



ISSUE 4  
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# Southwest Economy

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# President's Perspective



*We cannot simply base our inflation outlook on what seemed true just a few years ago.*

I once had a neighbor in Dallas who kept a python named Julius Squeezer. That snake was an efficient processor of most anything he swallowed, although there were times when he had to be taken to the vet to be treated for indigestion.

The python might serve as a metaphor for the inflationary predicament now facing the U.S. economy. This summer's easing of energy and commodity prices has raised hopes that the recent burst of cost-push inflation might simply pass through the U.S. economy as a one-and-done episode.

Unfortunately, this felicitous scenario is not guaranteed to play out. Rather than moving through the python, the higher costs of inputs may give the beast digestion problems, leading to lingering inflationary fever.

The inflation picture is far from clear. A return to stronger growth may revive some of the price pressures that have recently

abated. New worries may arise. In the first half of this year, for example, wages in China's urban areas, where most U.S. and foreign firms operating in China make or assemble products, rose 18 percent.

Nobody fully understands how Chinese labor impacts cost structures here at home. But this much is clear: We cannot simply base our inflation outlook on what seemed true just a few years ago.

Back then, a flood of cheap labor, low-cost goods and outsourced services from places like China, India, Brazil and the former Soviet satellites provided our economy with the most pleasant of tailwinds, propelling it forward while restraining inflation. Now that these countries are consuming more of what we consume as they climb up the income ladder, we have been facing a bracing inflationary headwind from the very same sources that previously helped our economy sail along.

The noble python may digest and dispatch the recent inflation bulge, or he might gag on it. It is too early to tell. And until we have a clear sense of what will prevail, monetary policy makers must remain poised to act if slowing growth fails to contain inflationary pressures. We cannot allow the Fed's credibility to be compromised by expectations of rising prices.

At times like these, it is important to know as much as we can about inflationary developments. Dallas Fed economist Jim Dolmas discusses some important measurement topics in this issue's On the Record interview (page 8). Reading it will help put recent trends into perspective.

A handwritten signature in gold ink that reads "Richard W. Fisher".

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



*The rising minimum wage has important implications for Texas, which unlike other big states sets its minimum wage equal to the federal one.*

# Higher Minimum Wage Looms Large in Texas

*By Pia M. Orrenius, Madeline Zavodny and Weihua Li*

In July 2007, the federal minimum wage increased for the first time in a decade, going from \$5.15 to \$5.85. It rose again in July 2008 to \$6.55. The current round of increases will end in July 2009, when the federal minimum will rise to \$7.25. In simple dollars and cents, the \$2.10 increase over these three years is the largest since the minimum wage's inception in 1938.

The rising minimum wage has important implications for Texas, which unlike other big states sets its minimum wage equal to the federal one. Texas also has some densely populated low-wage areas, especially along the U.S.–Mexico border.

How are Texas workers, businesses and consumers likely to be affected by the higher minimums? The answer depends on the prevalence of low-wage work and characteristics of low-wage earners.

Proponents contend that higher minimum wages move some families out of poverty and encourage people to work. Opponents argue that low-skill workers will have difficulty finding jobs and businesses' profits will be squeezed because employers will be unable to pass on all the higher employment costs to their customers.

The public debate on increasing the minimum wage mirrors the disagreement among economists about whether higher minimum wages hurt or help low-wage workers. Standard theory holds that higher minimum wages reduce employment. When the minimum rises, businesses should lay off workers whose productivity is below the new wage floor. Conventional estimates indicate that a 10 percent increase in the real minimum wage reduces employment rates by 1 to 3 percent among workers who earn relatively low wages, such as teenagers and fast-food workers.<sup>1</sup>

Some research, however, suggests that U.S. minimum wage increases during the 1990s may not have adversely affected employment. Several explanations may help reconcile this result with standard theory. Businesses may cut workers' hours instead

of firing them. More-skilled workers may enter the labor force, and businesses might substitute these workers for less-skilled employees. New entrants might include young adults substituting work for school, or stay-at-home moms reentering the job market. In addition, job turnover rates and vacancies might fall when the minimum wage rises, counteracting any negative effect on employment.

Both proponents and opponents of minimum wage hikes should keep one thing in mind: After the 2007 and 2008 increases, the inflation-adjusted federal minimum wage is still below what it was after the last increase in 1997 (*Chart 1*).

Unlike state-set minimum wages in Arizona, Oregon, Montana, Vermont and Washington, the federal minimum wage isn't indexed to inflation. The 10-year stretch without an increase led to a substantial decline in the real federal minimum. The scheduled 2009 hike will further raise the minimum in both real and nominal terms, but inflation will gradually undo the increase unless Congress votes for more changes.

## Low Wages in Texas

Wages are slightly lower in Texas than in the rest of the U.S., according to household survey data, and the income distribution is more unequal. As a result, more workers earn near the minimum wage in Texas than in the rest of the country.

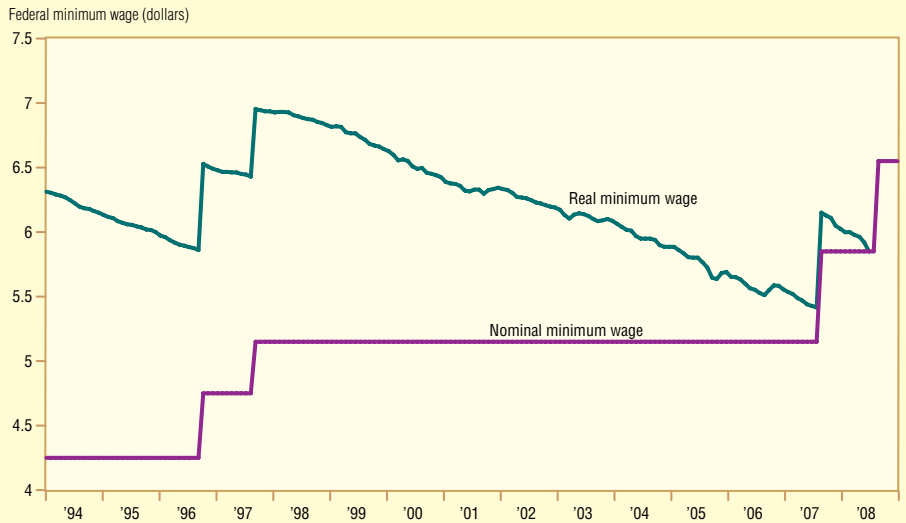
We define 25 percent above the minimum as the upper bound for low-wage earnings. By that standard, 12.2 percent of Texas' hourly employees earned low wages in 2007, compared with 6.8 percent nationally.<sup>2</sup> The gap isn't surprising because the state's hourly wages are lower across the board. We can see that by looking at the cumulative share of Texas workers at each wage rate, measured as a percentage of the federal minimum (*Chart 2*).

Earning below the minimum wage also is more common in Texas than the rest of



*Texas has a greater share of low-wage workers than other states.*

**Chart 1**  
**Inflation Eats Away at Minimum Wage**



NOTE: The real minimum wage is the nominal minimum wage deflated by the Consumer Price Index for urban wage earners and expressed in June 2008 dollars.  
SOURCES: Department of Labor Wage and Hour Division; Bureau of Labor Statistics; and authors' calculations.

the nation. In 2007, about 3.1 percent of Texas workers paid hourly earned less than the federal minimum wage, compared with about 1.9 percent nationally. The Texas rate is the second highest among the 50 states.<sup>3</sup>

Some employers may be illegally underpaying their staff, but minimum wage and overtime laws exempt certain workers, such as employees of religious, educational and nonprofit organizations and workers on

small farms. A lower wage floor—currently \$2.13 per hour—applies to tipped workers, such as waiters and waitresses, as long as they receive enough in tips to bring their total earnings up to the minimum wage.

Texas has a greater share of low-wage workers than other states for two main reasons.

First, Texas has a lower minimum wage than most other states. As inflation eroded the real federal minimum wage through the

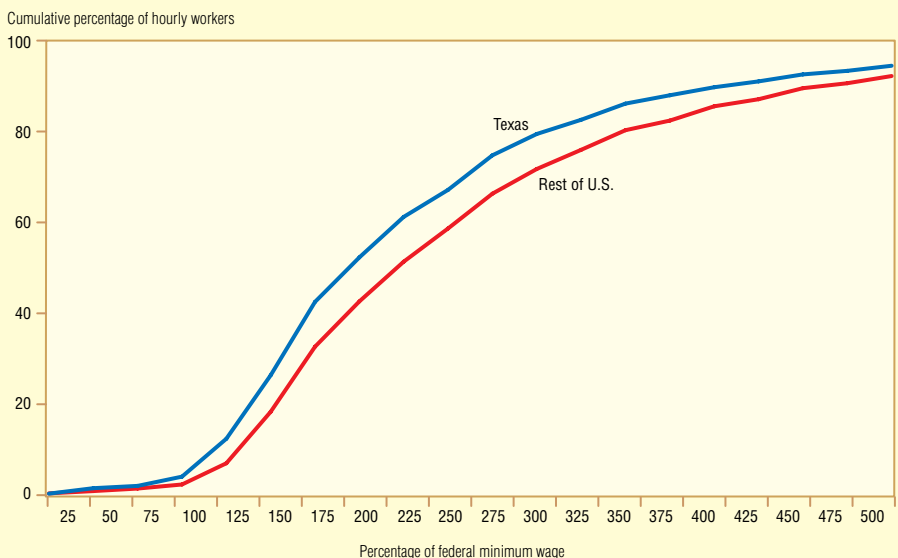
1990s and 2000s, an unprecedented number of states passed laws that set their floors above the federal rate. Before the national increase in 2007, 31 states and the District of Columbia had minimum wages that exceeded the federal level of \$5.15.

Not setting a higher wage floor has its advantages. Low employment costs attracted businesses, encouraged entrepreneurship and spurred job growth in Texas, particularly on the low-skill end. Consumers benefited from lower prices, and some low-wage workers found jobs. At the same time, the policy likely enticed more low-wage workers to move to the state because of job opportunities that might not have existed under a high minimum wage policy.

Second, characteristics of both employees and employers contribute to the relatively low wages. For example, Texas workers have fewer years of education, are slightly younger and are much more likely to be immigrants from Latin America—all characteristics associated with lower wages. Non-Hispanic whites, who tend to earn higher wages, make up only 52 percent of Texas workers, compared with 75 percent in the rest of the nation.

Industry and occupation distributions in Texas are more concentrated in relatively low-paying sectors, such as food service, retail and transportation. In addition, unionization rates—which are associated with higher compensation—are low in Texas.

**Chart 2**  
**Texas Earnings Closer to Minimum Wage**  
(Cumulative distribution of hourly wages relative to federal minimum wage)



SOURCE: Authors' calculations using 2007 Current Population Survey data.

## Who Earns Low Wages?

Both in Texas and the country as a whole, workers who earn near the minimum wage are likely to be female, young and Hispanic and to lack a high school diploma.

For all these groups, a higher percentage of workers earn close to the minimum wage in Texas than in the rest of the nation (*Table 1*). Some gaps are quite large. For example, the percentage of Hispanic workers who earn at most 25 percent above the federal minimum wage is almost three times higher in Texas.

At 42 percent, Hispanics represent a huge fraction of the state's hourly labor force. However, they make up 52.5 percent of its low-wage workforce (*Table 2*). Low-wage workers in Texas are also less likely to be 16–19 year olds and 20–24 year olds than in the rest of the country, suggesting that the state's low-wage workers are older. In addition, a greater percentage of the state's low-wage workers—almost half—don't have high school diplomas.

Immigration is an important factor in the low education and pay levels among adult Hispanics in Texas. Almost 20 percent of Texas workers are foreign born, and another 12 percent have at least one immigrant parent. The vast majority of foreign-born workers in Texas are from Mexico.

Immigrants are more likely than native-born workers to earn near the minimum wage in Texas. More than 24 percent of low-wage workers in Texas are foreign born, and 32 percent of workers who earn exactly the minimum wage are immigrants. Almost 15 percent of workers born in Mexico earn at most 25 percent above the minimum wage, or less than \$7.32 an hour after the 2007 increase. The comparable figure is 12 percent for natives.

**Table 1**  
**Who Earns Close to the Minimum?**

	Texas	Rest of U.S.
Male	8.7	4.9
Female	15.9	8.6
White, non-Hispanic	9.8	6.8
Black, non-Hispanic	10.2	7.9
Hispanic	15.2	5.6
Age 16–19	41.5	28.0
Age 20–24	16.1	11.3
Not high school graduate	20.7	13.4
High school graduate	8.8	5.3

NOTE: Shown are the percentages of workers paid hourly within a given group who earn at most 25 percent above the federal minimum wage.

SOURCE: Authors' calculations based on 2007 Current Population Survey.

**Table 2**  
**Low-Wage Labor Differs in Texas, U.S.**

	Texas	Rest of U.S.
Female	62.9	64.0
White, non-Hispanic	32.3	66.7
Black, non-Hispanic	11.4	14.6
Hispanic	52.5	12.6
Age 16–19	24.8	29.6
Age 20–24	19.2	23.9
Not high school graduate	48.7	36.2

NOTE: Shown are the percentages of low-wage workers who have each characteristic. Low-wage workers are those paid hourly who earn at most 25 percent above the federal minimum wage.

SOURCE: Authors' calculations based on 2007 Current Population Survey.

Interestingly, immigrants aren't more likely than natives to earn less than the minimum wage in Texas. If underreporting is worse among new immigrants—workers who typically earn the lowest wages—this result could be due to the limitations of household survey data.

The foreign born are more likely to earn near the minimum wage because of their relatively low educational attainment and poor English skills. Immigrants from Latin America in particular tend to have these traits.

Unlike natives, who mostly earn the minimum wage when they are young and experience substantial earnings growth as they age, many immigrants may earn near the minimum wage their entire working lives unless they acquire skills valued in the U.S. labor market. Indeed, the average low-wage immigrant worker is five years older than the average low-wage native worker in Texas.

## Locations of Low-Wage Jobs

The majority of Texas' low-wage workers live in the metropolitan areas of Houston, Dallas–Fort Worth–Arlington and San Antonio (*Table 3*). These three areas, however, have large and diverse economies, so low-wage workers make up a relatively small share of their overall employment.

The state's highest concentrations of low-wage workers can be found along the U.S.–Mexico border. The share of workers earning at most 25 percent above the federal minimum wage topped 37 percent in the Brownsville–Harlingen metropolitan area, 31 percent in Laredo, 23 percent in McAllen and 20 percent in El Paso.

The prevalence of low-wage workers in border cities is mainly a result of the large number of foreign-born workers

*Unlike natives, who mostly earn the minimum wage when they are young and experience substantial earnings growth as they age, many immigrants may earn near the minimum wage their entire working lives unless they acquire skills valued in the U.S. labor market.*

**Table 3**  
**Texas Metros Vary in Concentration**  
**of Low-Wage Workers**

	Pct. of metro-area workers earning low wages	Pct. of Texas low-wage workers	Pct. of Texas total emp.
Amarillo	9.8	1.1	1.1
Austin	5.6	3.1	7.3
Beaumont–Port Arthur	9.7	1.0	1.6
Brownsville–Harlingen	37.3	3.0	1.2
Corpus Christi	17.2	3.2	1.7
Dallas–Fort Worth–Arlington	8.2	19.8	28.3
El Paso	20.1	5.5	2.6
Houston	12.0	22.4	24.5
Killeen	11.9	1.5	1.2
Laredo	31.2	3.0	0.8
Longview	13.3	0.9	0.9
Lubbock	16.6	1.1	1.2
McAllen	23.6	3.7	2.0
Midland	9.1	0.5	1.2
San Antonio	15.0	10.3	8.0
Victoria	11.6	2.1	0.5
Waco	11.5	1.4	1.0
Not in a metropolitan area	15.4	16.4	14.8

NOTE: Low-wage workers are hourly workers who earn at most 25 percent above the federal minimum wage.

SOURCE: Authors' calculations based on 2007 Current Population Survey.

*A large number of Texans work at or near the minimum wage, both because of the size of the state's labor force and its relatively unequal wage structure.*

with low education levels. In addition, the border area has a disproportionate share of employment in sectors with large numbers of low-wage workers, such as retail trade and leisure and hospitality.

More than 16 percent of Texas' low-wage workers live outside metropolitan areas. Some of the wage differential in this case likely reflects lower costs of living in rural areas, particularly for housing. Differences in the industry and occupational mix between rural and urban areas also play a role.

Interestingly, the proportion of low-wage workers is relatively small in the Austin area compared with that area's share of all jobs. Most likely, this reflects the concentration of relatively high-paying government, high-tech and university jobs.

### Industry, Occupation Breakdowns

Three industries account for almost all low-wage jobs in Texas. More than one-third of all hourly workers who earn near the minimum wage in Texas are employed by food services and drinking places (*Chart 3A*). The two other low-wage industries are retail trade and "other services," a broad category that includes private household, repair, personal, business, social, entertainment and recreational services.

When it comes to occupations, food preparation and serving account for almost one-third of low-wage workers (*Chart 3B*), nearly matching the figure for eating and

drinking places. For both industries and occupations, the low-wage employment share far exceeds food-related jobs' share of total Texas employment.

Sales-related occupations employ 16 percent of workers who earn near the minimum wage, slightly less than the 19 percent of low-wage jobs in the retail trade industry. Other occupations that disproportionately employ low-wage workers include transportation and material moving, personal care and services, and building and grounds cleaning and maintenance.

Although office and administrative support occupations account for a large proportion of low-wage workers, these jobs compose a smaller proportion of low-wage workers than their total occupational share. In other words, the Texas economy has many secretarial jobs, but few of them pay near the minimum wage.

Manufacturing and construction also account for large proportions of low-wage workers because they are large sectors, but the proportion of workers earning near the minimum wage is quite low in those industries.

### Minimum Wage Hikes' Effects

A large number of Texans work at or near the minimum wage, both because of the size of the state's labor force and its relatively unequal wage structure. About 220,000 hourly workers earned the federal minimum wage or less in 2007, and an additional 470,000 were paid no more than 25 percent above the federal minimum.

These workers tend to be female and poorly educated, many of them adult immigrants from Mexico. They are disproportionately concentrated along the border and in rural areas, working in food services, retail and other service-sector jobs.

It's too early to assess the effect of the 2007 minimum wage hike on employment in either the state or the nation. The increase coincided with a general economic slowdown, rapid housing market declines in many parts of the country and shrinking residential construction activity. Employment changes stemming from the increasing minimum wage would be difficult to disentangle from those caused by the deteriorating economic conditions.

However, any adverse impact was probably larger in Texas than in much of the country because the state doesn't set a minimum wage above the federal level. As a result, Texas experienced the full 70 cent increase in the wage floor last year, and it

will bear the full brunt of the most recent 70 cent hike and next year's as well.

Simple employment growth regressions for 1994–2008, which control for business cycle effects, suggest that a \$1 increase in the minimum wage on average reduces Texas payroll employment by about 15,500 jobs. The job losses are concentrated in the leisure and hospitality, manufacturing, and education and health industries.

City- and industry-specific regressions show that areas with a large presence of affected industries have had slower em-

ployment growth in the wake of minimum wage increases. Leisure and hospitality in Brownsville and Austin, manufacturing in El Paso and Austin, and services in San Antonio and Fort Worth have felt the impact.

The 2008 and 2009 minimum wage increases—which bring the floor to \$7.25—are likely to have much larger effects than the 2007 increase. More workers will be directly affected.

In 2007, over 925,000 hourly workers in Texas (16.6 percent) earned less than \$7.25 an hour. The increases this year and

next coincide with the economic slowdown and the imposition of a new franchise tax on Texas companies.<sup>4</sup> Businesses' profits will likely suffer more from next year's minimum wage hike than from this year's. Consumers may experience some higher prices as a result of rising labor costs.

The irony of minimum wage increases is that they may hurt the people they are designed to help—namely the least-skilled workers. Employers that face mandated wage hikes often try to offset higher employment costs by hiring more-productive workers.

In Texas, the least-skilled workers are likely to be less-educated females, many of them adult Hispanic immigrants. The most vulnerable industries and regions are along the border, such as tourism in Brownsville and manufacturing in El Paso.

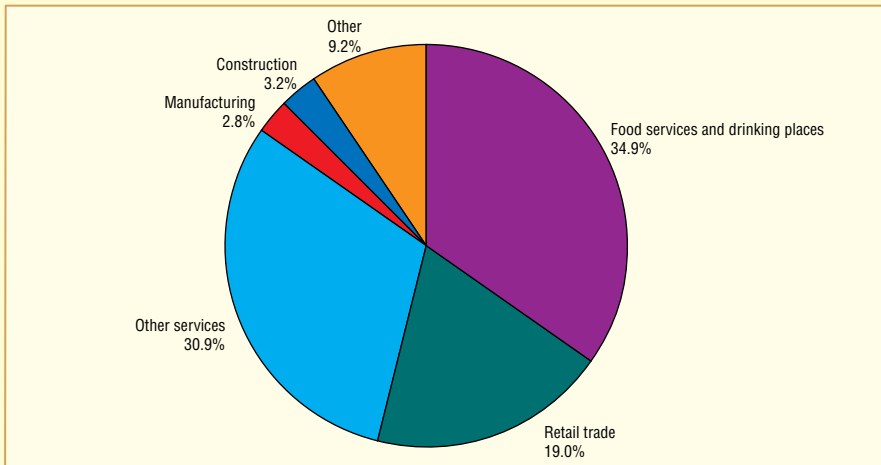
In the long run, higher minimum wages will raise employment costs, compelling students to get more education and businesses to invest more in workers through on-the-job training. Job growth may be slower as a result, however, and employment rates among low-skill workers could decline.

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### Chart 3

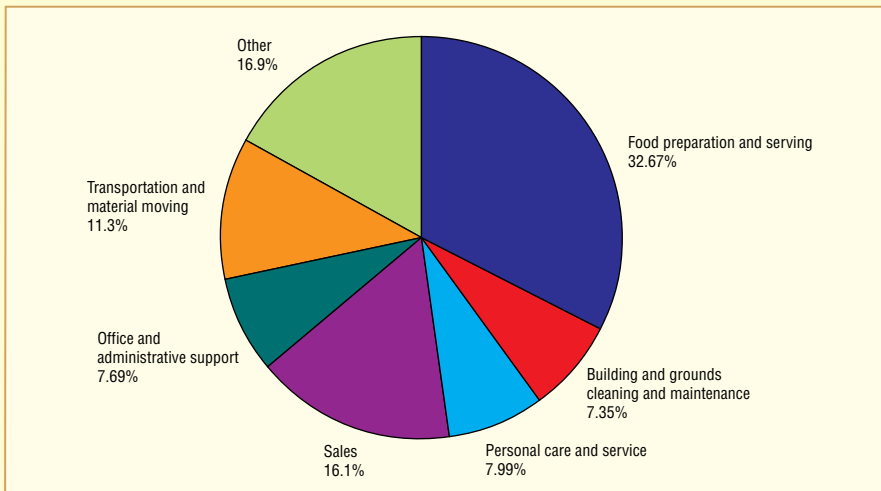
## Where Low-Wage Jobs Are Found in Texas

### A. Most Fall into Three Industries . . .



NOTES: Shares show fraction of low-wage workers employed in each industry. Low-wage workers are hourly paid workers who earn at most 25 percent above the federal minimum wage.

### B. . . and a Few Occupations



NOTES: Shares show fraction of low-wage workers employed in given occupational categories. Low-wage workers are hourly paid workers who earn at most 25 percent above the federal minimum wage.

SOURCE: Authors' calculations based on 2007 Current Population Survey.

### Notes

<sup>1</sup> For a recent survey, see "Minimum Wages and Employment: A Review of the Evidence from the New Minimum Wage Research," by David Neumark and William Wascher, National Bureau of Economic Research, Working Paper no. 12663, November 2006.

<sup>2</sup> Based on authors' calculations from 2007 Current Population Survey Outgoing Rotation Group data for workers paid hourly.

<sup>3</sup> See Table 1 in [www.bls.gov/ro6/fax/minwage\\_tx.htm](http://www.bls.gov/ro6/fax/minwage_tx.htm).

<sup>4</sup> See "Will New Business Tax Dull Texas' Competitive Edge?" by Jason L. Saving, Federal Reserve Bank of Dallas *Southwest Economy*, March/April 2008.



## The Art and Science of Measuring Inflation

At a time when many Americans worry about rising prices, Dallas Fed Senior Economist Jim Dolmas discusses the numbers we use to track inflation in the U.S. economy.

**Q. How do recent inflation readings compare with historical trends?**

**A.** The Consumer Price Index—what we call headline CPI inflation—was about 5.5 percent for the 12 months ending in July. To put it in perspective, a 5.5 percent rate, if sustained, would be something we haven't seen since the early 1990s.

The great inflation of the 1970s was brought down in two steps—a sharp deceleration in the early 1980s from double-digit levels to 4 to 5 percent, and a second step in the early 1990s to the 2 to 3 percent range. Current rates, if sustained, would put us back on that first step.

Of course, headline inflation is quite volatile. We also had 12-month rates around 4 percent from autumn 2005 to autumn 2006, followed by a period where the 12-month rate was mostly in the 2 to 3 percent range.

One of the distinctive features of our recent inflation experience has been the stability of the core rate, which excludes such volatile items as food and energy. In that regard, today differs from what we saw in the 1970s, when the core rate basically tracked the headline rate, with a lag of a few months.

**Q. Haven't we seen particularly big increases in food and energy this time?**

**A.** Yes, but food and energy prices were also big factors behind the headline inflation surges in the 1970s. We usually think of 1970s inflation as primarily driven by energy, but food also played a big role. The 12-month inflation rate in the food component of the CPI, for example, had already reached 20 percent in August of 1973, two months before the October oil embargo that caused energy prices to jump.

The sharp increases in food and energy prices only tell us why the headline rate initially accelerated. They don't explain why



core inflation increased so dramatically in the 1970s. To explain that—and, conversely, to explain why core inflation has been so stable over the past decade or so—we need to look to monetary policy.

In recent years, monetary policy has done a much better job of anchoring inflation expectations, so shocks to food or energy prices haven't had as big an impact on the pricing decisions of businesses outside those sectors.

**Q. What about the perception that inflation statistics don't match consumers' experiences when they shop?**

**A.** The components experiencing the most rapid price increases today are the ones people buy on a regular basis—the weekly trip to the grocery store or gas station. The components holding the overall index in check are in large part things people buy less frequently.

Over the past 12 months, the CPI's food and energy component is up about 16 percent. The price index for core goods—that is, goods excluding food and energy—has risen only 0.5 percent. These are items such as apparel, autos, televisions, computers, toys and the like.

The inflation rate for core services—that is, services excluding things such as electricity and other utilities—is running at 3.3 percent on a 12-month basis. The big player is shelter costs, up 2.5 percent over the past two months. It's something people consume every day, but a big chunk of it, called "owners' equivalent rent," is an implicit cost, not something people pay out of pocket.

**Q. Shouldn't the cost of shelter be going down with housing prices?**

**A.** The cost of a home and the cost of living in a home are different concepts. We want to measure the latter—the cost of consuming housing services over a given time period. The idea is to estimate what you would have paid to rent your home, and that's going to be influenced by factors beyond the price of the house itself, such as interest rates and expected house price appreciation.

The Bureau of Labor Statistics computes owners' equivalent rent by looking at actual rents paid, then making adjustments to account for differences between its sample of renters and a representative sample of homeowners.

Over long stretches of time, we'd expect rents and owners' equivalent rent to move together with house prices, but that needn't hold over shorter periods, especially when interest rates are changing or expected home price appreciation is speeding up or slowing down.

Rising costs for being an owner-occupant push people into the rental market, which drives up rents and the measure of the cost of owner-occupancy. That's what's been happening lately. I should note, though, that rent growth has slowed over the past several months, which suggests the flow of households into the rental market may be stabilizing.



*“One of the distinctive features of our recent inflation experience has been the stability of the core rate, which excludes such volatile items as food and energy.”*



**Q. Why exclude food and energy?**

**A.** When properly understood—that is, as an underlying trend missed by headline inflation—any core measure addresses the problem of how to distinguish transitory blips from more persistent movements in real time.

Those last few words are important. Think about a three-month period in which headline inflation went up a bit each month. Is that a blip or the start of a persistent movement? If the three months are in the distant past—so we have a bunch of observations before and after—then we can say with some certainty whether the acceleration was transitory or persistent. What do we do when those three months are the most recent, so we only know what came before, not what will come after?

Measures like “ex food and energy” try to solve this problem by excluding items that have traditionally shown high volatility. What’s left—the ex food and energy index—is going to be a lot smoother than the headline rate, and movements in it are more likely to represent persistent swings rather than transitory blips.

**Q. Are there other measures that help reveal inflation trends?**

**A.** I’ve been using “ex food and energy” and “core” interchangeably, but we have other measures of core inflation. The Trimmed Mean PCE we produce here at the Dallas

Fed or the Cleveland Fed’s trimmed mean CPI try to do something similar to the ex food and energy measure but without automatically excluding a predetermined list of items.

Some non-food, non-energy items are at least as volatile as a lot of food and energy items. Conversely, parts of food and energy—food away from home (at restaurants, for example)—are quite stable and probably very informative about underlying inflation trends.

Trimmed means exclude the items with the biggest price changes up or down in any month, regardless of the type of goods. I think this approach is superior to routinely excluding food and energy, but I look at all the measures each month and don’t entirely discount any of them.

**Q. What’s the difference between the PCE and CPI?**

**A.** The CPI tracks the cost of acquiring a particular basket of consumer goods, which represents what a typical urban household buys. The basket’s composition is adjusted every two years to reflect changes in spending patterns.

Unlike the CPI, the price index for personal consumption expenditures, or PCE, isn’t produced as an end in itself. Rather, it emerges from the solution to the problem

of separating the portion of changes in consumption due to varying prices from the portion due to real quantities. The PCE basket’s composition changes from month to month.

People tend to think the CPI and PCE are two ways of measuring the same thing, but each has its own logic. The CPI aims to be

a cost-of-living index—a measure of how price changes affect the real well-being of a household with a given money income. This leads to an emphasis on expenses people pay out of their pockets.

The PCE, on the other hand, focuses on what we consume, leading to some important differences from the CPI. Medical care, for example, has a much larger weight in the PCE than the CPI. Why? Well, the CPI just cares about what people spend directly on medical care, while the PCE also factors what employers pay into the weight assigned to medical care. A change in the identity of the party who pays for something shouldn’t affect our measure of the amount of consumption that takes place.

**Q. Where do you see research on inflation measurement going in coming years?**

**A.** The most interesting work is going to focus on refining our notions of what inflation measures central banks should watch. How much weight should these policymakers put on the various components of any price index?

I think of the situation as analogous to the early history of price indexes. In the early 1920s, Irving Fisher wrote a 500-page book called *The Making of Index Numbers*, which ranked more than 100 different price indexes that were in use or had been proposed.

Almost none of those indexes survives today. Why? Mainly because advances in consumer theory finally settled the question of what an ideal cost-of-living index should look like, killing off many of the competing indexes. Eventually, I think we’ll see something similar with regard to indexes for the purpose of conducting monetary policy.



# Texas Economy Feels National Pinch

By Laila Assanie and Raghav Virmani

*Helped somewhat by a weak dollar and strong exports, Texas has shed manufacturing jobs at a 1.4 percent rate so far this year, a much slower pace than the nation's 3.4 percent decline.*

Texas entered 2008 with its economy on the wane, largely because of the drags from the nation's slowing business activity. During the first half of the year, more signs of weakness have emerged in Texas and the U.S., but the state is still doing better than the nation.

Through June, Texas had created 118,200 jobs—a 2.3 percent annualized gain. The pace looks good compared with the nation's 0.6 percent decline, but it doesn't measure up to Texas' 37-year average employment growth rate of 2.8 percent.

In areas where the U.S. has been hurt in the past year, Texas has either weathered the storm by adding jobs or tempered the blow by not losing as many jobs as the nation (Chart 1). For instance, Texas increased its construction employment 5.2 percent in the 12 months prior to June 2008 and 3.8 percent so far this year.<sup>1</sup> The number of U.S. construction jobs contracted 6 percent from June 2007 to June 2008 and 7.1 percent so far this year.

Helped somewhat by a weak dollar and strong exports, Texas has shed manufacturing jobs at a 1.4 percent rate so far this year, a much slower pace than the nation's 3.4 percent decline.

Texas is likely to continue doing better than the U.S. A recent Manpower survey indicates that business sentiment is more upbeat in Texas. The company found that 31 percent of Texas firms planned to hire in third quarter 2008, compared with 26 percent of national employers. Only 6 percent of state companies expected to reduce their payrolls, while 10 percent nationwide intended to cut back.

Texas' unemployment rate stands at 4.4 percent, close to a 30-year low. The Dallas Fed Beige Book—an anecdotal survey of current economic conditions—suggests that Texas labor markets are relatively tight, particularly for professionals in energy, information technology and engineering services.

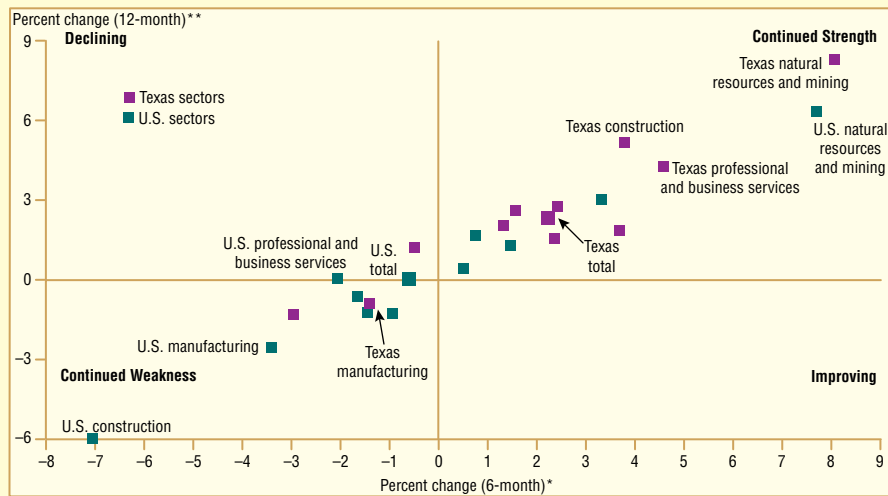
## Signs of Weakness

Over the past year or so, a series of storms has broken out over the U.S. economy—skyrocketing food and energy prices, the bursting of the housing bubble and turmoil in financial markets. All these forces are rippling through Texas' economy, some for good, others for ill.

The state, for example, is home to some of the world's largest airlines. A doubling of jet fuel prices in the past year has hurt not only legacy carriers that already suffer from high costs, but also the low-cost carriers whose bold fuel-hedging practices had until recently insulated them from oil shocks. Industry leaders call this period the worst crisis faced by airlines since the Sept. 11, 2001, terrorist attacks.

Dallas-Fort Worth-based American Airlines lost \$612 million in the first six months of 2008, excluding second-quarter write-downs related to jobs and capacity cuts. Houston-based Continental Airlines lost \$110 million, excluding one-time gains

Chart 1  
Texas Outperforming U.S. Across Sectors



\* June 2008/December 2007 annualized. \*\* June 2008/June 2007.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by Federal Reserve Bank of Dallas.

from sale of aircraft and stake in a Latin American airliner. Both companies are cutting payrolls and capacity.

American said it would reduce its capacity 11 to 12 percent after the peak summer travel season and eliminate nearly 7,000 jobs. It has decided to ground 30 of its least-fuel-efficient MD-80 aircraft, all of its A300 fleet, 37 regional jets and its entire turboprop fleet.

Continental announced it would cut 6.5 percent of its workforce (3,000 jobs) and reduce capacity 11 percent. The company also said it would retire its entire 737-300 fleet by next year and ground 20 of its 737-500 aircraft.

Dallas' Southwest Airlines continues to fare better than the two other Texas-based airlines. It has used hedging to offset high jet fuel prices. As oil prices have risen, however, even Southwest has begun to feel the heat. Its profit of \$164 million (excluding special items) in the first half of the year was off 28 percent from year-ago levels. The airline has decided to slow its expansion rather than take drastic steps to reduce capacity or trim its workforce.

Activity in the Lone Star State's manufacturing sector has been soft as well. The Dallas Fed's Texas Manufacturing Outlook Survey, which gauges the overall health of state manufacturing, has been sluggish since late 2007. Earlier, the weakness was limited to housing-related manufacturers, but high gasoline prices have slowed activity in Texas' auto manufacturing sector, and two large auto manufacturers are idling their Texas-based SUV and truck plants. (See Noteworthy on state auto manufacturers, page 14.)

Texas' housing industry has been flagging, although it remains in better shape than the nation's.<sup>2</sup> The state's home building and sales activity has been trending down since late 2006. In June alone, starts were off 34 percent and existing home sales fell 15 percent from year-earlier levels.

Many prospective homebuyers are awaiting news of a turnaround or are encountering difficulties obtaining mortgages. Faltering demand and rising foreclosures have pushed home inventories to just over the equilibrium level of six months, but Texas home prices are about even with last year—a contrast to the nation's big declines.

Financial market woes, a fallout from the weakening housing sector, have begun to take their toll on the commercial real estate sector. Office vacancy rates, which had

been coming down steadily since mid-2004, have started to edge up, reflecting both a slower pace of job growth and downbeat business sentiment. At 21.4 percent, Dallas' office vacancy rate is second highest among U.S. cities. Austin's rate is about 16 percent, while Houston's is relatively low—around 12 percent—because of a booming energy sector.

Investment in office real estate across major Texas metros has declined sharply. Through May, sales activity is off significantly from last year's levels (Chart 2). For instance, sales of Austin office properties through May were merely 2 percent of the total 2007 transactional volume, while comparable numbers were 16 percent in Dallas, 14 percent in San Antonio and 13 percent in Houston.

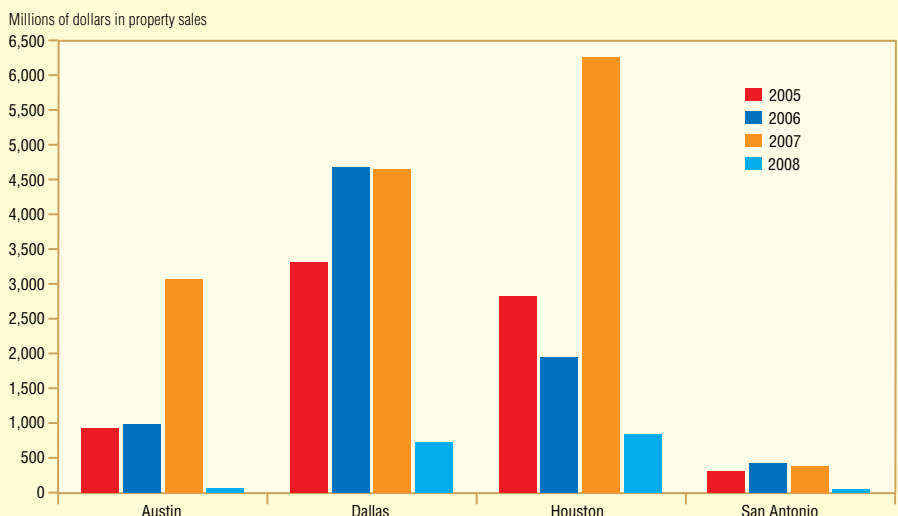
Nonresidential building activity, which includes office, retail and industrial space, has fallen off as well, and contract values were down 15.6 percent in June compared with year-ago levels. The current contraction in commercial construction is nearly as pronounced in Texas as in the nation, where the decline has been 18.3 percent.

The pullback in commercial real estate activity stems from two factors. First, construction costs are rising, a direct result of soaring fuel, steel and other raw material prices.

Second, financial restraints are increasing. Business contacts indicate that private money is difficult to come by, especially for large projects, many of which have gone

*The Dallas Fed's Texas Manufacturing Outlook Survey, which gauges the overall health of state manufacturing, has been sluggish since late 2007.*

**Chart 2**  
**Investment in Texas Major Metro Office Markets Plummets**



NOTE: 2008 data include transactions closed through May.

SOURCE: Real Capital Analytics.

over budget. Perhaps more important, activity has been hindered by a lack of liquidity in the commercial-mortgage-backed securities (CMBS) market (*Chart 3*).

Securitized mortgages, which make up nearly a fourth of the commercial loan market, had fueled a significant share of the growth in mortgage originations in recent years.<sup>3</sup> With securitization activity coming to a screeching halt this year—a direct result of

the subprime meltdown that began in mid-2007—financing large deals in particular has become increasingly difficult. Beige Book contacts tell us that only a handful of deals are being finalized in a lending environment characterized by little liquidity and more rigorous underwriting standards.

Although traditional financiers such as commercial banks and life insurance firms have picked up some of the slack, their ability to fill the void is limited. This suggests that, without a turnaround in the CMBS market, there may be further softening in new commercial construction projects in coming months.

Texas commercial markets remain attractive both in terms of relative price and future growth because of the state's business-friendly climate, its low cost of living and a young labor force.

### On the Upside

Despite the troubles in airlines, real estate and elsewhere, Texas still looks better than the rest of the country. The factors behind the relatively buoyant performance start with the energy industry, which has long been one of the state's primary economic drivers. This year has been no different.

With oil prices high, Texas' energy employment has continued to reap the immediate benefits, growing 8.1 percent in the first half of the year, after posting a 9.6 percent growth rate in 2007 (*Chart 4*). Texas now employs nearly one of every two workers in the U.S. oil and gas extraction industry.<sup>4</sup>

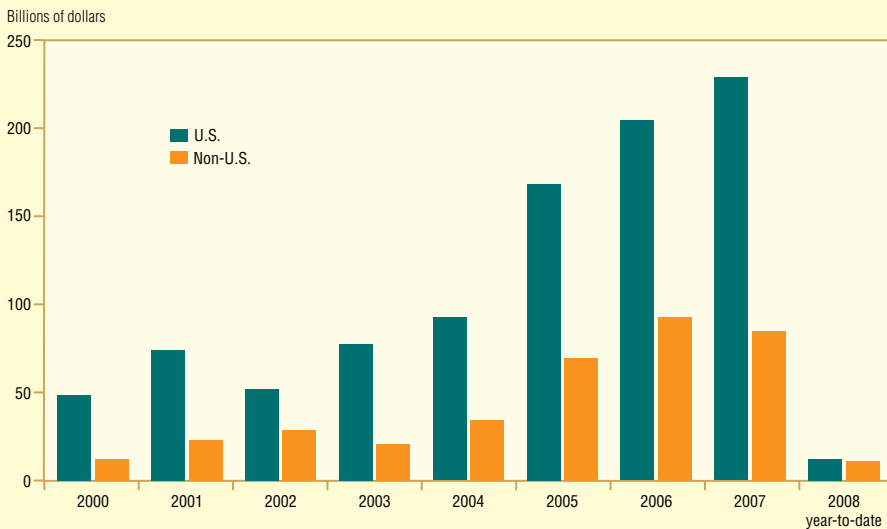
Although Texas oil production has remained flat because of a lack of reserves, natural gas output has picked up strongly in recent years. Buoyed by drilling activity in the immense Barnett Shale reserve, Texas natural gas production increased more than 16 percent in 2007.

The strength continued this year, with production in the first five months rising 12 percent annualized (*Chart 5*). Today, Texas produces nearly a third of all U.S. natural gas, up from about a fourth in 2004.

Another bright spot has been trade. Texas exports surged 7.6 percent in the first five months of 2008, aided by a falling dollar, a strong energy industry and a record year for agriculture.

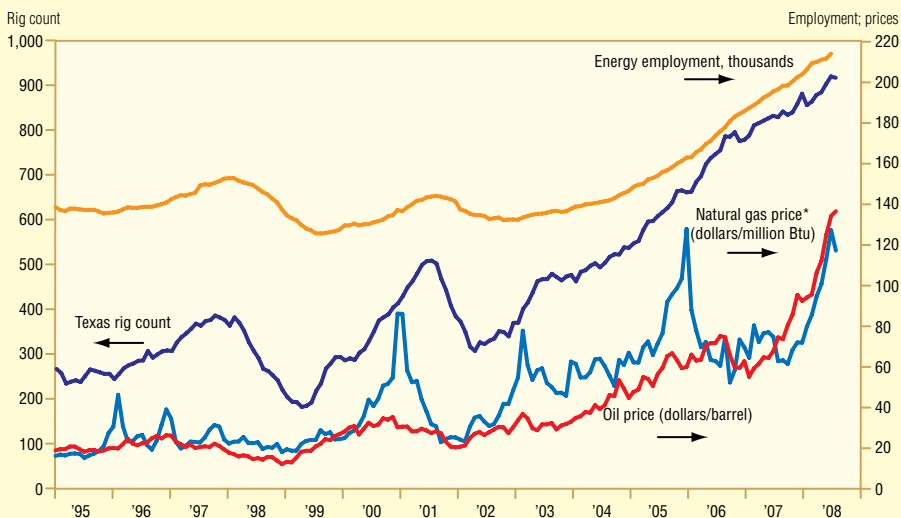
While breakdowns of industry- and country-level data aren't available on a monthly basis, first quarter 2008 data show that sales to Europe were 13.3 percent

**Chart 3**  
**Commercial-Mortgage-Backed Securities Market Dries Up**



NOTE: 2008 data are through July 24.  
SOURCE: Commercial Mortgage Alert.

**Chart 4**  
**Soaring Prices Energize Texas Activity**



\*Multiplied by 10  
NOTE: 2008 data are through July, except employment, which is through June.  
SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; Federal Reserve Bank of Dallas; *Wall Street Journal*; Baker Hughes International.



higher than a year ago—likely the result of a euro that strengthened by more than 10 percent in 2007 alone. Anecdotal reports from the Texas business community suggest that there has been a surge of soybean and corn exports to Europe, possibly to aid the production of biofuels. The higher price of oil relative to natural gas has made chemical production competitive in the U.S., fueling European demand for U.S. exports.

Sales to Latin America (excluding Mexico) were up a robust 23.7 percent in first quarter 2008 compared with year-ago levels, driven primarily by a doubling of petroleum products exports and a 50 percent gain in chemical sales. Latin American currencies have strengthened, boosting the region's purchasing power for U.S. goods and services. The Brazilian, Chilean and Colombian currencies have all shown double-digit gains from first quarter 2007 to first quarter 2008 against the U.S. dollar, helping spur Texas exports (*Chart 6*).

Despite a surge in metal and agricultural exports to China, overall exports to the Asian giant grew 4.6 percent between first quarter 2007 and first quarter 2008, the slowest pace since second quarter 2005. China's demand for infrastructure-related raw materials and staple grains ahead of the Summer Olympics increased its purchases of Texas products. A managed float of the Chinese yuan against the dollar, however, hasn't strengthened the currency enough to create the kind of price breaks that help American goods in Europe and Latin America.

Medical services continue to expand swiftly, with employment rising 1.8 percent (8,600 jobs) through June 2008, following a 3.8 percent increase (34,400 jobs) in 2007. The growth is due in part to demand created by the state's strong population growth rate—2.1 percent in 2007, or twice the nation's rate.<sup>5</sup> Health care jobs now account for about 9 percent of Texas' total employment, up from 7.8 percent in 2001.

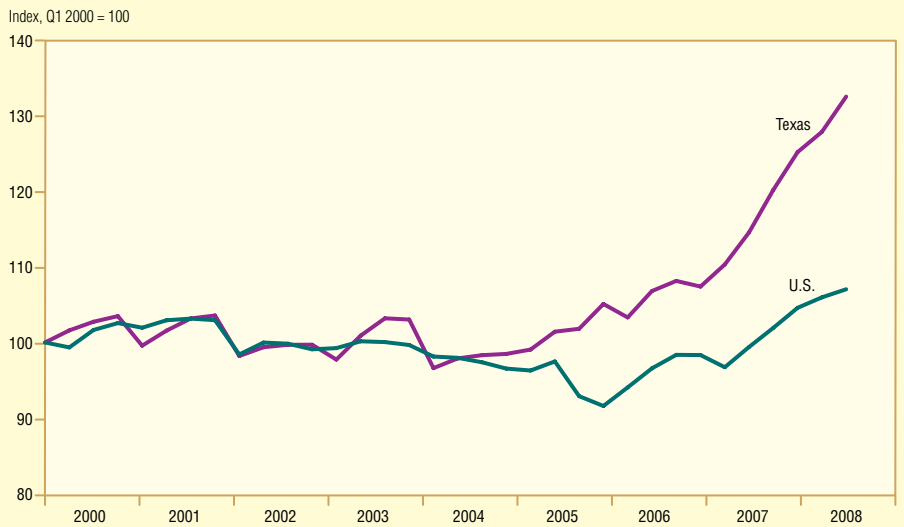
After receding through most of 2007, inflation-adjusted investment in Texas health care facilities has increased more than 25 percent in the first half of 2008, compared with the same period a year ago. For example, Houston is adding a \$220 million, 490,000-square-foot children's hospital, creating a 700,000-square-foot one-stop medical facility and spending \$75 million to expand The Woman's Hospital of Texas by 145,000 square feet and 250 employees. (For information on El Paso's health care

expansion, see Spotlight, page 15.)

Additional impetus is coming from the military's expanding presence in Texas. Fort Sam Houston, outside San Antonio, has received hundreds of millions of dollars to expand and develop new medical training facilities. New projects are also planned for Fort Hood in Killeen.

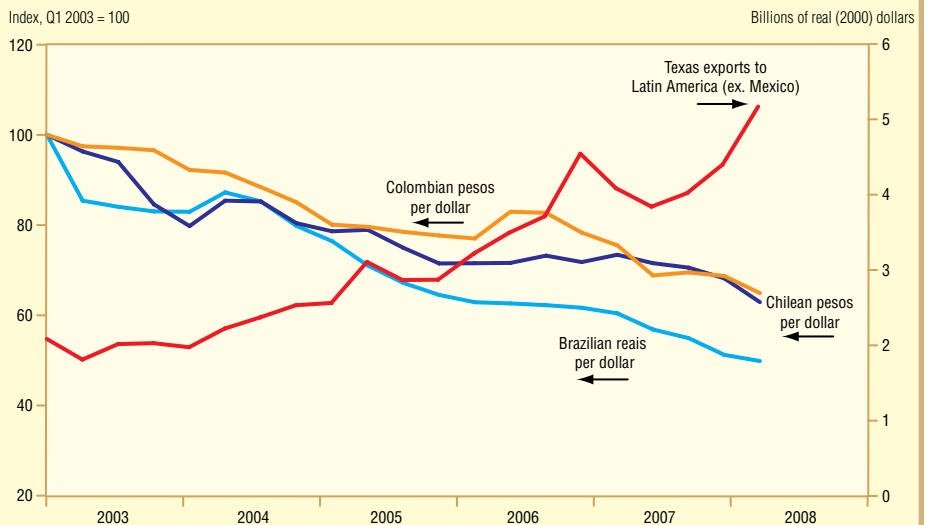
(continued on back page)

**Chart 5**  
**Texas Natural Gas Production Tees Off**



NOTE: Second quarter 2008 production has been estimated using the average of April and May data.  
SOURCE: Energy Information Administration.

**Chart 6**  
**Texas Exports Surge as Dollar Weakens in Latin America**



NOTE: Data are through first quarter 2008.  
SOURCES: Wall Street Journal; WISERTrade; seasonal and other adjustments by Federal Reserve Bank of Dallas.

**QUOTABLE:** “The Texas economy continues to add jobs despite persistent losses at the national level this year.”

—D’Ann Petersen, Business Economist



## DEMOGRAPHICS: Texas Cities Show Strong Population Growth

Buoyed by stronger-than-average job markets, relatively low living costs and a warm climate, Texas cities captured four of the top 10 spots in the Census Bureau’s latest ranking of urban population increases from 2006 to 2007.

In sheer numerical gains, Houston ranked first, growing by 38,932 inhabitants. San Antonio came in third, Fort Worth fourth and Austin eighth. Dallas also performed well, ranking 13th.

In percentage terms, a number of Texas municipalities were among the nation’s fastest growing areas with over 100,000 residents. McKinney, 30 miles north of Dallas, ranked third for growth at 8 percent, trailing a rebounding New Orleans and Victorville, Calif. Killeen, boosted by ex-

pansion projects at nearby Fort Hood, took the No. 6 spot. Denton grew 4.7 percent, good for 10th, and Fort Worth increased its population 4.5 percent, coming in 11th.

Texas was the seventh fastest growing state in 2007, with its overall population increasing at 2.1 percent, more than double the national rate.

The state’s strong job growth was one major driving force behind these population gains. Texas employment rose 3.1 percent in 2007, well above the national rate of 0.8 percent. Texas metro areas also topped the nation in job gains. Houston again ranked first, while Dallas–Fort Worth came in at third and Austin seventh.

—Mike Nicholson



## AUTO INDUSTRY: Texas to Produce All Toyota Pickups, GM SUVs

A shift in demand away from pickup trucks and sport utility vehicles has led two major automakers to consolidate production in their Texas plants.

Starting next spring, all Toyota pickup trucks will be made in the San Antonio factory the company opened in 2006. By 2010, GM’s Arlington plant will be the company’s sole producer of SUVs, including the new hybrid vehicle.

The consolidations reinforce Texas’ dominance in the manufacturing of light trucks and SUVs. The state’s role has grown in the past two years, rising from 1.6 percent to 4.5 percent of the nation’s output of light trucks and SUVs.

The prospects of long-run gains come at a time of

immediate hardships. High fuel prices and a slowing economy have depressed shipments of light trucks and SUVs. This year’s sales of SUVs built in Arlington are down 30 percent, and sales of Tundra pickups built in San Antonio are off 54 percent from a year ago.

GM’s Arlington plant was idle most of July, and Toyota’s San Antonio plant has suspended production until early November. The closures affect 45 percent of Texas’ motor vehicle manufacturing jobs. With their long-term plans for Texas, however, neither Toyota nor GM anticipates large job losses at their factories.

—Jessica J. Renier



## TEXAS JOBS: DFW and Austin Magnets for High-Tech Talent

The Austin and Dallas–Fort Worth metros boast high-tech job concentrations substantially above the national average. In 2006, these industries employed 11.2 percent of private sector workers in Austin and 7.3 percent in Dallas–Fort Worth, compared with 5.1 percent for the nation.

The Dallas–Fort Worth area’s 7,480 high-tech firms employed 177,629 in 2006, based on American Electronics Association categories. The companies include three of Fortune 500’s 10 largest IT services providers—EDS, Affiliated Computer Services and Perot Systems—and the second largest U.S. semiconductor maker—Texas Instruments.

The latest payroll data show that Dallas–Fort Worth has the nation’s second largest telecom sector and the fourth largest computer and electronics manufacturing sec-

tor. In 2007, Dallas–Fort Worth ranked fourth among U.S. cities in computer programmers, fifth in computer systems engineers and sixth in electrical engineers.

With 63,381 high-tech employees, the Austin area had the nation’s eighth largest computer and electronics manufacturing industry and its seventh largest pool of computer scientists in 2007. Among the area’s top tech employers are Dell Computer, IBM and Freescale Semiconductor.

Going into the current slowdown, both metros’ high-tech employment had been growing significantly faster than the national average. During 2006, high-tech sectors expanded by 5.1 percent in Austin and 3.5 percent in Dallas–Fort Worth, eclipsing the nation’s 2.7 percent.

—Mike Nicholson

**E**l Paso's efforts to move beyond low-wage manufacturing and services jobs will get a boost from next year's opening of a new medical school. Along with other new and expanded health care facilities, the school could serve as a catalyst for bringing well-paying professional jobs to West Texas.

The Paul L. Foster School of Medicine will be the 10th medical school in Texas and the state's first new one since 1977. Perhaps more important, it will be the first U.S. medical school along the 2,000-mile border with Mexico.

The new medical school figures to have a large impact on a metropolitan area of 2.4 million people, which includes the Mexican city of Juárez. According to one study, the 10-year increase in economic activity (directly and through multipliers) will be an additional \$1.3 billion in business revenue, \$462 million in income to El Paso households, \$12 million in net operating income for local government and 4,700 new jobs.<sup>1</sup>

The new four-year school is among several major health care projects under way in El Paso. Thomason Hospital, Texas Tech's partner in medical training for 40 years, has begun a \$250 million expansion project that includes a new children's hospital.

Turning an El Paso satellite for doctor training into a fully accredited four-year medical school moved toward reality in 2003, when the Texas Legislature approved \$45 million in revenue bonds for three new classroom and research buildings, followed by a \$48 million appropriation in 2007 to hire faculty and obtain accreditation.

Private donations of \$83 million from the El Paso community exceeded expectations, with \$50 million coming from refinery owner Paul L. Foster, the school's namesake. Accreditation, received early this year, completed a process that put the school on track to open its doors to 80 first-year students in the fall of



El Paso's new Paul L. Foster School of Medicine will be the only accredited four-year medical school along the U.S.–Mexico border.

2009. Accreditation also secures the school a permanent place in the state budget for normal operations.

The new medical school's roots can be traced to a partnership between the city of El Paso and the Texas Tech University School of Medicine that began in 1973 with the arrival of third- and fourth-year medical students as well as graduate residents. Thirty-five years later, the city has eight residency programs operated by the Texas Tech University Health Sciences Center and another cosponsored with William Beaumont Army Medical Center.<sup>2</sup> In 2007, 46 El Paso-based medical students and 56 residents graduated from the program.

Beyond its role in physician training, the Texas Tech facility served more than 200,000 patients in El Paso and West Texas in 2007, operating 11 clinics in El Paso County, with 1,200 faculty and staff members.

The new medical school is something rarely found in poor border cities—a prestigious, well-paying institution. It will bring future medical professionals into one of the most underserved regions of the U.S. for health care, both on the border and in the rural areas of West Texas.

The Foster school is located in south El Paso, two minutes by car from Juárez and among some of El Paso's poorest neighborhoods. The site underscores its mission to study illnesses prevalent along the U.S.–Mexico border, such as diabetes and infectious diseases. In addition, officials hope the school's location will attract students who speak Spanish, enhancing the ability to serve the most rapidly growing part of the Texas population.

—Roberto Coronado and Robert W. Gilmer

### Notes

<sup>1</sup> Economic impacts are based on a 10-year period and dollar values in present values. For details, see "The Expansion of Texas Tech University School of Medicine: Economic Impact on El Paso, Texas, Over 2004–2013," by David A. Schauer, Dennis L. Soden and David Coronado, Institute for Policy and Economic Development, University of Texas at El Paso, Technical Report no. 2004-8, 2004. Available at [http://digitalcommons.utep.edu/iped\\_techrep](http://digitalcommons.utep.edu/iped_techrep).

<sup>2</sup> The residency programs include emergency medicine, family medicine, internal medicine, neuropsychiatry, obstetrics and gynecology, pediatrics, surgery and a transitional year. An orthopedics program is shared with William Beaumont Army Medical Center.





# Texas Economy Feels National Pinch

(continued from page 13)

## What's in Store?

In the second half of 2008, the Texas economy is expected to continue to outperform the nation, although the pace of growth may subside further.

The Conference Board's Consumer Expectations Index for the Southwest region—dominated by Texas—has dipped alarmingly since late 2007. Today, the index for the Southwest is at the lowest level since its inception in January 1981. This plunge in consumer sentiment is worrisome because it suggests that Texans are feeling the pinch of a slowing economy and high commodity prices and may cut back on discretionary expenditures in the near term. If they do, retail sales may soften.

The state's unemployment rate remains low, but the uptick in initial as well as continuing jobless claims suggests softening of Texas labor markets in coming months. Growth in temporary employment, a reliable leading indicator of statewide employment, has slowed since late last year to under 1 percent, also suggesting that overall employment may slow further in the latter half of 2008.<sup>6</sup>

The current mix of strengths and weaknesses coupled with the slowdown at the national level has increased uncertainty

about the health of the Texas economy. Movements in the Dallas Fed's Texas Leading Index over the past several months point to employment growth between 1.5 percent and 2 percent this year, well below the state's long-term average.

*Assanie is an associate economist and Virmani worked as a research analyst in the Research Department of the Federal Reserve Bank of Dallas.*

## Notes

<sup>1</sup> Year-to-date employment data are through June 2008.

Employment data are subject to revision. Employment growth rates are annualized.

<sup>2</sup> For details on Texas housing markets, see "Texas Finds Cover from U.S. Economic Storm" by Fiona Sigalla and "Hot Housing Market Catching Cold in Texas" by D'Ann Petersen, Federal Reserve Bank of Dallas *Southwest Economy*, January/February 2008.

<sup>3</sup> Data are from Commercial Mortgage Securities Association's Compendium of Statistics and Flow of Funds Accounts data from the Federal Reserve Board of Governors.

<sup>4</sup> We define energy employment as the sum of oil and gas extraction and support activities for mining.

<sup>5</sup> The Census Bureau estimates that in 2007 eight of the top 50 fastest growing metros were located in Texas.

<sup>6</sup> Econometric testing done at the Dallas Fed suggests that it takes about five months for overall employment to fully arrive at the level suggested by temporary employment.



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