 percent in Laredo, 36 percent in McAllen and 26

Strong cultural and economic ties to Mexico shape the industry composition of Brownsville, McAllen, Laredo and El Paso. Many Mexican citizens cross the Rio Grande to shop for clothing and other goods in the U.S.

Table 3
Major Metros' Top Industry Clusters, 2005

Rank	Industry	Location quotient
Austin		
1	Computer and electronic product manufacturing	4.09
2	Publishing industries	2.01
3	Information and data processing services	1.78
4	Wholesale trade, durable goods	1.63
5	Lessors of nonfinancial intangible assets (except copyrighted works)	1.57
Dallas-Fort Worth		
1	Oil and gas extraction	3.05
2	Air transportation	2.78
3	Information and data processing services	2.45
4	Computer and electronic product manufacturing	2.11
5	Funds, trusts and other financial vehicles	1.82
Houston		
1	Pipeline transportation	10.22
2	Oil and gas extraction	8.44
3	Funds, trusts and other financial vehicles	8.29
4	Petroleum and coal products manufacturing	5.08
5	Support activities for mining	5.07
San Antonio		
1	Leather and allied product manufacturing	7.86
2	Information and data processing services	2.20
3	Management of companies and enterprises	1.79
4	Insurance carriers and related activities	1.65
5	Pipeline transportation	1.53

SOURCES: Census Bureau, *County Business Patterns* data; authors' calculations.

*Earnings per worker in
Texas' local export
industries grew 10.3
percent versus
2.8 percent for
local industries.*

percent in Brownsville.³ Cross-border trade also clusters the transportation services and trucking industries along the border. Laredo has a particularly strong presence in transportation services, with 21 times the industry's national employment share.

Although the border metros have moved away from their historical dependence on manufacturing to diversified service economies, they still have higher shares in some manufacturing industries. El Paso has more than nine times the nation's share in leather products manufacturing, and McAllen holds a 3-to-1 edge over the U.S. in the industry.

Like San Antonio, the border metros have a growing specialization in health care. The industry's employment share increased significantly from 1998 to 2005, rising to four times the national share in Brownsville and more than twice the national share in Laredo and McAllen. Shrimping is also important in Brownsville, which has nine times the nation's concentration in the fishing and hunting industry.

Identifying the key local export industries has given us a glimpse of the economic base in each Texas metro. We now look at how the differences play out in terms of economic performance.

Clusters and Growth

Earnings differ across industries for many reasons, including productivity, competition, unionization and labor supply. Industry clusters are also a factor in higher earnings because they help companies achieve higher productivity from knowledge spillovers and lower costs.⁴

From 1998 to 2005, real earnings per worker grew 4.9 percent in Texas, but the performance of major and border metros varied considerably. Houston posted the largest gains, followed by San Antonio and Dallas-Fort Worth. With the exception of McAllen's modest increase, the border cities lost ground in real earnings, led by Laredo's 8 percent decline.

The picture changes when we focus on local export industries. In all metros, 2005 average real earnings per worker were higher in these sectors than in those catering to local customers (Table 5). The

earnings differentials between local export and local industries are quite large in some metros—\$35,000 in Houston, \$28,000 in Austin and \$27,500 in Dallas-Fort Worth. The difference is less striking in the border metros.

Just as important, earnings growth in local export industries was nearly three times as high as in the rest of the economy. From 1998 to 2005, earnings per worker in Texas' local export industries grew 10.3 percent versus 2.8 percent for local industries. Similarly, average local-export earnings rose 16 percent in Houston and over 6 percent in Austin and Dallas-Fort Worth (Chart 1).

The tech bust stunted growth in the high-tech industry between 1998 and 2005, but Austin and Dallas-Fort Worth continued to see bigger paychecks in computer manufacturing, information and data processing, and broadcasting and telecommunications. Moreover, the pace of earnings growth in these industries was much higher than in the nation.

The energy industry had considerable earnings gains in Houston and Dallas-Fort Worth. Air and water transportation were among the few local export industries with declines in real earnings per worker. The decline in air transport earnings probably reflects the industry's troubles after the September 11, 2001, terrorist attacks.

Along the border, overall real earnings per worker declined about 3.8 percent

Table 4
Border's Top Industry Clusters, 2005

Rank	Industry	Location quotient
Brownsville		
1	Fishing, hunting and trapping	8.99
2	Ambulatory health care services	3.96
3	Support activities for transportation	2.72
4	Clothing and clothing accessories stores	1.51
5	Museums, historical sites and similar institutions	1.39
El Paso		
1	Leather and allied product manufacturing	9.59
2	Apparel manufacturing	4.44
3	Truck transportation	2.18
4	Petroleum and coal products manufacturing	2.17
5	Support activities for transportation	2.03
Laredo		
1	Support activities for transportation	20.93
2	Truck transportation	5.59
3	Oil and gas extraction	3.80
4	Leather and allied product manufacturing	2.73
5	Clothing and clothing accessories stores	2.54
McAllen		
1	Leather and allied product manufacturing	3.41
2	Support activities for mining	3.35
3	Ambulatory health care services	3.23
4	Clothing and clothing accessories stores	1.70
5	General merchandise stores	1.66

SOURCES: Census Bureau, *County Business Patterns* data; authors' calculations.

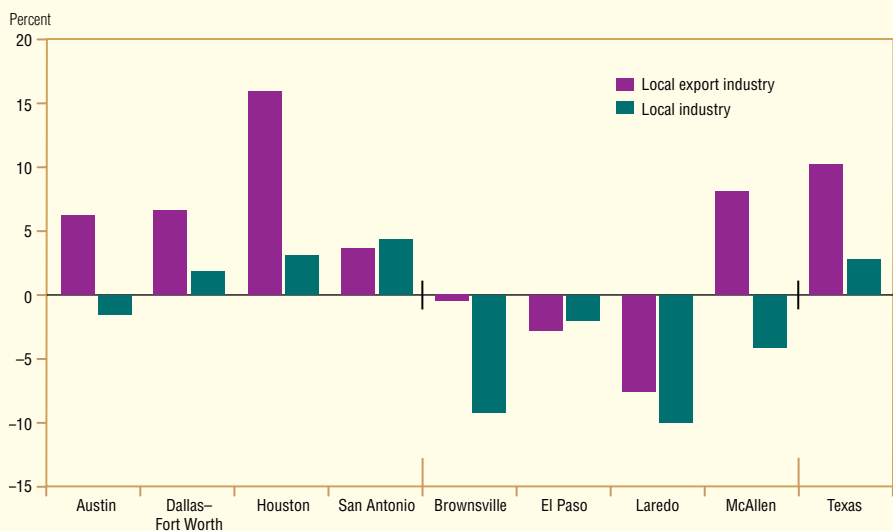
Table 5
**Earnings Are Higher
in Local Export Industries**

Area	2005 earnings*	
	Local export	Local
Major Metros		
Austin	\$56,713	\$28,593
Dallas-Fort Worth	\$55,773	\$28,200
Houston	\$65,292	\$30,191
San Antonio	\$37,031	\$25,397
Border Metros		
Brownsville	\$20,755	\$17,305
El Paso	\$27,097	\$19,462
Laredo	\$20,774	\$17,689
McAllen	\$21,975	\$18,334
Texas	\$48,742	\$29,463

*Average, per worker, in 2000 dollars.

SOURCES: Census Bureau, *County Business Patterns* data; authors' calculations.

Chart 1
Local Export Industries' Wages Rise Faster, Fall Less (1998–2005)



SOURCES: Census Bureau, *County Business Patterns* data; authors' calculations.

Although industry clusters have a strong impact on earnings, the implications are less clear for employment growth.

from 1998 to 2005. Local export workers, however, saw much smaller declines. In Brownsville, earnings were basically flat in the local export sectors, compared with a 9 percent decline in the rest of the economy. Laredo showed a similar pattern, with real average earnings falling 10 percent in local industries, compared with a 7.7 percent decline in local export industries. In McAllen, earnings were down 4.2 percent in local sectors, while local export earnings were up 8 percent.

Only in El Paso did local export earnings per worker fall faster than in the rest of the economy. They declined 2.8 percent, compared with 2 percent for earnings in local industries. Huge job losses in manufacturing, a sector that usually paid above-average wages to border workers, contributed to the poor performance.

The migration of manufacturing out of border cities shifted their industrial composition. Manufacturing work has been replaced by lower-paying service jobs. Together with strong employment growth along the border, this change in industry mix has lowered average earnings per worker.

Sectors related to the cross-border trade saw earnings growth along the border. These included warehousing and storage, support activities for transportation and general merchandise stores. These industries also saw rapid employment growth.

Although clusters have a strong impact on earnings, the implications are less

clear for employment growth. In a given industry, higher productivity growth leads to higher earnings but less job growth over time. Along the border, the rationalization of the manufacturing sector and offshoring of some industries led to employment declines in these cities, even if the industry's share stayed higher than the national average. Such industries as leather and apparel manufacturing saw neither employment nor wage growth, largely because operations moved across the border and overseas.

The downsizing of the technology industry after the recession resulted in employment declines in computer and electronics manufacturing in all cities. Even so, the information and data processing services sector added jobs between 1998 and 2005. Similarly, while the Texas oil and gas extraction sector saw employment declines, the oil and gas services sector had gains in both Houston and Dallas–Fort Worth.

Industry clusters have played a prominent role in earnings growth in Texas. Data limitations have confined the analysis to a short period that covers a recession, but the differential between earnings for industry clusters and those for the rest of the economy is still evident. Even clusters that were hard hit by the 2001 recession and lost employment saw earnings growth. A longer time frame may provide a better picture of growth differentials between local industries and local export industries.

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Notes

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¹ "Diversification of Houston's Economic Base," by Robert W. Gilmer and Thomas Wang, Federal Reserve Bank of Dallas *Houston Business*, September 2000.

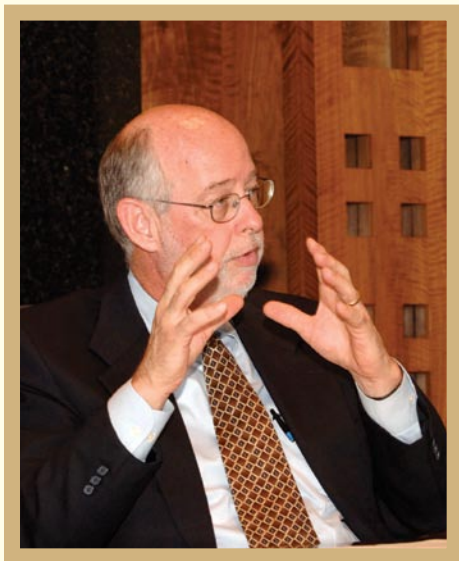
² We use 2000 census definitions to construct data for Texas metropolitan areas. The metropolitan employment and earnings per worker data are computed by summing up the county-level figures from the *County Business Patterns* data set. At this level, the data are suppressed for a particular company if disclosure would compromise that company's identity. When data are suppressed, a range is reported for employment, and we use the midpoint of the range in our analysis. For the wage data, however, no information is provided when data are suppressed and, hence, the average wage figures by three-digit NAICS industry may be underestimated for the metros. The 1997 three-digit NAICS codes were used to sort industries.

³ "Border Benefits from Mexican Shoppers," by Jesus Cañas, Roberto Coronado and Keith R. Phillips, Federal Reserve Bank of Dallas *Southwest Economy*, May/June 2006.

⁴ For information on regional growth across all U.S. metropolitan areas, see "The Economic Performance of Regions," by Michael E. Porter, *Regional Studies*, vol. 37, August/October 2003, pp. 549–78.

Taking Stock of the District Banking Industry

Dallas Fed Senior Vice President Bob Hankins, who oversees bank regulation in the Eleventh District, discusses the district's banks—from the risks posed by today's faltering housing markets to lessons from the turbulence of the 1980s.



Q: Nationally, a lot has been written about the housing downturn and financial market stresses. How have they affected Texas banks?

A: So far, Texas banks haven't been affected much by the housing slump. That's probably due to the fact that the state's real estate markets haven't seen the kinds of difficulties other regions have.

If you look at banking profiles, you'll see some clear differences between the Eleventh District and the rest of the country in terms of asset quality. As things stand, only about one-half of 1 percent of the mortgages held by district banks aren't being paid on schedule. That's a better track record than banks in the rest of the country, where a little over 1 percent of mortgages aren't current.

But I like to think that there's more to the strength of the district's banking sector than just the region's economy. Though the economy is responsible for much of the relative better performance, it also comes down to having enough bankers around who remember the hard times of the 1980s.

Q: What do you remember about the 1980s?

A: I've been in banking regulation for over 34 years, 28 of them here in Dallas. I like to say that I arrived on the scene in 1979 and had two good years before we saw the worst crisis in banking since the Great Depression.

Between 1982 and 1993, the district had more than 600 banks fail. In the peak years of 1988 and 1989, Texas banks alone accounted for about two-thirds of all failures in the country, and Texas banks recorded losses for four straight years, from 1986 through 1989. Only one of the top 10 banking organizations—Cullen/Frost—survived the crisis intact.

As bad as all that sounds, it helps to understand that the number of failures was inflated because Texas still barred branch banking at the time. So in a multibank holding company, one failure could take down all of the banks in the organization.

Q: What caused the crisis?

A: It was really a confluence of a number of things. It started with the bust in energy prices. The energy crisis was followed closely by the real estate crisis. At the time, it seemed the banks that weren't exposed to the energy sector were exposed to real estate. It didn't help that we saw the removal of some tax laws that had benefited the real estate market. The deregulation that took place in the savings and loan industry only served to exacerbate real estate investors' euphoria.

Q: Does anything about today's environment take you back to the 1980s?

A: What I talk about today and have been talking about for over five years now is banks' exposure to commercial real estate. I'm not making any judgments but simply

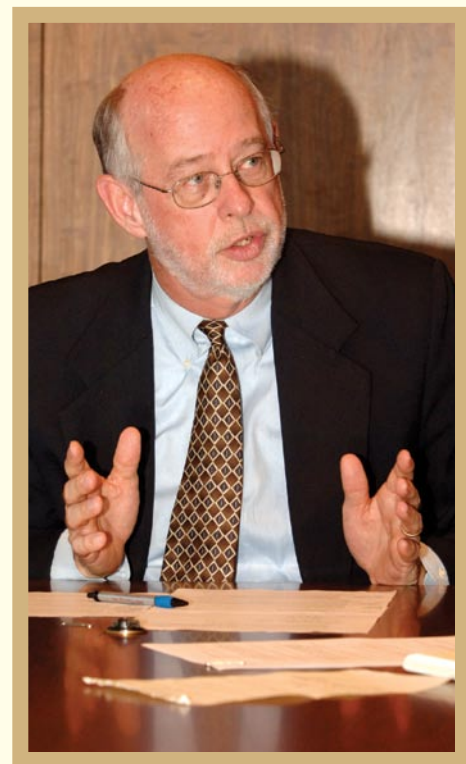
looking at the numbers. Right now, commercial real estate makes up some 28 percent of district banks' assets. That's significantly greater than the 16 percent we saw at the height of our real estate problems in 1987.

Although I recognize that banks have better risk management practices in place than they did in the 1980s, it doesn't stop me from worrying. If we have a major economic downturn, banks' exposure to commercial real estate could have a significant impact on the overall condition of the industry.

Q: How did the 1980s crisis change banking regulation?

A: At the state level, the crisis helped provide the impetus for changes in Texas' banking landscape. Because the industry was in such a weakened condition, we ended up letting out-of-state organizations acquire Texas banks. That started in 1988, when NCNB bought First Republic. Many others followed, leaving Texas without any big homegrown banks.

For the nation, the FDIC Improvement



“If you look at banking profiles, you’ll see some clear differences between the Eleventh District and the rest of the country in terms of asset quality.”



Act was passed in 1991, introducing a number of reforms that address such issues as the safety and soundness of the insurance funds, prompt regulatory action and the need to resolve failures in the most cost-efficient way.

Another important change came with the passage in 1994 of the Riegle-Neal Interstate Banking and Branching Efficiency Act. It’s a mouthful to say, but the law for the first time allowed banks to set up branches outside their home states—although Texas didn’t opt in to the law change until 1998.

Since then, the number of district banks has fallen from about 900 to about 650, but customers still have ample opportunity to receive banking services. The number of branches in the district has grown from 3,500 to more than 6,000.

By the way, vestiges of the old system are still with us. Even today, institutions can’t come into Texas with de novo branches. They have to acquire an existing charter that’s at least five years old and convert it to a branch.

Q: Are there other ways to set up shop in Texas?

A: A bank can also relocate to Texas by establishing a new charter here. The most recent example of this is Comerica, which is merging its current Michigan charter into its new Texas charter.

Comerica—the nation’s 21st-largest bank, with assets of about \$60 billion—is by far the largest bank to relocate to the state, and its arrival sends a strong signal of the viability of the Texas banking market.

Q: What will your jurisdiction encompass after Comerica finalizes its move?

A: Today, the Dallas Fed directly supervises 38 state-chartered banks that have elected to be members of the Federal Reserve System. We refer to them as state member banks. As of the end of the second quarter, those 38 banks represented 6 percent of the 679 banks headquartered in the Eleventh District and 10 percent of the 387 state-chartered banks headquartered here.

Those 38 banks held \$19.2 billion in assets—10 percent of the district’s total banking assets of \$194.7 billion and 20 percent of its state-chartered banking assets of \$94.9 billion. We also supervise about 450 bank holding companies and 30 agencies and representative offices of foreign banks.

After the Comerica move, that \$19.2 billion figure will bump up to nearly \$80 billion. So you can see it’s quite important for the district.

Q: Are there other risks to the banking system outside of real estate?

A: Banks typically borrow or take in deposits at lower short-term rates and then lend out that money longer term at higher rates. The difference between those two rates is what they pocket and can affect their profitability.

The challenge for banks in recent years has been the narrowing gap between these two rates, putting pressure on their profit margins. The longer that environment has persisted, the more I worry about banks struggling to sustain their earnings. What I have been cautioning against is letting the

squeezed profit margins lead to too much cost cutting in such areas as internal controls, compliance, loan review and personnel.

On top of that, I worry that banks are having a hard time attracting the right talent to their management ranks. But, then, I am paid to worry.

Q: Does the recent rate cut by the Fed imply that banks are entering a better earnings environment?

A: In theory, declining interest rates should be beneficial to the banking industry. But in reality, it depends on an individual bank’s position. If a bank’s liabilities reprice faster than its assets, then that bank’s net interest margin will increase, and so should earnings. If, on the other hand, a bank’s assets reprice quicker than its liabilities, its profits might fall.

If the industry as a whole plays true to form—funding long-term assets, or loans, with short-term liabilities, or deposits—it’s probably better off today than it was before the Fed cut interest rates.



The federal statisticians who divided the nation into 179 regional economies put Las Cruces and surrounding Doña Ana County in El Paso's orbit.

This makes sense, of course, but New Mexico's second-largest city—population 82,671 in 2005—also has an economic life of its own. While El Paso relies heavily on industries with frequent ups and downs, Las Cruces has built a well-balanced, service-oriented economy based on education, defense, agriculture, tourism and construction.

This mix has kept the area's economy humming. Over the past 10 years, average annual nonagricultural job growth has been 3 percent, significantly better than El Paso's 1 percent, the nation's 1.2 percent and Albuquerque's 1.6 percent (see chart).

The Las Cruces economy has cooled somewhat, with job growth over the past 18 months the slowest in five years. Even so, the job market remains tight. The unemployment rate is just over 4 percent, not far above its recent low of 3.7 percent in December 2006.

Slower U.S. growth has sapped retail trade and other activities in Las Cruces. The area, like much of the country, faces declines in building and home sales in the aftermath of a housing boom.

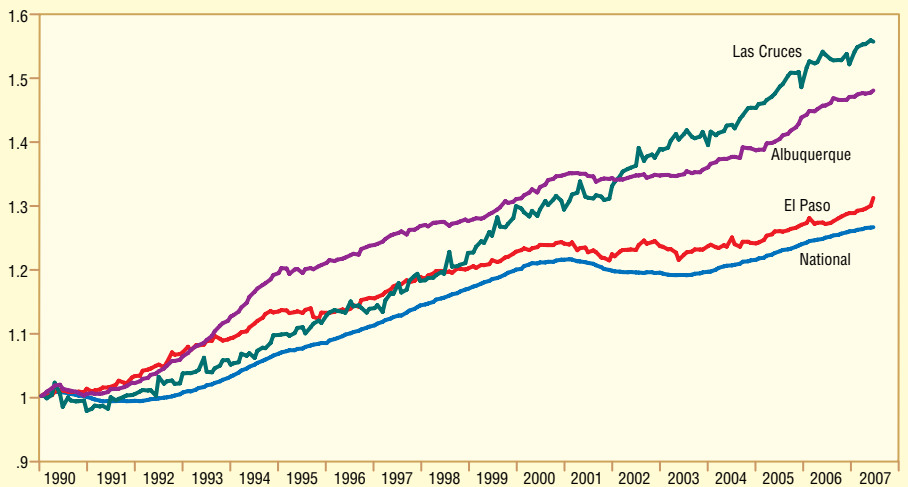
In recent years, many have come to Las Cruces after cashing out of much pricier housing markets, like California and

Florida. The result was a rapid increase in local housing construction, especially in homes relatively expensive for the area.

Las Cruces' single-family permits per 1,000 people jumped from four in 2001 to 12 in 2005, while Albuquerque peaked at nine and El Paso—overheated by Fort Bliss' expansion—never got past six. Doña Ana County's average permit value was five times its median income for several years.

Las Cruces' Steady Job Growth

Index: January 1990 = 1



NOTE: Data for the index are seasonally adjusted nonfarm employment.

SOURCE: Bureau of Labor Statistics.

With a housing slump gripping the nation, equity is no longer available to fuel relocations, finance luxury houses in cheaper markets or fund new businesses. Now, Las Cruces faces questions about the extent to which "froth" on the East and West coasts boosted local housing for several years. How much of a local slowdown may be ahead as the froth settles?

Diverse Economy

Many small metropolitan economies depend on one or two industries. Not so the Las Cruces area. It has done well largely because of a diverse economic base.

The 16,000-student New Mexico State University employs 1,400 faculty and staff. White Sands Missile Range and Holloman Air Force Base have survived the Pentagon's latest round of base closings.

At \$156 million a year, agricultural incomes have remained stable as farmers shifted from cotton and onions to grapes, chilies, pecans and pistachios.

Las Cruces means "the crosses" in Spanish, and the community has been a transportation hub since its days as a colonial settlement. Today, the city sits at the junc-

ture of Interstate Highway 25, which runs down the eastern side of the Rockies, and Interstate 10, the southern pass through the Rockies. The freeways bring traffic, tourism, shoppers and nearby residents seeking medical services.

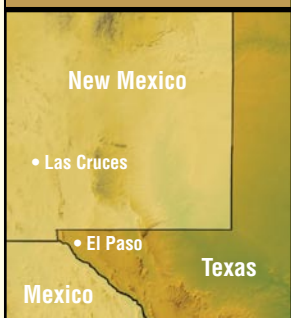
Compared with the typical U.S. city, Las Cruces has 70 percent more passenger transportation, 55 percent more gasoline stations, 56 percent more retail, 21 percent more restaurants, and 31 percent more health care and social assistance.

The Las Cruces area's highly diverse economy is poised to revive quickly once the U.S. and El Paso do better. It should continue to attract retirees and other new residents—from both near and far.

The El Paso area's New Mexico side has been growing rapidly, adding to the 10,000 commuters who live in Doña Ana County. A good climate, affordable housing and relaxed lifestyle have put Las Cruces on Relocate-America's list of "Best Places to Live," *Money* magazine's "Best Places to Retire" and the Milken Institute's "Best Small Metro Areas for Business and Careers."

—Robert W. Gilmer

11th District Places



Globalizing Texas: Exports and High-Tech Jobs

By Anil Kumar

Texas has won plaudits for globalization. The Kauffman Foundation's 2007 State New Economy Index ranked Texas the third most-globalized state. The Regional Globalization Index, constructed by Moody's Economy.com, puts Dallas among the country's top 10 most globalized cities; Austin and Beaumont make the top 25.

A key factor in these high marks for globalization has been expanding trade, which has made Texas the top exporting state. Compared with the nation, Texas exports a larger share of its output, depends on exports for more of its jobs, sends more sophisticated products overseas and employs higher-skilled workers in export-related jobs. The state has been instrumental in the surge of overall U.S. trade; its port activity has grown more than twice as fast as the nation's in the past decade.¹

Texas, however, hasn't diversified its export markets, continuing to depend heavily on Mexico. It also hasn't done as much as the nation in penetrating some of the large, emerging markets that will grow rapidly in coming decades.

Globalization has been spreading and deepening in the past decade or two. Economists are still trying to understand how the cross-border movement of goods, services, people and money is affecting national economies.

Globalization's state-level impacts are even more uncertain because important data are either incomplete or unavailable. We track regional exports of goods but not services. We don't have any reliable data on imports. State-level export data have limitations as well, but they provide valuable information on how Texas and other states are faring in a more open world economy.²

Economic Boost

Texas was a standout in goods exports even before it surpassed California in 2002 as the top exporting state. Over the past decade, the state has maintained a significant lead over the nation in foreign sales as

FIRST OF TWO PARTS

a share of total output (*Chart 1*). In 2006, exports accounted for 14 percent of Texas' economic activity, compared with 8 percent for the United States.

As economies globalize, workers' livelihoods are more likely to be tied to foreign markets. According to Census Bureau and International Trade Administration data, export-related jobs account for 5.5 percent of all private-sector employment in Texas, compared with the nation's 4.5 percent. Twenty percent of the state's manufacturing jobs depend on exports, versus 17 percent for the U.S.

Total exports and the jobs they create are key aspects of Texas' globalization, but we can also look at the mix of export products and markets. Export diversification is measured using the Herfindahl index, which equals the sum across industries or countries of the square of export shares. A larger value

indicates that fewer industries or countries dominate total exports. A lower value signifies less concentration and more diversification.

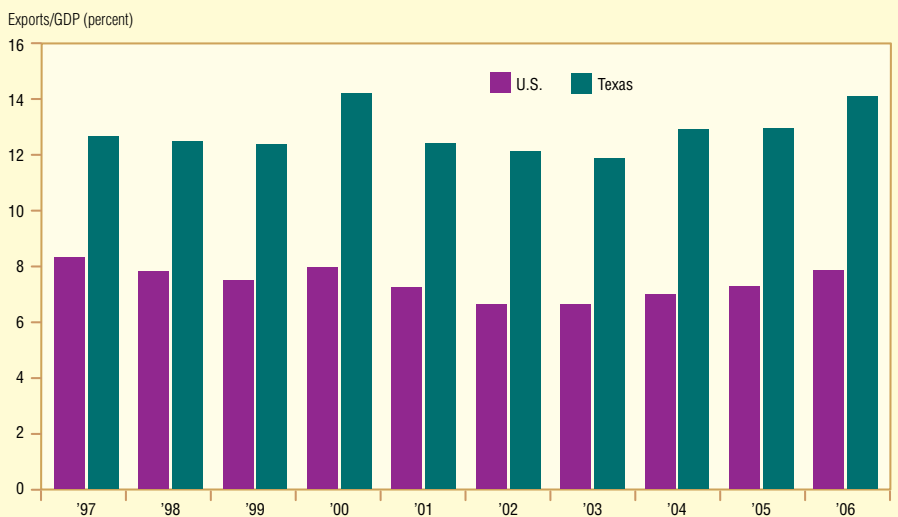
Across both export products and markets, these diversification indexes show that Texas' overseas sales are more concentrated than the nation's. This isn't surprising because the U.S. index is simply a weighted average of the states, which have different comparative advantages in terms of what they export and the markets they find favorable.

Comparing Texas with California, the No. 2 exporter, we see that the two states have come together in recent years in the industrial diversification of their exports (*Chart 2A*). Nearly all the movement, however, has come from California, suggesting that Texas hasn't made much progress in changing its export mix.

Texas continues to lag California and the nation in diversification across countries (*Chart 2B*). Texas' top three foreign markets account for more than half its exports, com-

Chart 1

Texas Exports a Larger Percentage of Its Manufactured Output Than the U.S.



NOTE: GDP in U.S. ratio is based on North American Industrial Classification System. The exports consist of manufactured products.

SOURCES: WISER Exports; Bureau of Economic Analysis; Haver Analytics.

Texas' high-tech workers help put the state ahead of the nation in exporting technologically sophisticated goods.

pared with 40 percent for the U.S. and 37 percent for California.

Mexico is a big part of the story. In recent years, Texas has become somewhat more diverse, with fast export growth to Latin America, Asia and the European Union.³ Even so, Texas still depends heavily on its southern neighbor as an export market. Although Mexico is the top export destination for both Texas and California, Texas relies on the Mexican market for 36 percent of overseas sales, substantially higher than California's 15 percent.

The principle of comparative advantage encourages greater specialization, but a diversified export portfolio can help sustain economic growth by lending stability to states' overseas sales. The greater a state's range of products and markets, the more likely it will be able to withstand shocks to particular industries or countries.

Several times in the 1980s and early 1990s, Mexico's economic turmoil spilled over into Texas, hitting the border region particularly hard. Over the past decade, Mexico has achieved a long stretch of economic stability, which lessens concerns about Texas' reliance on a single market for its exports.

Rising exports are a positive for Texas and other states. Expanding trade's gains, however, may entail side effects—for example, globalization's impacts on certain segments of the economy, such as low-skilled workers. These are largely import-related,

and state-level data aren't reliable enough to measure the overall economic effects on Texas' industries, jobs and income.

Sophisticated Products

As a high-wage country, the United States can't compete with the likes of China and India in markets that rely on cheap labor. America's edge in global markets is more likely to be found in goods and services that embody a high degree of advanced technology and skilled labor.

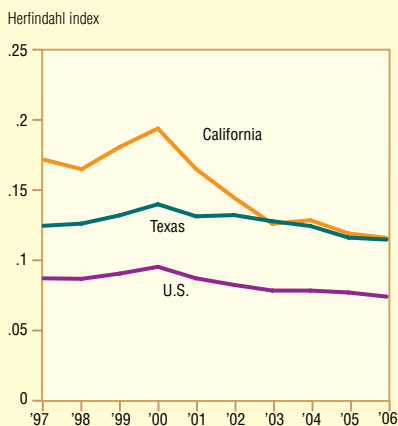
In general, Texas gets high marks for the superior quality of its workforce. The state ranks eighth on the Milken Institute's Technology and Science Workforce Composite Index and 12th in concentration of high-tech workers per 1,000 private-sector employees.

Texas' high-tech workers help put the state ahead of the nation in exporting technologically sophisticated goods. We measure the state's edge in these skill-intensive products as the export-share weighted average of research and development (R&D) spending to net sales ratio across manufacturing industries (*Chart 3*).

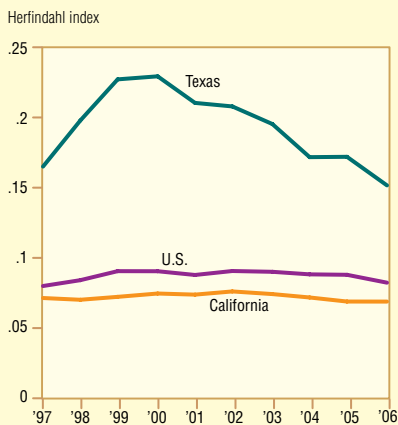
In both Texas and the U.S., relatively skill-intensive industries are more globalized and employ a larger concentration of export-related workers. Of these, the computer and electronics sector is the most skill-intensive, with industrial R&D expenditures of 11 percent of net sales. The sector also ranks No. 1 in share of jobs tied to exports.

Chart 2
Diversification of Texas Exports
(Higher score = less diversified)

A. Texas Exports Across Products Are Less Diversified Than U.S.



B. Texas Exports Are Getting More Diversified Across Countries

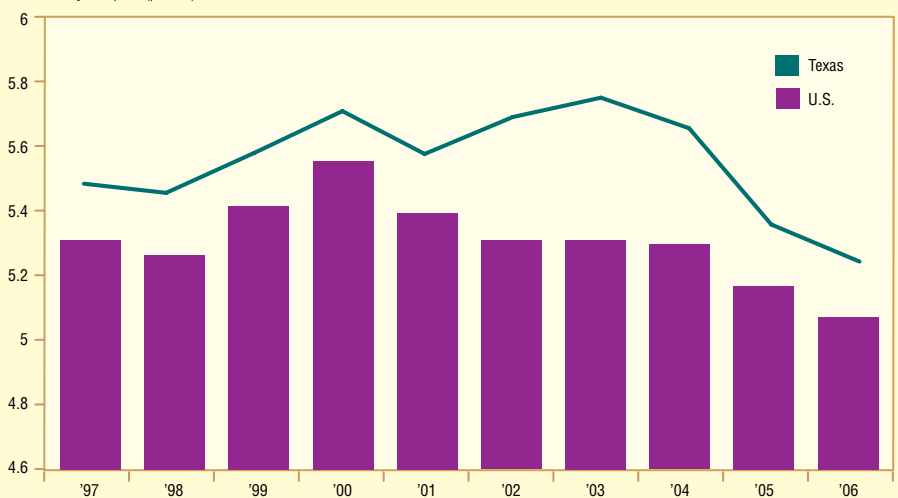


NOTE: Industrial diversification was calculated using exports data on two-digit HS commodities from WISER.

SOURCES: WISER Exports; author's calculations.

Chart 3
Skill Intensity of Texas Exports Is Higher Than U.S.

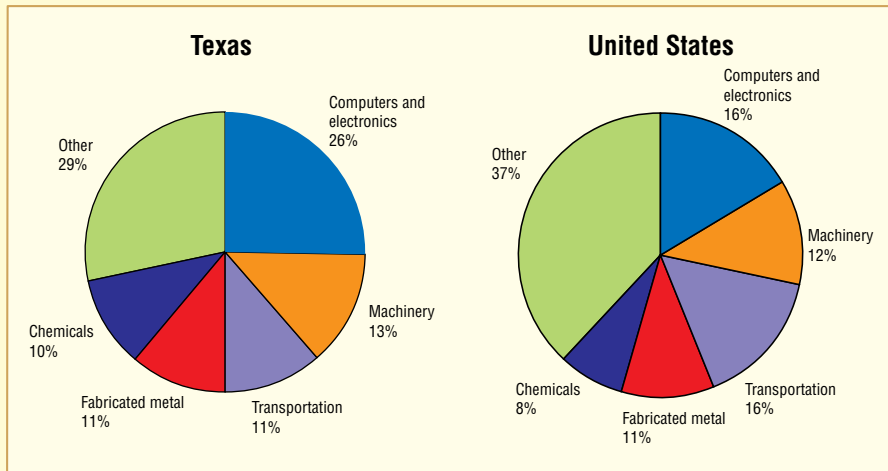
Skill intensity of exports (percent)



NOTE: Skill intensity of exports was calculated using average R&D/net sales ratio from 1999 to 2003.

SOURCES: WISER Exports; National Science Foundation; author's calculations.

Chart 4
Industrial Distribution of Export-Related Jobs



NOTE: Export-related jobs data used are for 2003.
SOURCES: International Trade Administration; Census Bureau; author's calculations.

As much as 48 percent of Texas' computer and electronic equipment jobs depend directly or indirectly on exports, compared with 35 percent for the nation.⁴ The high level of skill intensity in exports and export-related jobs reflects Texas' prowess in computer and electronic equipment manufacturing, which accounts for 26 percent of all export-related jobs, compared with 16 percent for the nation (*Chart 4*).

Texas and the U.S. have differences in export-related jobs in chemicals and transportation, but they aren't decisive for skill intensity.

The data show important links between globalization and the high-tech sector, which has emerged as one of the Texas economy's mainstays. Recent research stresses the importance of exports' skill content, including its positive effects on technological progress, productivity and economic growth.⁵ Selling more sophisticated products on world markets also accelerates the learning process that makes exporters more efficient than nonexporters. All this suggests that qualitative aspects of trade may be just as important as the quantitative ones.

Trade with BRICs

In the 21st century, several large developing economies have emerged as major drivers of global economic growth. Brazil, Russia, India and China, collectively known as the BRICs, are likely to continue their rapid economic growth in coming decades,

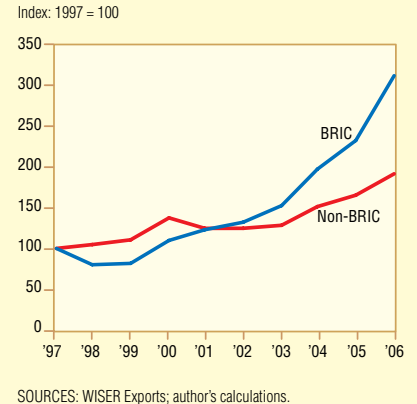
creating markets for goods and services from more advanced nations.

Today, the BRICs produce just 15 percent of the combined output of the U.S., Japan, Germany, France, U.K. and Italy, collectively the G6. According to Goldman Sachs, however, the BRICs will reach half the G6's GDP in 2025 and surpass the G6 in 40 years.⁶ Increases in demand from the four countries are likely to exceed that of the G6 as early as 2009 and are projected to be four times the G6 in 2050.

Texas' exports to the four emerging giants have shown impressive growth, more than doubling over the past decade (*Chart 5*). Since 2001, when the BRIC growth rate eclipsed the non-BRIC rate, the dollar value of sales has risen by 320 percent to China, 217 percent to India, 76 percent to Russia and 42 percent to Brazil.

Even with high growth rates, however, the share of Texas exports going to the BRICs hasn't increased relative to the nation's over the past decade. The state has traditionally done much bet-

Chart 5
Texas Exports to BRICs Grow Faster Than to Non-BRICs



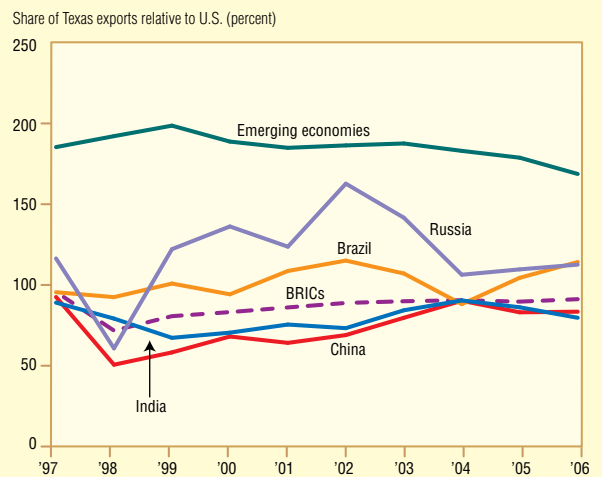
SOURCES: WISER Exports; author's calculations.

ter than the U.S. in selling to a group of 21 emerging economies (including the BRICs), a fact that largely reflects Mexico's prominence as a market for the state (*Chart 6*).

Over the past decade, Texas has trailed the U.S. in the share of its total exports to the BRICs but is closing the gap. In 2006, the BRICs accounted for a relatively small 8 percent of the state's total exports. These nations purchase 9 percent of U.S. exports. Texas' exports relative to the U.S. are larger

(continued on back page)

Chart 6
Relative to U.S., Texas Exports More to Emerging Economies, Less to BRICs



NOTE: The 21 emerging economies included in the analysis are Argentina, Brazil, Chile, China, Colombia, Egypt, India, Indonesia, Israel, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, South Africa, Russia, Singapore, Thailand, Turkey and Venezuela.

SOURCES: WISER Exports; author's calculations.

QUOTABLE: “Some of the air appears to be coming out of the recent boom in Houston. The numbers look great compared with a sluggish U.S. economy but are well short of the year-ago results.”

—Robert W. Gilmer, Vice President

ENERGY: ‘If You Don’t Have a Gas Well ... Get One’

So reads a billboard in Fort Worth, the heart of Barnett Shale country. This rich natural gas reservoir has thrust the Dallas–Fort Worth area, traditionally a financier to Texas’ energy industry, into the realm of production.

A 7,000-foot-deep rock formation, the Barnett Shale stretches from eastern Dallas to west and south of Fort Worth. The drilling area now covers 17 counties and more than 3 million acres.

The Barnett Shale has potential reserves of 30 trillion cubic feet of gas. Through May, this year’s production ran at about 2 billion cubic feet per day from more than 6,500 wells. Some 70 to 80 rigs are in use, popping up in backyards and dotting the landscape at Dallas/Fort Worth International Airport.

Experts call the Barnett Shale North America’s largest unconventional resource play, possibly rivaling Alaska’s North Slope in potential gas resources.

The Barnett Shale is a “tight gas” reservoir, meaning extraction is difficult because of the very hard surrounding rock. Exploration and production became feasible only with developments in hydraulic fracturing technology and horizontal drilling.

The Barnett Shale’s prospects have also received a boost from higher natural gas prices. Drilling makes economic sense at about \$4.50 per million Btu. This year, natural gas has been selling for \$6 to \$8 per million Btu.

—Mime Yücel

INCOMES: Gains from Higher Education Rising in Texas

Education pays off handsomely in Texas. A typical college graduate over age 25 earned \$45,345 in 2006, well above the state’s average income of \$30,210. Formal education enhances workers’ skills and knowledge, making them more productive.

The gap between highly educated workers and less educated ones has risen sharply in recent years. According to the Census Bureau’s American Community Survey, Texas workers over age 25 with college degrees earned 89 percent more in 2006 than those with high school diplomas, up from 79 percent in 2004.

Median earnings rise along with Texas cities’ education levels. Austin, the state leader in college graduates at 39 percent of its 25-plus population, reported the highest median

earnings of \$34,714 in 2006. In contrast, the lowest incomes were in the border metros of El Paso, Laredo, McAllen and Brownsville, where less than a fifth of the population has a college degree.

A more educated workforce may even help those toward the bottom of the wage scale. Incomes of workers with little or no formal schooling are also higher in cities with larger shares of highly educated workers.

Dallas–Fort Worth, for example, has a larger percentage of college graduates than San Antonio, and Dallas–Fort Worth laborers without high school diplomas earn nearly \$2,000 more a year than San Antonio workers with the same educational background.

—Laila Assanie

HOUSING: Sector Weakens in Texas, but Prices Hold Up

The national housing downturn is weighing on Texas markets. In the October Beige Book, the Dallas Fed’s regular survey of business activity, housing contacts report that weakening conditions nationwide have heightened unease among homebuyers.

Builders report a rise in cancellation rates as potential buyers—both Texans and those planning to relocate from other states—face tough markets for selling their current homes. In addition, tighter lending standards have made financing more difficult to obtain, particularly for buyers looking for their first homes and those deemed less creditworthy.

Home sales, building permits and inventories all point to a sagging real estate sector. So far, though, Texas housing prices have held up fairly well.

Through August, Texas median home prices were a modest 3 percent higher, compared with the same period in 2006, according to data from Texas A&M University’s Real Estate Center. Prices were up 7 percent in Austin, 6 percent in San Antonio, and 2 percent in Dallas and Houston. Of the 43 cities tracked by the Real Estate Center, only four showed declines—Paris, Lufkin, Garland and Temple–Belton.

The Office of Federal Housing Enterprise Oversight reports that the state’s second-quarter repeat-sale home prices were 6.9 percent higher than a year earlier, ranking Texas ninth among states. Rhode Island, Massachusetts, California, Michigan and Nevada recorded year-over-year home-price declines in the second quarter.

—D’Ann Petersen

Texas Economy Weathering the Storm

Texas' economic expansion remains quite strong, outperforming much of the rest of the country. The state's growth has been slowing as expected, but a nationwide reassessment of lending risk has accelerated the decline in homebuilding and created additional headwinds for the state's economy.

Data revisions show Texas' job growth even stronger than initially reported over the past year. Employment increased 3.4 percent in 2006, slightly above the average for the past 35 years. This year, job growth has been close to its long-term trend and more than double the U.S. rate of 1.8 percent (*Chart 1*).

Declines in the dollar's value have stimulated foreign demand for Texas products by lowering their relative cost. Texas exports increased smartly in July and August, due in part to brisk demand for chemicals and energy equipment.

The state's energy sector continues to be robust, although even this hallmark industry shows signs of cooling. Well permits and rig counts saw little growth over the summer. While oil prices have risen to record levels,

natural gas prices have seen less upward momentum. The Beige Book, the Dallas Fed's regular survey of the district's business activity, found concerns about growing natural gas inventories, which may restrain some activity.

The construction industry is still vibrant, with condominiums, hotels, offices, roads and entertainment facilities going up around the state. But housing markets have softened. Existing-home sales have drifted lower, returning to their April 2006 level (*Chart 2*). Existing-home inventories are still in relatively good shape at just under six months—back where they were in mid-2005 but still well below U.S. levels (*Chart 3*).

Typically, housing inventories have been higher in Texas than in the rest of the country. In recent months, however, the nation has eclipsed the state, a sign that builders elsewhere are facing a problem that plagued Texas real estate markets in the early 1990s—homebuilding running ahead of demand.

Texas home construction has been pulling back for a year, partly because excess supply nationally has transmitted financial

problems to lenders and builders in the state. Housing permits continue to fall, reaching February 2005 levels.

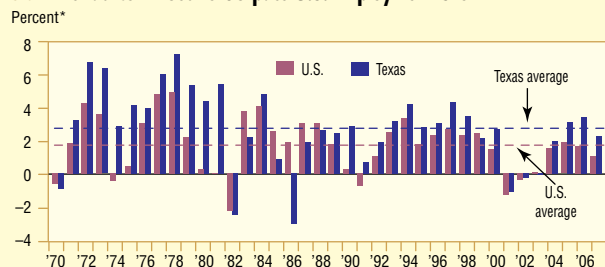
The economy is still digesting the adjustment to tighter lending standards and slower homebuilding that has heightened uncertainty about economic growth. In the wake of the nation's pullback in homebuilding, a number of the region's builders, mortgage lenders and construction-related manufacturers have announced employment freezes or layoffs.

Still, the Texas labor market remains tight. The state unemployment rate inched up from 4.2 percent in August to 4.3 percent in September, staying below the U.S. rate of 4.7 percent (*Chart 4*).

There's little evidence that the housing slowdown is significantly affecting the broader Texas economy. A model developed by Dallas Fed economist Keith R. Phillips expects job growth to be between 2.5 and 3 percent in 2007, with the probability of a Texas recession at less than 5 percent.

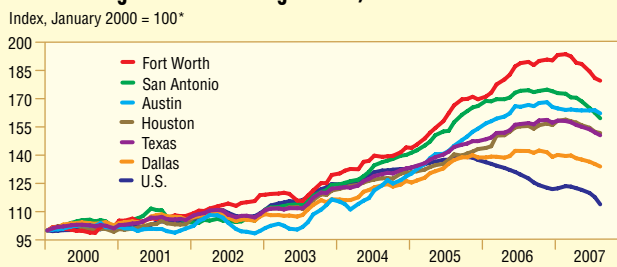
—Fiona Sigalla

Chart 1 Texas Continues to Outpace U.S. Employment Growth



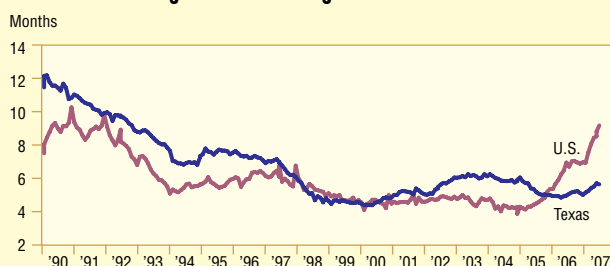
* Year-over-year, seasonally adjusted annualized rate.
NOTE: 2007 values are September/December for U.S. and Texas, both annualized.
SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments to Texas data by Dallas Fed.

Chart 2 Existing-Home Sales Easing in Texas, Metros



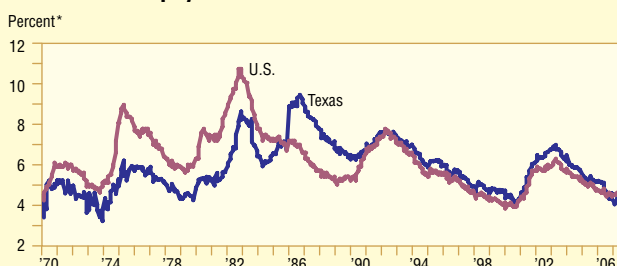
*Six-month moving average, annualized.
SOURCES: National Association of Realtors; Real Estate Center at Texas A&M; seasonal and other adjustments to Texas data by Dallas Fed.

Chart 3 Texas Housing Inventories Rising Slower Than U.S.



SOURCES: National Association of Realtors; Real Estate Center at Texas A&M; seasonal adjustments to Texas data by Dallas Fed.

Chart 4 Texas Unemployment Rate Below U.S.



* Seasonally adjusted.
SOURCES: Bureau of Labor Statistics; Texas Workforce Commission.

Globalizing Texas: Exports and High-Tech Jobs

(continued from page 13)

to Russia and Brazil and smaller to India and China. The performance difference probably reflects other nations' needs as well as what Texas firms supply at competitive prices.

Gaining an Edge

We know a lot less about globalization at the state level, but what evidence we do have suggests Texas compares favorably with the nation on globalization yardsticks centered on exports.

The state depends more than the nation on overseas sales, as a percentage of both state GDP and employment. Texas scores higher on export sophistication, suggesting the state maintains a competitive edge in the high-tech sector. Texas trade with emerging economies remains solid, although the state depends heavily on the Mexican market and lags the U.S. in tapping into the fast-growing BRICs.

In upcoming years and decades, the forces of globalization aren't likely to subside. States, just like nations, will face sometimes difficult challenges as economic integration increases competition. At the same time, globalization will create new opportunities for states to boost exports, not only creating jobs but also raising incomes.

Kumar is a senior economist in the Research Department of the Federal Reserve Bank of Dallas.

Notes

The author thanks Keith R. Phillips and Raghav Virmani for useful comments.

¹ For details about Texas port activity, see "Full Steam Ahead for Texas Ports," by José Joaquín López and Keith R. Phillips, Federal Reserve Bank of Dallas *Southwest Economy*, November/December 2006, pp. 3–6.

² The Census Bureau advises caution in interpreting its state-level export statistics. The numbers track origin of movement, which may differ from exporters' actual locations. Goods not manufactured but merely shipped from a particular state count as exports from that state.

³ "Texas Exports: Markets Grow Faster Beyond North America," by Anil Kumar and Raghav Virmani, Federal Reserve Bank of Dallas *Southwest Economy*, March/April 2007, p. 10.

⁴ The Census Bureau estimates export-related jobs as the total of (1) employment related to direct exports and (2) employment from activities supporting direct exports. The bureau uses the following methodology: Export data are from the Annual Survey of Manufactures (ASM) and U.S. International Trade in Goods and Services. These direct exports are multiplied by the employment/shipment ratio from the ASM to yield employment related to direct exports. The estimate of supporting employment is based on multipliers from input/output accounts provided by the Bureau of Economic Analysis. The multipliers are used to calculate supporting shipments to direct exports. Employment multipliers are then used to estimate employment related to supporting shipments.

⁵ For example, see "The Export Skill Content, Learning by Exporting and Economic Growth," by Galina An and Murat F. Iyigun, *Economics Letters*, vol. 84, July 2004, pp. 29–34.

⁶ For details, see "Dreaming with BRICs: The Path to 2050," Global Economics Paper No. 99, Goldman Sachs, October 2003.



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