



FIRST QUARTER 2010

Southwest Economy

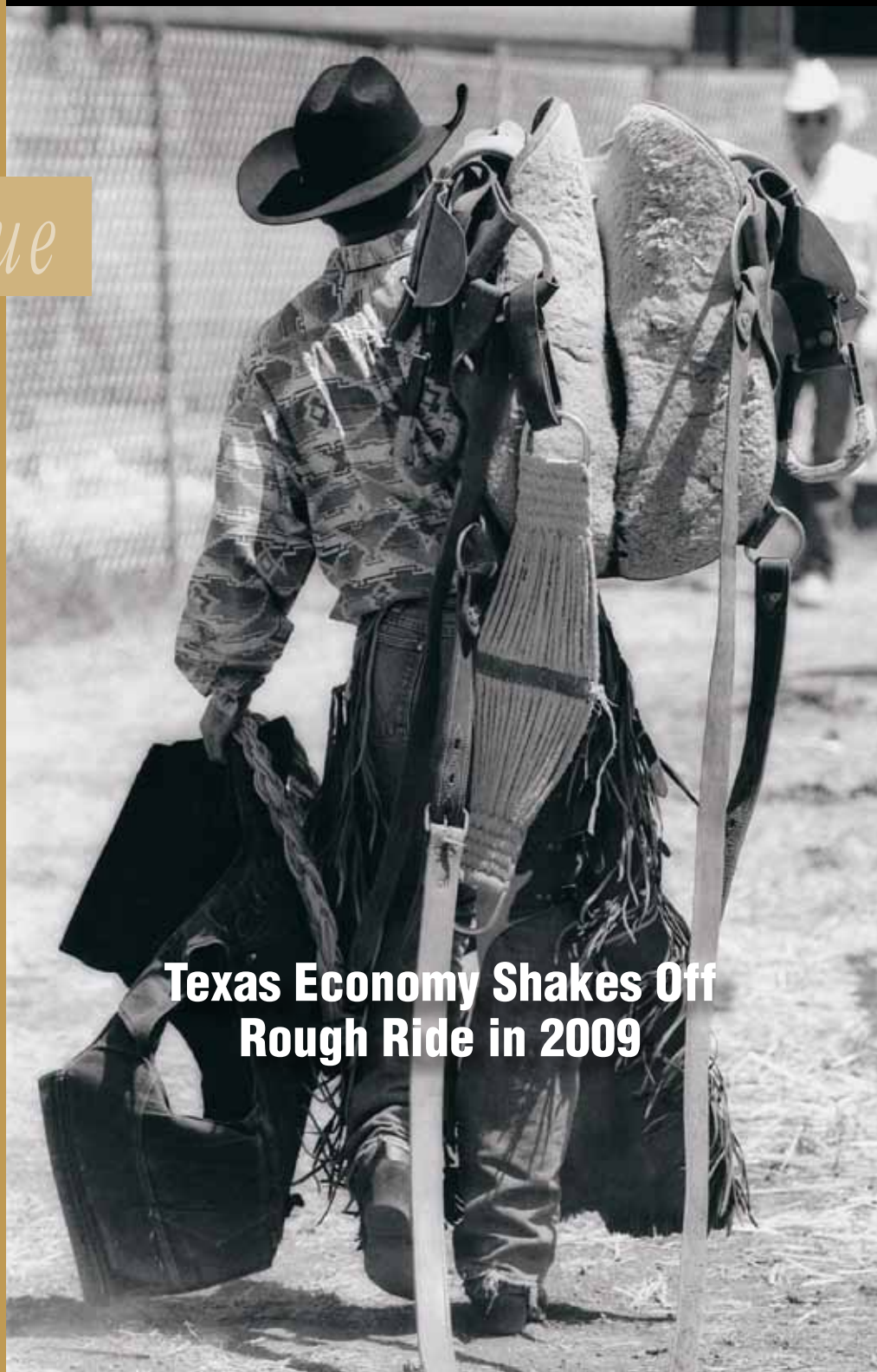
FEDERAL RESERVE BANK OF DALLAS

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*Our future prosperity
depends on fulfilling
our duty to educate
students and prepare
them for success—to
teach them to love
to learn.*

When I was a child, my mother took me twice a month to the local grocery store to purchase the latest installment of the Golden Book Encyclopedia. She insisted I read each one, cover to cover, before I could “earn” the next one.

As she put it: “You can’t expect to get by in America just relying on your looks or athletic ability.” She knew her son would need to develop mental muscles to succeed in this world. She insisted that I “learn to love to learn.”

My mother’s advice rings just as true today.

Much of the farm and factory work that once powered American economic growth has shifted to China, India and other newly capitalist societies. We still produce superb agricultural and manufactured products, but today they account for only about 12 percent of our aggregate output. Our economy is increasingly dominated by the service-pro-

viding sector. The engine that drives it is the human brain. A highly educated workforce has made the U.S. a global leader in high-tech industries, research and sophisticated services—where employers offer higher pay and better working conditions.

To maintain our nation’s competitive edge, we must stay a step or two ahead of the rest of the world. We must make a conscious and continuous effort to improve our education system because it molds the brainpower that will drive our knowledge-based economy forward. If we do not invest in it today, we will surely suffer tomorrow.

Our region is no different, and we would do well to reflect on my mother’s advice. We should be proud of our region’s natural beauty, its “good looks.” We should be proud of our professional and college sports teams, our “athletic ability.”

But our future prosperity depends on fulfilling our duty to educate students and prepare them for success—to teach them to love to learn. Making this investment requires commitment from every participant in our public education system: from the various policymakers who manage it to the families and students who are served by it.

As Richard Fry points out in this *Southwest Economy*’s “On the Record” interview, lagging Hispanic achievement in public schools represents a serious problem in both Texas and the nation (*see page 8*). If we do not address it, this issue will hinder not only the Hispanic worker but also our economy as a whole.

A handwritten signature in dark ink that reads "Richard W. Fisher". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

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



Texas Economy Shakes Off Rough Ride in 2009

By Laila Assanie and Pia Orrenius

Recent economic data and anecdotal evidence suggest the worst of the state's economic woes may be over. Activity is growing in several sectors.

Texas entered 2009 with its economy mired in recession, a consequence of the global financial crisis, collapsing energy prices and falling exports. After outperforming the nation the previous four years, the state experienced steep declines in economic activity last year that nearly matched the U.S. freefall.

Texas lost 338,600 jobs in 2009, and the state's unemployment rate rose to its highest level in 22 years.¹ The Dallas Fed's Texas Business-Cycle Index—a barometer of the state's economic health—plunged 4.6 percent from December 2008 to December 2009.

While conditions remain weak, it appears that the Texas economy is on a steadier course after a rough ride last year. Recent economic data and anecdotal evidence suggest the worst of the state's economic woes may be over. Activity is growing in several sectors. The state maintains its traditional advantages—relatively low living costs, modest taxes, a central location and an attractive business climate. Barring further setbacks, the Texas economy should pick up steam in 2010 and beyond.

Comparing Texas Recessions

Since the early 1970s, Texas has skirted three of the six U.S. recessions, thanks to high or rising oil prices, a net positive for a

state with a large energy sector.² Even so, the state joined the U.S. in three recessions and had its own downturn in 1985–87. Oil prices fell steeply in 1986 and contributed to a widespread real estate bust and banking crisis.

We use changes in employment and output to compare the 2008–09 downturn with recessions that began in 1982, 1985 and 2001.³ We date Texas recessions based on the Texas Business-Cycle Index, a measure constructed with data on Texas' payroll employment, the unemployment rate and real state gross domestic product (GDP). A rising index signals expansion, while a falling index suggests a downturn.

From the peak of economic activity in mid-2008 through December 2009, payrolls fell 3.7 percent—a deeper decline than the 3.2 percent in 1982–83, 3 percent in 1985–87 and 2.2 percent in 2001–03 (*Table 1*).⁴

Unemployment rate changes followed a similar path. From June 2008 through December 2009, unemployment rose 3.4 percentage points. The peak-to-trough increases were 2.4 percentage points in 1982–83, 2.1 percentage points in 1985–87 and 2.5 percentage points in 2001–03.

Looking at state GDP three quarters into each downturn, this recession's contraction of 5.4 percent exceeds the declines of 3.3 percent in 1982–83 and 3.5 percent 2001–03.⁵

Table 1
2008–09 Recession Hits Texas Hard

Measure	Texas recessions			
	1982–83	1985–87	2001–03	2008–09
Employment (percent change)	–3.2	–3.0	–2.2	–3.7
Unemployment rate (percentage point change)	2.4	2.1	2.5	3.4
State gross domestic product, first three quarters (percent change)	–3.3	–5.3	–3.5	–5.4

NOTE: Employment and unemployment changes are measured from peak to trough for past recessions and through December 2009 for the 2008–09 recession.

SOURCES: Texas Workforce Commission; Federal Reserve Bank of Dallas; Bureau of Economic Analysis.

The plunge this time is close to the 5.3 percent contraction experienced by the state economy during the 1985–87 oil and real estate bust.

Before the most recent recession, output and employment growth were much stronger in Texas than in the U.S. In fact, the state held its own in the first half of 2008, even as the nation slipped into recession under the weight of the housing bust. Texas' historically large declines in employment and output this time likely stem from the timing of external shocks. The financial crisis, the collapse in global trade and the plunge in energy prices delivered near-simultaneous blows to the state's large trade, energy and high-tech sectors.

Signs of Recovery

Texas has been hit much harder by the 2008–09 recession than previous ones. As 2009 drew to a close, however, hopeful signs began to emerge in the labor market and across several sectors, including manufacturing, exports, housing, energy and transportation.

Labor market losses subside. Texas' labor market contracted through most of 2009, declining 3.2 percent from December 2008 to December 2009, below the nation's –3.5 pace. The brunt of Texas' decline came in the first half of the year, when the state shed jobs at a 5 percent pace. With job losses mounting, the state's unemployment rate climbed from 6.1 percent in December 2008 to 8.2 percent one year later.

In the second half of 2009, employment losses gradually subsided. Job growth averaged about zero in the last three months of the year and turned positive in January 2010 (*Chart 1*).

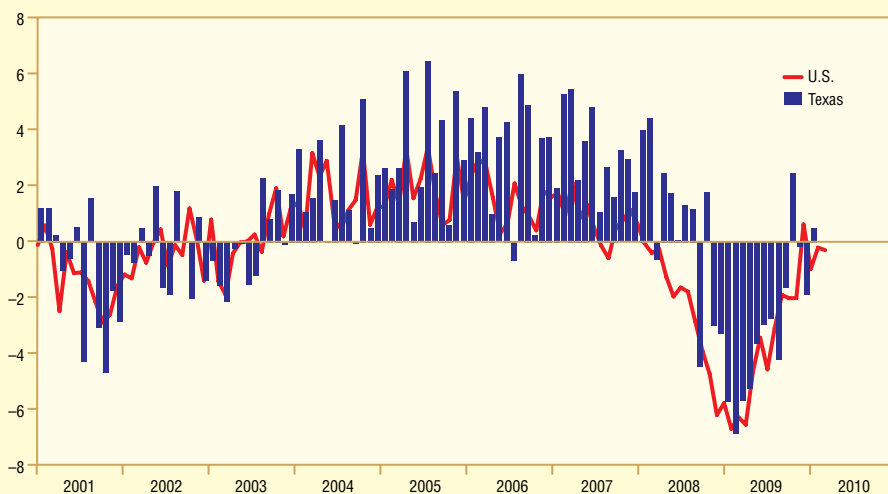
Service-providing industries held up better than goods-producing industries in 2009. The service sector shed jobs at a 1.3 percent pace from December 2008 to December 2009; meanwhile, employment in the goods-producing sector plunged 12.5 percent (*Chart 2*). This result isn't unusual: Goods-sector employment is generally much more cyclical than service-sector employment. The goods sector makes up about 15 percent of state jobs, and services accounts for the rest.

Despite the still-weak employment picture, the Texas labor market's leading indicators are improving. Initial jobless claims peaked in spring 2009 and have been falling since, suggesting the unemployment rate is at or near its high point. From October

Chart 1

Texas Job Declines Slow in Second Half of 2009

Percent (month/month, seasonally adjusted annualized rate)

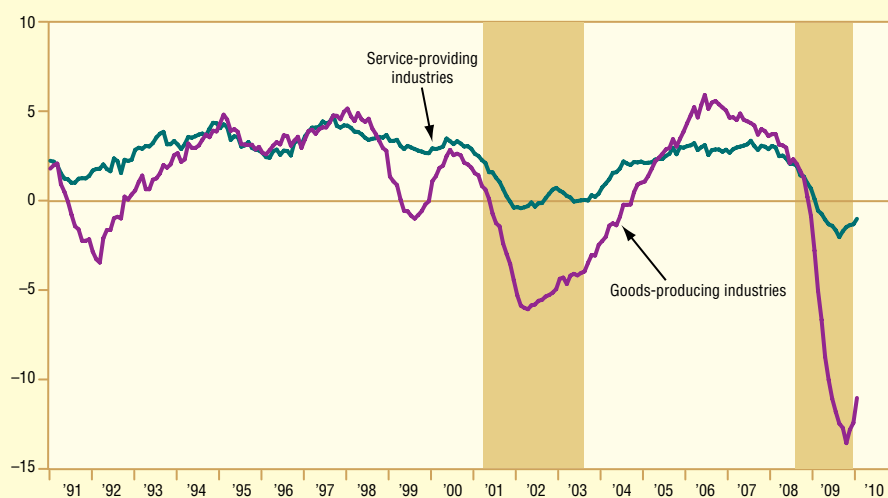


SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by the Dallas Fed.

Chart 2

Employment Growth Less Volatile for Services than Goods in Texas

12-month percent change, seasonally adjusted



NOTE: Shaded areas represent Texas recessions.

SOURCES: Texas Workforce Commission; seasonal and other adjustments by the Dallas Fed.

2009 through January 2010, the state payroll survey reported increases in weekly hours worked in manufacturing, a positive sign because hours worked tend to rise before hiring.

Since September, the Dallas Fed's Beige Book—an anecdotal survey of current economic conditions—has been reporting that most employers are finished with job cuts and are holding employment levels steady. In addition, staffing firms are noting increases

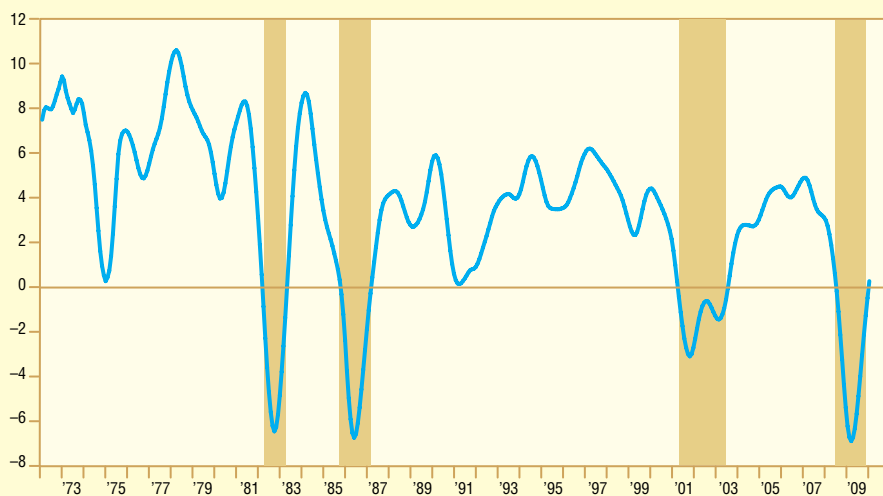
in temporary hiring, a favorable indicator because growth in short-term employment typically leads Texas job creation by about five months.

Broad indicator turns up. Declines in the Texas Business-Cycle Index have been decelerating since second quarter 2009 and the indicator grew in January, suggesting the state's economy is in recovery. The monthly declines moderated from –6.9 percent in

Chart 3

Texas Business-Cycle Index Suggests State's Recession Is Over

Percent (month/month, seasonally adjusted annualized rate)



NOTES: Shaded areas represent Texas recessions. The index is an aggregate measure of the state's current economic activity.

SOURCE: Federal Reserve Bank of Dallas.

March to -0.5 percent in December (*Chart 3*). The January increase was the first since June 2008.

A lack of fourth-quarter state GDP data is holding down the index. State economic output has been increasing since the last reading in third quarter 2009. Texas real GDP rose 1.6 percent in the third quarter, after coming in flat in the second quarter and declining 7.5 percent in the first quarter.⁶

Factory activity recovering. After a prolonged decline, the state's manufacturing sector appears to be improving. The Dallas Fed Texas Manufacturing Outlook Survey, which gauges the overall health of regional manufacturing, points to continued expansion in February. The index for production has been positive since November 2009 (*Chart 4*). The indexes for new orders and shipments, though volatile from month to month, signal moderate growth in the sector.

Anecdotal reports from business contacts confirm the uptick in activity. The February Beige Book reported continued increases in demand for high-tech, petrochemical and food products and a bottoming out in activity for transportation equipment and fabricated metals producers.

Weakness in construction-related manufacturing continues, but the rate of decline has been slowing. In January, the manufacturing sector added jobs for the first time since May 2008, and more firms reported increases in hiring, work hours or both.

Exports rising again. Texas' foreign

sales peaked in mid-2008, then contracted well into the first quarter of 2009. But the picture has brightened recently. After a relatively flat second quarter, real exports rose a solid 15.8 percent (not annualized) in the latter half of 2009, aided by a pickup in global demand and a falling dollar.⁷

The 2009 surge was largely driven by a huge jump in sales to the nation's North American Free Trade Agreement partners,

Mexico and Canada. Demand for Texas exports also rose in Asia, Latin America and Europe. In addition, the higher price of oil relative to natural gas has made chemical production competitive in the U.S., fueling demand for chemical exports. (See "Noteworthy" on page 15.)

As its trading partners' economies strengthen, Texas should see continued export gains in 2010. Mexico, the state's largest trading partner, is moving into economic recovery. Retail sales and consumer confidence are improving across the border, and industrial production has been expanding since September. Economic forecasts call for 3.9 percent GDP growth in 2010—a notable improvement from Mexico's 6.8 percent plunge in 2009.

Going forward, the recent strengthening of the dollar against the currencies of some major Texas trading partners may partly offset the state's gain from rising global trade.

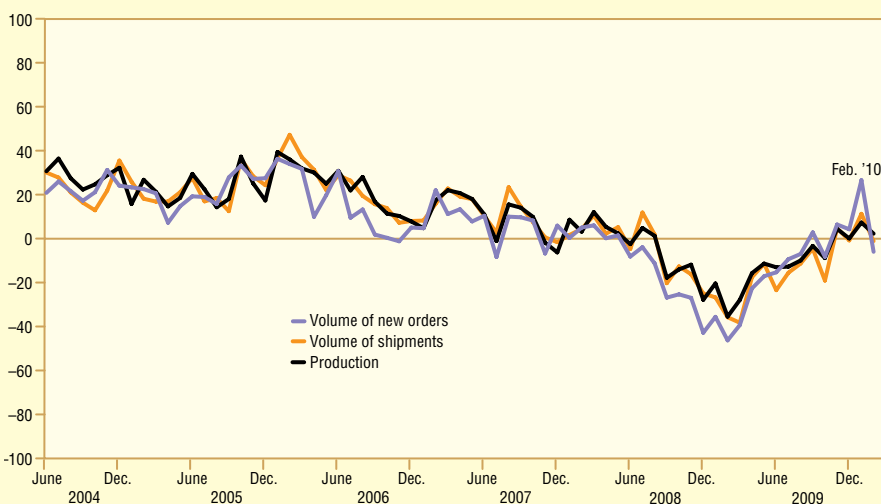
Housing indicators firming. Statistical and anecdotal reports point to stabilization in the state's residential real estate sector. Texas home sales have improved across all major metros, especially in the entry-level market, thanks to the first-time-homebuyer tax credit and low mortgage rates (*Chart 5*). Inventories of existing homes for sale are holding steady around seven months—slightly higher than the six months the industry considers healthy.

The improved housing picture has

Chart 4

Texas Manufacturing Outlook Survey Signals Recovery in Factory Activity

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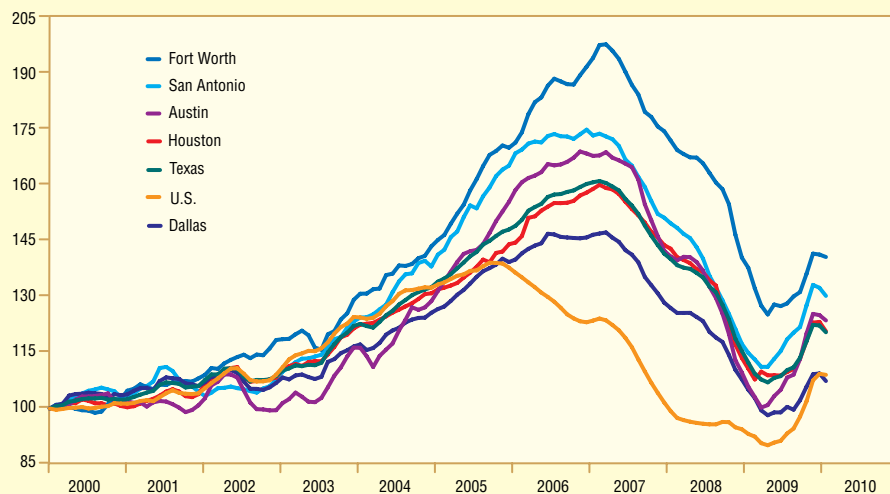


NOTE: The Texas Manufacturing Outlook Survey is a monthly survey based on manufacturers' responses to questions about their Texas operations.

SOURCE: Federal Reserve Bank of Dallas.

Chart 5
Existing-Home Sales Holding Up in Texas and U.S.

Index, January 2000 = 100*



*Six-month moving average.

SOURCES: Texas Real Estate Center; National Association of Realtors; seasonal and other adjustments by the Dallas Fed.

helped Texas home prices. The seasonally adjusted Federal Housing Finance Agency (FHFA) purchase-only price index, which includes repeat home sales financed with conventional mortgages, posted increases in the last three quarters of 2009. Multiple listing service data—a broader measure than the FHFA index because it also includes homes financed with unconventional mortgages—suggest Texas home prices rose modestly in 2009 compared with the previous year.

Residential construction activity has bottomed out. Housing permits and contract values have been rising since spring. Dallas Beige Book contacts report that single-family housing starts are increasing. However, overall housing starts—which don't separate single-family and multifamily dwellings—haven't recovered since hitting a low point in April 2009. The rise in single-family starts is likely being offset by a decline in multifamily construction.

On the downside, a weak economy and high unemployment rates have led to record increases in Texas mortgage delinquencies and foreclosures. Delinquencies remained on a steep trajectory in 2009, rising from 3.4 percent of mortgages in the third quarter to 3.6 percent in the fourth. The share of loans for which a foreclosure was initiated edged down from 0.9 percent to 0.8 percent of mortgages over the same period.⁸ Still the foreclosure rate remains high compared with year-ago levels.

Rising mortgage delinquencies and a high foreclosure rate pose a significant risk to the recovery in the state's housing market. They add to inventories, put downward pressure on prices and hurt banks' ability to lend. However, a Dallas Fed study found that foreclosures are likely to remain low in Texas compared with the U.S.⁹

Energy activity supported by higher oil and gas prices. A sizeable contraction in the energy sector, brought about by the slump in oil and natural gas prices, contributed to Texas' weak economic performance in late 2008 and early 2009.

But energy prices were on the upswing by the second half of the year, due in part to improved demand. A rise in oil-related drilling activity helped boost the rig count from a low of 320 in mid-June to 565 in February 2010.

For much of 2009, natural gas drilling activity remained depressed due to low prices and bloated inventories, but a reversal of these factors during the cold winter has boosted gas-directed drilling. Business contacts note that shale-based natural gas drilling—much of which is outside Texas—is likely to prevail on a longer horizon over activity in conventional gas-bearing regions like the Panhandle, South Texas and East Texas.

Despite the production increase, the energy employment picture remains weak.

Health care expands strongly. The only recession-proof sector in this downturn has been health care services. Employment

in medical services expanded at a 4.3 percent rate in 2009, adding 42,300 jobs between December 2008 and December 2009.

Health care demand is rising nationwide as the population ages and new technology enhances the delivery of medical services. Texas' population grew at twice the national pace last year, providing another spur for health care employment. Rising demand for medical services has also bolstered hospital and medical office construction in the state.

Transportation seeing a turnaround. Texas' central location in the U.S. has made it a prime spot for some of the world's largest airlines. The state also boasts large ports and is a major trade route to Mexico. Despite these advantages, payrolls in the state's transportation and warehousing sector shrank by 6.3 percent, or 24,500 jobs, last year.

A faltering economy and rising unemployment weakened discretionary spending and business and leisure travel. Airlines continued to lower costs by cutting capacity and payrolls. Trucking and warehousing employment plunged due to sluggish consumer demand.

However, weakness in this sector is abating, and transportation and warehousing employment is up from its November low. Beige Book contacts in this sector have also reported that activity appears to be stabilizing at low levels.

Sustained Headwinds

Lingering risks temper the optimism created by signs of a budding recovery in the Texas economy. Consumers remain cautious, given the high unemployment rate. Tight bank lending standards, depressed conditions in commercial real estate, low venture capital investment, rising mortgage delinquencies and weakness in the national economy could stall the nascent recovery.

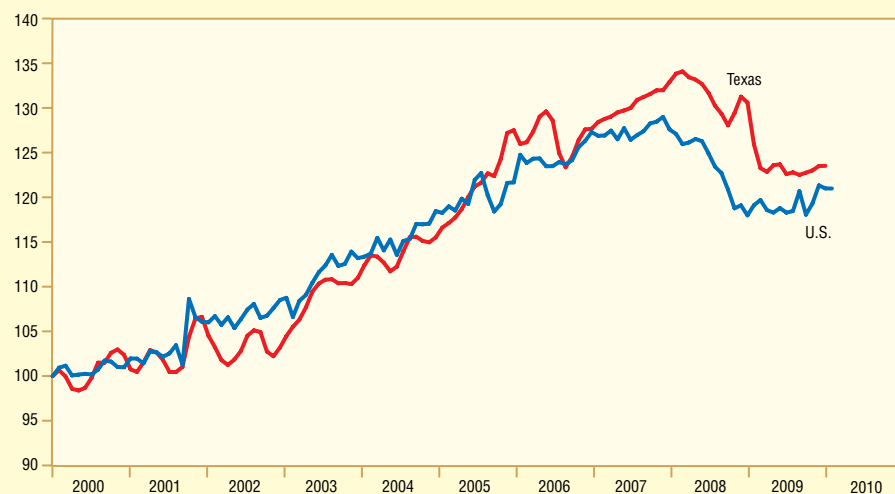
Additionally, some of the current growth has been supported by government intervention in the form of public-sector hiring and various stimulus programs. Much of this aid is slated to end in 2010.

Households still fragile. Consumer spending—which makes up the lion's share of Texas' economy—remains flat and may continue to constrain growth. Tight credit conditions, reduced household wealth from the housing bust, higher savings rates and weak job prospects are suppressing spending.

According to Dallas Fed estimates, Texas retail began recovering in mid-2009, after

Chart 6**Texas Retail Sales Remain Flat**

Index, January 2000 = 100*



*Seasonally adjusted, real dollars.

SOURCES: U.S. Census Bureau; Federal Reserve Bank of Dallas.

Chart 7**Sharp Rise in Texas Leading Index Suggests Modest Job Growth Likely in 2010**

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NOTE: The index is a composite of eight leading indicators that can predict movements in the state economy.

SOURCE: Federal Reserve Bank of Dallas.

falling for over a year (*Chart 6*).

The February Beige Book found retail activity increased the first two months of the year and sales were up year over year. Still, the outlook is cautiously optimistic, with contacts expecting a slow recovery in sales as the unemployment rate stabilizes and credit eases.

Commercial real estate woes continue. Commercial real estate continues to struggle. Rents are falling, vacancies are high and new building activity is almost nonexistent outside of education, health care and government. In 2009, sales of commercial properties were weak, posting year-over-year declines of 76 percent in

Austin, 66 percent in Houston and San Antonio and 64 percent in Dallas.¹⁰

Banks in the Dallas Fed's Eleventh District have twice the national share of commercial real estate loans on their books, and the number of noncurrent loans has been climbing. The share of distressed commercial properties has also been rising across all major metros. Business contacts report uncertainty about how banks will rework loans on these distressed commercial properties.

On a positive note, in fourth quarter 2009, noncurrent commercial real estate loans as a share of total commercial real estate loans was 4 percent for Texas banks, relatively low compared with the nation's 7.1 percent. Business contacts also report rising investor interest in commercial properties. Even so, activity in the sector isn't expected to rebound until 2011.

Venture funding shrinks. Venture capital investment fuels new ventures and enterprises that generate jobs. In 2009, Texas venture capital investment was \$644 million, off 50 percent from its 2008 level. The nation's decline was 37 percent. At the same time, Texas' share of total U.S. venture capital ebbed from 4.6 percent in 2008 to 3.6 percent last year.¹¹

A large portion of Texas venture capital investment over the past three years has gone to the industrial and energy sectors, so falling energy prices explain some of the decline. The global financial crisis and U.S. recession are other factors restraining Texas venture capital investment.

What's in Store?

The Texas Leading Index, the Dallas Fed's barometer of future economic activity, has improved significantly in recent months (*Chart 7*). It climbed 16.8 percent from March to December, suggesting that job growth will pick up in coming months.

All of the index's eight components rose over the last half of 2009. The largest positive contributors were a significant improvement in the U.S. Leading Index, a decline in jobless claims, a rise in average weekly hours worked, an uptick in the Texas Stock Index and a decrease in the Texas export-weighted value of the dollar.

The employment forecast based on the leading index suggests Texas will see modest employment growth of 1 to 2 percent in 2010. While this increase will likely put Texas ahead of the nation once again, it leaves the state well below its historical

(Continued on back page)

Why Hispanic Education Deficits Persist

Economist Richard Fry, senior research associate at the Pew Hispanic Center, a Washington think tank, discusses the challenges of improving educational outcomes for the country's rapidly growing Hispanic population.

Q: How big is the Hispanic student population in the U.S. and Texas?

A: Expanded immigration from Mexico and other Latin American countries since 1980 has greatly enlarged the number of Hispanic students. The nation's public schools educated 10.2 million Hispanics in 2007–08—about 21 percent of all students. White students were about 56 percent and black students about 17 percent.

Hispanic students are already a plurality in Texas. The public schools educated 2.2 million Hispanics in 2007–08, or 47 percent of the state's students. Whites were at 35 percent and blacks at 14 percent.

Because Hispanic students are younger than non-Hispanic students, they make up even larger shares of elementary school enrollments in Texas and the nation. For example, Hispanics were almost 50 percent of Texas' prekindergarten-to-sixth grade enrollment in 2007–08.

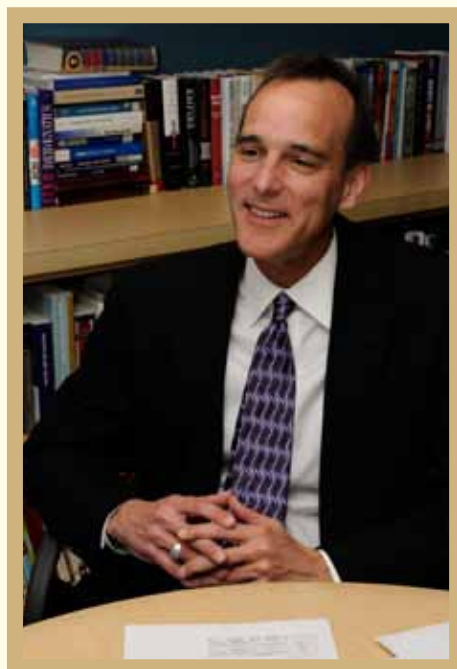
The nation's Hispanic student population will grow rapidly. The Census Bureau projects it will climb 166 percent by 2050, while the number of non-Hispanic students will increase just 4 percent.

Q: Where are Hispanic students concentrated?

A: California, Texas, Florida, New York, Arizona and Illinois educated seven of 10 Hispanic students in 2007–08—but these six states had an even larger portion in 1990. City school districts educate about 47 percent of Hispanic students, but the Hispanic population is increasingly suburban, dispersing Hispanic enrollments. About 36 percent of Hispanic students are in suburban schools, up from 29 percent in the early 1990s.

Q: How do Hispanics compare with other demographic groups in educational outcomes?

A: Nationally, Hispanic elementary school



students are already behind academically. According to "The Nation's Report Card," put out by the U.S. Department of Education, about half of white 9-year-olds can perform numerical operations and start solving problems. Only a quarter of black and Hispanic 9-year-olds show this level of mathematics proficiency.

I'm not an expert in early-childhood education, but we know that early academic difficulties strongly predict later difficulties in staying in school. Since 1980, Hispanics have made some progress in graduating from high school, but they still have high dropout rates. Among 16- to 19-year-olds nationally, about 11 percent of Hispanics were high school dropouts in 2008, compared with 5 percent of whites and 8 percent of blacks.

Hispanic college enrollment rates also lag. In 2008, about 43 percent of Hispanic high school graduates 18 to 24 years old were in college. Comparable figures were 54 percent for white graduates and 48 percent for black graduates.

U.S.-educated Hispanic teenagers aren't that far behind their white peers in completing high school. And many of them pursue some form of postsecondary education. The big difference is in completing bachelor's degrees. About 11 percent of Hispanics 25 to 29 years old have finished college, well below the 33 percent for whites and 18 percent for blacks.

Q: What about Texas?

A: College enrollment is a bit lower. In Texas, 41 percent of Hispanic high school graduates 18 to 24 years old were in college. The state's college enrollments for whites and blacks were also a bit lower—52 percent and 45 percent, respectively. Otherwise, Texas' measures of Hispanic educational attainment closely resemble the nationwide outcomes.

Q: What are key factors at work?

A: Let's start with the elephant in the room. English proficiency is an important prerequisite to success in American classrooms. Some Hispanic students are English-language learners, and they face the large, sophisticated task of acquiring a second language. The task is difficult, but it should be noted that English acquisition applies to a minority of Hispanic students. Among Hispanic children ages 5 to 9, for example, only a quarter speak English with difficulty. So language is an important factor but far from the only one.

Another factor is disadvantaged socioeconomic backgrounds. I think this is best captured by parental education rather than poverty rates or income. Hispanic students are much less likely than white students to have parents who finished high school—and less likely still to have parents who are college educated.

I'll add one more thing. Hispanic students trail other groups in achievement and high school completion because of where they go to school. In Texas, more than half of Hispanic students attend schools with nonwhite enrollments of 90 percent or more. These schools differ from those educating white students. For example, Hispanic students attend bigger high schools, where stu-

*“U.S.-educated Hispanic teenagers aren’t that far behind
their white peers in completing high school.
The big difference is in completing bachelor’s degrees.”*

dents tend to perform less well academically and are more likely to drop out.

Q: What’s behind the large college gap?

A: One key is academic preparation. Hispanic undergraduates aren’t as well prepared, and persistence in college partly reflects the skills acquired in high school. But equally well-prepared Hispanic and white youths tend to take different pathways.

White high school graduates tend to enroll at more academically selective colleges and universities, which do a better job of ensuring that their students graduate. Hispanic undergraduates are more heavily concentrated at the lower rungs of American higher education—at less academically selective colleges and universities with lower graduation rates.

Hispanic youths enroll in community colleges to a greater extent than their white and black peers. Part of this is geography. Hispanic youths are concentrated in six states with well-developed community-college systems. After accounting for geography, however, Hispanic youths still disproportionately enroll in two-year colleges. Undergraduates who start at two-year colleges are less likely to get their degrees.

College affordability is an issue with some nuances. The largest cost of college is foregone earnings, which don’t vary whether a student goes to a community college or an elite university. If we factor in publicly provided and institutional aid, the net undergraduate tuition across different kinds of postsecondary education isn’t all that different in the U.S. I suspect that’s also true in Texas.

So I think that, aside from the very difficult task of understanding how to increase Hispanic academic preparation for success in college, we need a better understanding of Hispanics’ choice of postsecondary education in Texas as elsewhere.

Q: Do we see significant gender differences in educational outcomes?

A: Young Hispanic females have made tremendous strides since 1970 and have eclipsed their male counterparts in educational attainment. Hispanic females are less likely than

males to drop out of high school. Among Hispanic high school graduates, females are more likely to be enrolled in college. These gender differences aren’t distinctly Hispanic. Young women of all racial and ethnic identities have eclipsed males in many educational measures.

I don’t think we have a full explanation for women’s ascendance in U.S. schooling. One factor is motherhood. Young mothers are much less likely to be enrolled in school than women of similar age without parenting responsibilities. Since 1970, young motherhood has declined among Hispanic females, and this is clearly associated with the falling dropout rates. However, most Hispanic female dropouts aren’t mothers, so other factors come into play.

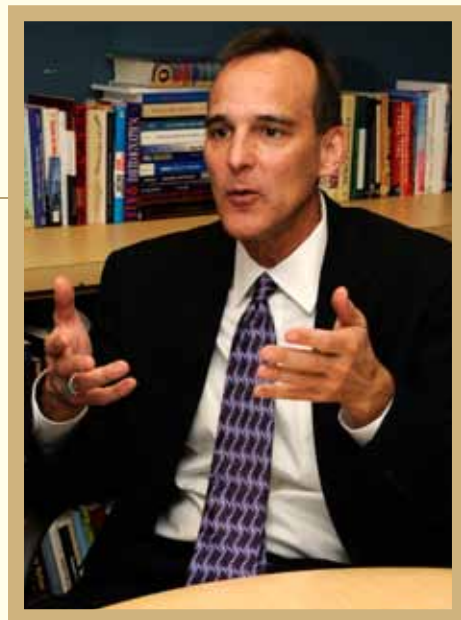
Q: What role does immigration play in the lower educational outcomes among Hispanics?

A: Most Hispanic immigrants arrive in the U.S. as adults. Their education reflects the schooling they received in their home countries. On average, they’re much less educated than U.S.-born adults.

We really haven’t seen increases in the number of students who are immigrants themselves, so immigration can’t directly explain the educational performance of Hispanic children and youths.

Among Texas Hispanics, 45 percent of the 5.7 million adults are immigrants, while fewer than 8 percent of the 3.1 million children are immigrants. Most Hispanic kids in Texas started school in the U.S. Their performance reflects their education in Texas schools, not schools in Mexico and countries in Central and South America.

Immigrants are often young adults in their family-forming years. In 1980, 30 percent of Hispanic children were the U.S.-born offspring of immigrant parents, or second generation. By 2007, the share had grown to 52 percent. The rise of the second generation implies that more students speak Spanish at home and are exposed to English primarily when they start kindergarten. It also implies that more students have parents who were educated outside the U.S. and who lack familiarity with the practices and pathways of American education.



Q: What are the consequences of Hispanics’ lower educational levels—for them and society at large?

A: The impact of education on wage rates, unemployment and other aspects of work is well known. The typical 25- to 34-year-old Hispanic male with a high school education earns about \$25,000 per year. His college-educated counterpart makes about \$46,000.

But education is associated with many aspects of life beyond the labor market. More education increases the likelihood of voting and participating in civic activities. Less education is strongly related to the likelihood of engaging in crime and interacting with the justice system.

Finally, education is strongly related to marriage and family life. In 1970, native-born Hispanic high school dropouts were just as likely as native-born Hispanic college graduates to be married. No longer. Among native-born Hispanic women, 46 percent of dropouts are married, compared with 61 percent of college graduates.

As for the economy, Hispanics are a young enough and big enough population to make a big impact on our labor force. The Bureau of Labor Statistics projects labor force growth of 45 million workers by 2050—of which 27 million will be Hispanic. A large share of the additional Hispanic workers will be U.S. educated. Whether we continue to have a more-educated workforce depends in part on increasing the education and skills of Hispanic youths.

Texas' Latino Pay Gaps: Taking a Closer Look

By Emily Kerr, Pia Orrenius and Madeline Zavodny

Education explains more than half of the Latino pay gap vis-à-vis non-Hispanic whites in the state and 20 percent of the gap vis-à-vis Latinos outside Texas.

Latino workers in Texas are on the short end of two pay gaps. They earn substantially lower wages than the state's non-Hispanic white workers. They also earn less than Latinos working in other parts of the U.S.

In the fourth quarter 2009 issue of *Southwest Economy*, we identified lower educational attainment and such characteristics as immigrant status and country of origin as key factors in explaining Texas Latinos' relatively low wages. We now want to dig deeper into the Latino pay gaps. Two key questions remain unexplored. First, can we quantify the educational and demographic factors' relative contributions to the Latino wage gaps? Second, what role does occupational choice play in Texas Latinos' lower earnings?

We find that education explains more than half of the Latino pay gap vis-à-vis non-Hispanic whites in the state and 20 percent of the gap vis-à-vis Latinos outside Texas. English fluency and state-level characteristics—such as cost of living, geography, history and institutions—likely account for much of the remaining wage deficit of Latinos in Texas.

We also find that occupational choice explains some of the wage gap within Texas but little to none of the disparities across states.

SECOND OF TWO PARTS

The Gap Within Texas

To get a closer look at the earnings differential within Texas, we rely on the Census Bureau's Current Population Survey (CPS).¹ The data suggest that for the past decade and a half, Latinos' weekly wages have been 46 percent lower on average than wages of non-Hispanic whites.²

This is the unadjusted wage gap for all Latinos (*Table 1*). The gap is wider for Latino immigrants, who earn 58 percent less than non-Hispanic whites. It's narrower for native-born Latinos, who earn 38 percent less. It's puzzling that such substantial wage inequality exists among natives since second-generation or higher Latinos are all U.S. citizens and are largely fluent in English.

Differences in age, sex and marital status have very little impact on the wage gap for Latinos vis-à-vis non-Hispanic whites. After accounting for these demographic characteristics, the wage gap for all Latinos remains largely unchanged at 45 percent.

However, education matters quite a lot,

Table 1

Over Half of Latino Wage Gap in Texas Is Due to Lower Education

Remaining wage gap for Latinos vis-à-vis non-Hispanic whites in Texas (percent)

	All Latinos	Native-born Latinos	Immigrant Latinos
Unadjusted	-46	-38	-58
Adjusted for			
Age, sex, marital status	-45	-33	-62
Add education	-20	-15	-30
Add citizenship, immigrant status	-17	n.a.	-24

NOTE: We use the log of real weekly wages among Texas workers ages 20–64 as the dependent variable in least squares regressions on the Latino dummy variable (row 1), adding demographics (row 2), education (row 3) and immigration variables (row 4). In each case, the wage gap is the coefficient on the Latino dummy variable.

SOURCE: Authors' calculations using 1994–2009 Current Population Survey data.

Table 2

Lower Education Contributes to Cross-State Latino Pay Gap

	Remaining wage gap for Texas Latinos vis-à-vis U.S. Latinos (percent)		
	All Latinos	Native-born Latinos	Immigrant Latinos
Unadjusted	-10	-17	-12
Adjusted for			
Age, sex, marital status	-10	-18	-13
Add education	-8	-13	-9
Add citizenship, immigrant status	-11	n.a.	-9

NOTE: We use the log of real weekly wages among Latino workers ages 20–64 as the dependent variable in least squares regressions on the Texas dummy variable (row 1), adding demographics (row 2), education (row 3) and immigration variables (row 4). In each case, the wage gap is the coefficient on the Texas dummy variable.

SOURCE: Authors' calculations using 1994–2009 Current Population Survey data.

accounting for more than half of the earnings gap in Texas. Controlling for differences in educational attainment, the wage gap between Latinos and non-Hispanic whites shrinks from 45 percent to 20 percent.

This reflects the wide differences in educational outcomes. Forty percent of Texas Latinos age 25 and older didn't graduate from high school, compared with 5 percent for non-Hispanic whites. Only 11 percent of Latinos earned college degrees, well below the 38 percent for non-Hispanic whites. (*The "On the Record" conversation with Pew Hispanic Center's Richard Fry on page 8 features a wide-ranging discussion of the Latino gap in educational outcomes.*)

Some of the remaining wage differences between Latinos and non-Hispanic whites in Texas can be explained by different attributes of Latino immigrants, such as U.S. citizenship. Factoring in differences in these characteristics further shrinks the gap in overall Texas Latinos' earnings to 17 percent. Accounting for the fact that many Latino immigrants are not citizens leaves an adjusted wage gap of 24 percent for foreign-born Latinos. The larger immigrant wage gap, as compared with the native Latino wage gap, is most likely due to a lack of English fluency, which we cannot control for in the comparison because this variable is not included in the CPS data.

The Gap With the U.S.

We look next at the wage gap between Latinos in Texas and the rest of the U.S., starting with the native-born. They constitute the majority of Latinos in Texas but earn 17 percent less than native Latinos in the rest of the U.S. (Table 2).

As with the in-state wage gap, differences in age, sex and marital status are largely irrelevant. Lower educational attainment in

Texas is a contributing factor, but the wage gap only shrinks to 13 percent when we control for differences in schooling.

For Texas' Latino immigrants, the unadjusted wage gap is 12 percent. Once again, basic demographic characteristics play a negligible role. The impact of education is comparable to native-born Latinos, explaining less than a third of the wage differential between foreign-born Latinos in Texas and other states. After controlling for age, sex, marital status, education and citizenship, the wage deficit among Latino immigrants in Texas shrinks to 9 percent. Among all Latinos, the adjusted cross-state wage gap is 11 percent. Adjusting for differences in immigrant status increases the gap because so many Texas Latinos are U.S.-born, and native-born Latinos earn less in Texas than elsewhere.

What explains the remaining gap? It's likely that the cost-of-living differential between Texas and other states that have large populations of Latinos plays an important role, but so do the state's proximity to Mexico, long history of discrimination and relatively low minimum wage.

According to the American Chamber of Commerce Research Association, Texas has the nation's eighth-lowest cost of living.³ California, home to the largest population of Latinos, ranks 49th—that is, it has the second-highest cost of living. Florida and New York, other states with large Latino populations, are ranked 30th and 44th. With the state's relatively low cost of living, Texas employers can pay workers less. The lower wages show up in cross-state comparisons, but Texans aren't necessarily worse off because the lower living costs translate into higher real wages.

Proximity to Mexico and the border wage penalty may also explain some of

Proximity to Mexico and the border wage penalty may also explain some of the wage deficit for Texas Latinos.

the Texas wage deficit. About 23 percent of Texas Latinos live in border cities, and one study found that Mexican immigrants working in the region earn 16 percent to 20 percent less than those who migrated into the U.S. interior.⁴

In theory, this localized earnings penalty should disappear over time—if workers are sufficiently mobile. However, Latino immigrants may not exercise their mobility if they have strong preferences for staying along the border for cultural, language or geographical reasons.⁵

Texas has a history of discrimination against Latinos, particularly in education. Mexican-Americans endured inferior and separate schooling for decades, with lasting consequences.⁶ As of the 2005–06 school year, Texas was the second-most segregated state for Latino students.⁷ In addition, Latinos have often been pushed toward vocational occupations rather than encouraged to pursue more schooling.⁸

Policy differences may also affect the remaining wage gap for both native-born and immigrant Latinos. The minimum wage is a prime example. While other large states with substantial Latino populations set minimum wages above the federal rate, Texas simply adopts the national standard. A relatively low minimum wage helps employment grow but may also keep wages relatively low in entry-level jobs.

The Jobs Latinos Hold

Does the occupational distribution of Texas Latinos provide any clues to the earnings deficit?

To address this question, we use CPS data from 2003–09, a period during which consistent occupation codes are available. We calculate Latino workers' relative occupation shares—the fraction of Latino workers in an occupation divided by the fraction of non-Hispanic workers in that occupation. When the ratios exceed 1, Latinos are overrepresented in that occupation.

For Texas Latinos, we find the highest ratios in building and grounds maintenance, construction, food preparation, farming and fishing, production and transportation (*Table 3*). These are largely low-paying jobs that don't require high levels of education.

In higher-paying occupations—such as computer, mathematical, life, physical and social sciences as well as architecture, legal, management, business and finance—ratios are far below 1, indicating that Texas Latinos are very unlikely to have these occupations.

Table 3

Texas Latinos Overrepresented in Low-Wage Occupations

Occupation	Relative share of Latino workers
Building and grounds cleaning and maintenance	4.1
Construction and extraction	3.1
Food preparation and serving	2.5
Farming, fishing and forestry	2.2
Production	2.0
Transportation and material moving	1.6
Health care support	1.4
Installation, maintenance and repair	1.1
Personal care and service	1.0
Office and administrative support	.9
Sales and related	.7
Protective services	.7
Community and social services	.6
Education, training and libraries	.5
Arts, design, entertainment, sports	.5
Health care practitioners and technical	.4
Business and financial operations	.4
Management	.4
Legal	.3
Architecture and engineering	.3
Life, physical and social sciences	.3
Computers and mathematical sciences	.2

NOTE: Shown is the ratio of the share of Latinos in a given occupation category to the share of non-Latinos in a given occupation category.

SOURCE: Authors' calculations using 2003–09 Current Population Survey data.

Adding occupations to our analysis allows us to measure the effect of job choice on in-state wage differences between Latinos and non-Hispanic whites. We find the wage gap shrinks from 16 percent to 12 percent, suggesting that occupation accounts for 25 percent of Texas Latinos' remaining earnings deficit (*Table 4*).

Turning to cross-state Latino wage comparisons, we find that higher shares of Texas Latinos work in construction, office and administrative support and sales jobs

(*Table 5*). They're also overrepresented in education and health sector jobs but less likely to be employed in farming and fishing work than Latinos elsewhere. A smaller proportion of Texas Latinos hold production and food-service jobs.

Despite significant differences in Latino occupational choice across states, adding this factor to our gap analysis has no effect on the cross-state wage gap (*Table 4*). Adding occupation variables leaves the adjusted wage gap at 11 percent.

Table 4

Occupation Affects Latino Wage Gap In-State but Not Cross-State

	Remaining wage gap (percent)	
	Latinos vis-à-vis non-Hispanic whites in Texas	Texas Latinos vis-à-vis U.S. Latinos
Unadjusted	–46	–10
Adjusted for		
Age, sex, marital status, citizenship, immigrant status	–34	–15
Add education	–16	–11
Add occupation	–12	–11

NOTE: We use the log of real weekly wages among workers ages 20–64 as the dependent variable in least squares regressions on the Latino and Texas dummy variables (row 1), adding demographics and immigration (row 2), education (row 3) and occupation variables (row 4). The wage gap is the coefficient on the Latino dummy variable (column 1) and the Texas dummy variable (column 2).

SOURCE: Authors' calculations using 2003–09 Current Population Survey data.

Table 5
Latino Occupational Choice Varies Across Texas, U.S.

Occupation	Distribution of Latino workers					
	All Latinos		Native-born Latinos		Immigrant Latinos	
	Texas	U.S.	Texas	U.S.	Texas	U.S.
Construction and extraction	14.2	12.8	7.9	6.9	22.9	16.6
Office and administrative support	12.7	11.6	17.8	18.5	5.7	7.2
Sales and related	9.4	8.4	11.5	11.4	6.4	6.5
Production	9.4	10.7	6.9	6.1	12.9	13.7
Transportation and material moving	8.4	8.2	7.7	6.8	9.4	9.2
Building and grounds cleaning and maintenance	9.8	7.9	4.4	4.0	12.8	13.5
Food preparation and serving	7.6	8.4	5.3	5.1	10.8	10.6
Management	5.4	5.4	6.8	7.8	3.4	3.9
Installation, maintenance and repair	4.3	3.5	4.5	3.9	4.1	3.3
Education, training and libraries	3.5	2.7	4.8	4.5	1.7	1.6
Personal care and service	3.0	3.2	3.4	3.7	2.4	2.9
Health care support	2.5	2.1	3.3	2.8	1.5	1.6
Health care practitioners and related	2.3	2.0	3.4	3.3	.8	1.1
Business and financial operations	2.2	2.3	3.2	3.8	.8	1.3
Protective services	1.7	1.5	2.6	2.9	.6	.5
Farming, fishing and forestry	1.2	2.4	.7	.6	1.8	3.6
Arts, design, entertainment, sports and related	1.2	.9	1.1	1.6	.7	.9
Community and social services	.9	1.1	1.3	1.9	.4	.6
Architecture and engineering	.9	.9	1.2	1.3	.5	.6
Computers and mathematical sciences	.8	.9	1.1	1.5	.4	.5
Legal	.4	.6	.7	1.1	.1	.2
Life, physical and social sciences	.3	.4	.4	.6	.1	.3

NOTE: Shown is the fraction of the Latino workforce in a given occupation category in Texas and in the rest of the U.S.

SOURCE: Authors' calculations using 2003–09 Current Population Survey data.

A Permanent Wage Gap?

Part One of this article pointed to education as a key factor keeping Texas Latinos' wages low. We have now quantified this effect, finding that educational attainment explains 55 percent of the in-state Latino wage gap vis-à-vis non-Hispanic whites and 20 percent of the gap relative to Latinos living in other states.

The less educated tend to become low-wage workers. In post-2002 data, taking occupation into account further narrowed the in-state gap vis-à-vis non-Hispanic whites by 25 percent, although it did nothing to shrink the cross-state gap with other Latinos.

To a large extent, education and occupation are matters of individual choice and institutional responsibility. Improving educational outcomes of Texas Latinos will give them access to higher-paying occupations.

The importance of investing more in Latino education hasn't been lost on Texas policymakers. Implemented in 1993, Texas' controversial "Robin Hood" scheme of school finance, which redistributes tax revenue from rich to poor school districts, has greatly benefited the financially disadvan-

tagged districts, many of which serve mostly Latino and other minority students.⁹

Other educational reforms have targeted higher education. For example, a 1997 rule guarantees public university admission to high school students who graduate in the top 10 percent of their classes. Research finds the rule, which was implemented after race-based quotas were scrapped, has had a positive impact on minority enrollment.¹⁰

Another law grants in-state tuition to undocumented immigrant students. It can improve educational outcomes but will not pay off in the labor market since these immigrants can't legally work, a constraint more likely to be binding in high-wage than low-wage occupations.¹¹

All told, most of the Texas Latino wage gap relative to non-Hispanic whites in our state can be explained by characteristics such as education, immigrant status and occupational choice. Some characteristics—such as immigrant status—are out of reach for state policymakers. But targeting educational outcomes would likely pay off in reducing occupational inequality and increasing Latino wages.

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Notes

¹ We use the outgoing rotation group files of the Census Bureau's Current Population Survey, a large-scale monthly poll of about 50,000 U.S. households.

² This number represents the average wage differential for 1994–2009 and is therefore different from the wage differential displayed in Table 1 of Part One of this article, which represents the average wage differential for 2007–09.

³ Report can be found at www.missourieconomy.org/indicators/cost_of_living/index.stm.

⁴ See "Differences Between Mexican Migration to the U.S. Border and the Interior," by Pia M. Orrenius, Madeline Zavodny and Leslie Lukens, in *Labor Market Issues Along the U.S.–Mexico Border*, Marie T. Mora and Alberto Dávila, eds., Tucson: University of Arizona Press, 2009, pp. 139–59.

⁵ For further discussion on this topic, see "Changes in the Relative Earnings Gap Between Natives and Immigrants Along the U.S.–Mexico Border," by Alberto Dávila and Marie T. Mora, *Journal of Regional Science*, vol. 48, no. 3, 2008, pp. 525–45.

⁶ See "Let All of Them Take Heed": *Mexican Americans and the Campaign for Educational Equality in Texas, 1910–1981*, by Guadalupe San Miguel Jr., College Station: Texas A&M University Press, 1987.

⁷ Calculated as the percentage of Latino students in 90 to 100 percent minority schools. See "Historic Reversals, Accelerating Resegregation, and the Need for New Integration Strategies," by Gary Orfield and Chungmei Lee, The Civil Rights Project, UCLA, August 2007.

⁸ See *The Other Struggle for Equal Schools: Mexican Americans During the Civil Rights Era*, by Rubén Donato, Albany: State University of New York Press, 1997.

⁹ For a more detailed analysis, see "Improving Public School Financing in Texas," by Jason Saving, Fiona Sigalla and Lori Taylor, Federal Reserve Bank of Dallas *Southwest Economy*, no. 6, 2001.

¹⁰ See "Policy Transparency and College Enrollment: Did Texas Top Ten Percent Law Broaden Access to the Public Flagships?" by Mark C. Long, Victor Saenz and Marta Tienda, *Annals of the American Academy of Political and Social Science*, vol. 627, no. 1, 2010, pp. 82–105.

¹¹ Research suggests the returns to education for undocumented immigrants from Mexico are small. See "Illegal Immigrants in the U.S. Economy: A Comparative Analysis of Mexican and Non-Mexican Undocumented Workers," by Francisco L. Rivera-Batiz, in *International Migration: Trends, Policy and Economic Impact*, Slobodan Djajic, ed., London: Routledge, 2001, pp. 180–203.

Mexicans living in the U.S. are sending less money home. In 2009, remittances to Mexico totaled \$21.5 billion, a 15 percent decline from 2008. With the exception of October 2008, remittances have been decreasing since mid-2007 (*Chart 1*).

Remittances represent significant income for Mexico's economy. In 2008, inflows of \$25.3 billion equaled roughly 3 percent of Mexico's GDP and nearly 60 percent of oil-export revenues, and they exceeded foreign direct investment by 30 percent.

The money from abroad is important for many families in poorer regions of Mexico, such as the south and west. Remittances increase consumption and reduce poverty, and they have been found to spur entrepreneurship and schooling among recipients.¹

Most research identifies migrants' income as the main driver behind remittances, suggesting a positive correlation with economic conditions in the sending country. So it shouldn't be surprising that remittances began to fall with the downturn in the U.S. economy as measured by the coincident index, which peaked in late 2007 (*Chart 2*).

The timing coincides closely with the nationwide housing bust and fall in construction employment. A 2007 Banco de México survey found that nearly a fifth of migrants who sent

money home worked in the U.S. construction sector. Remittances kept rising in the 2001 recession, which didn't see a housing bust.

The size of the Mexican migrant population in the U.S. also influences total remittances.² A recent study by the Pew Hispanic Center didn't find Mexican immigrants returning home in large numbers; however, it did confirm a significant decline in the flow of new migrants to the U.S. in the past few years, likely a response to dwindling employment opportunities.³ Mexican demographic data also indicate that net emigration fell 61 percent from its 2006 peak to 2009.⁴

Two factors that impact remittances probably haven't contributed to recent declines. The cost of transferring money to Mexico fell in the first half of this decade and remains low, so remittance fees can't explain a decline in migrants' transfers since 2007.

In fall 2008, the dollar appreciated against the peso amid the financial crisis. A cheaper peso should provide incentives for migrants to send more money home, where a dollar can buy more. However, exchange rate changes weren't large enough to reverse the downward trend in remittances.

Recent data suggest the U.S. economy is starting to recover, and the U.S. housing market may be bottoming out. Job growth has yet

to revive, but forecasters anticipate real GDP growth of 3 percent in 2010 and 3.1 percent in 2011. Renewed growth will likely encourage migration, restoring remittances. However, commercial construction is still declining, suggesting the rebound in remittances might be slow.

—Roberto Coronado and Jesus Cañas

Notes

¹ See "Remittances and Poverty in Mexico: A Propensity Score Matching Approach," by Gerardo Esquivel and Alejandra Huerta-Pineda, *Integration and Trade Journal*, no. 27, 2007, pp. 45–71; "Globalization, Migration and Development: The Role of Mexican Migrant Remittances," by J. Ernesto López-Córdova, *Economía*, vol. 6, no. 1, 2005, pp. 217–56; and "Migration Networks and Microenterprises in Mexico," by Christopher Woodruff and Rene Zenteno, *Journal of Development Economics*, vol. 82, no. 2, 2007, pp. 509–28.

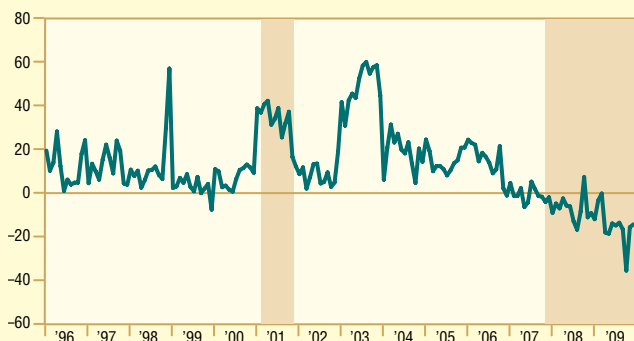
² See "Explaining the Increase in Remittances to Mexico," by Jesus Cañas, Roberto Coronado and Pia Orrenius, Federal Reserve Bank of Dallas *Southwest Economy*, no. 4, 2007. Economic conditions in Mexico also matter, but research provides inconclusive results regarding the direction of the impact on remittances.

³ See "Mexican Immigrants: How Many Come? How Many Leave?" by Jeffrey S. Passel and D'Vera Cohn, Pew Hispanic Center, Washington, D.C., July 2009.

⁴ Estimates based on second-quarter data from Encuesta Nacional de Ocupación y Empleo, Instituto Nacional de Estadística y Geografía.

Chart 1
Mexico's Remittances Show Rare Decline

Year-over-year growth rate (percent)



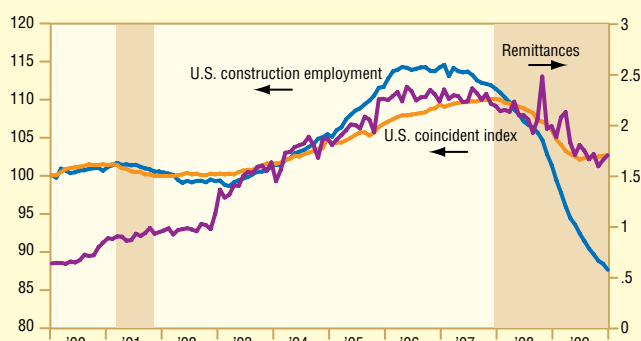
NOTES: Remittances have been adjusted for inflation and seasonal factors. Shaded areas represent U.S. recessions.

SOURCES: Banco de México; authors' calculations.

Chart 2
Remittances Track U.S. Business Cycle

Index, January 2000 = 100

Billions of dollars monthly



NOTES: Remittances have been adjusted for inflation and seasonal factors. Shaded areas represent U.S. recessions.

SOURCES: Banco de México; Conference Board; Bureau of Labor Statistics; authors' calculations.

QUOTABLE: “Commercial real estate is still losing ground. Any hopes for a turnaround have to wait for improvements in the financial environment and employment.”

—D’Ann Petersen, Dallas Fed business economist



TEXAS EXPORTS: NAFTA Markets Spur Trade Turnaround

Upturns in the Mexican and Canadian economies, coupled with the dollar’s declining value, fed strong Texas export growth in the second half of 2009. The state’s real exports increased 15.8 percent from the second to fourth quarter, and the United States’ NAFTA partners played a key role.

Mexico is Texas’ largest export market, accounting for 35 percent of the state’s foreign sales. The volume of Texas exports to Mexico rose 19.7 percent in the last half of 2009, mirroring Mexico’s increased domestic production. Sales to Canada, which constitute 8 percent of Texas’ exports, rose 17.1 percent in the same period.

After growing an average of 2.6 percent a quarter over the period 2004 to mid-2008, real Texas exports fell 20 per-

cent from second quarter 2008 to first quarter 2009. Texas has now had two quarters of sharply higher foreign sales, suggesting a return to the steady export growth the state had experienced before the recession.

Petroleum and coal products played an important part in Texas’ exports turnaround, rising 61 percent since March 2009. Consisting primarily of refinery products, this category has grown rapidly in recent years, expanding its share of Texas exports from 4.2 percent in first quarter 2004 to 13.8 percent at the end of 2009. Most petroleum and coal products are sold to Mexico and Canada, further linking Texas exports to the NAFTA partners’ economic performance.

—Emily Kerr



OIL MARKETS: Saudis Abandon WTI Price as Benchmark

Saudi Arabia’s state-owned oil company no longer uses West Texas Intermediate (WTI) crude oil as its pricing benchmark. Saudi Aramco, the third largest U.S. oil supplier, switched to the Argus Sour Crude Index (ASCI) in January.

ASCI is a composite price index of three Gulf of Mexico crudes—Mars, Poseidon and Southern Green Canyon. These are heavy, sour crudes, meaning they have higher sulfur content, and they’re similar to the oil the Saudis export to the U.S., where about 60 percent of refineries process sour crude.

Sour crudes generally sell at a discount from the light, sweet WTI, which is cheaper to refine. However, WTI prices are affected by storage levels at the crude’s Cushing, Okla.,

delivery depot. In early 2009, a surge in Cushing inventories depressed WTI prices against other benchmarks. At one point, WTI traded below some sour crudes, including Mars.

Price swings caused by storage levels suggest the WTI price may not always reflect supply and demand fundamentals. In addition, volatility in price differentials between WTI and sour crudes complicates hedging for sour crude buyers—an issue that using ASCI may solve.

The Chicago Mercantile Exchange recently introduced futures contracts designed to mirror ASCI. A deeper market for ASCI and similar futures contracts makes it more likely that other sour crude producers will use the benchmark.

—Jackson Thies



HOUSING: Tax Credit Boosting Sales, Building—for Now

In both Texas and the U.S., existing-home sales have been rising since March 2009—due in part to a tax credit of up to \$8,000 for first-time homebuyers.

The National Association of Realtors estimates the tax credit drove 350,000 purchases in 2009 and added 26,900 new Texas buyers through September. A Congressional Research Service (CRS) study suggests a smaller impact, with the credit spurring 43,000 to 128,000 additional sales nationwide.

The program had been scheduled to expire on Dec. 1, but in November Congress extended the deadline to July 1, 2010. It also raised the income limits and added a credit of up to \$6,500 for repeat homebuyers. The CRS predicts that the extension will generate an additional 51,000 to 154,000 sales.

The tax credit has also helped stimulate construction. Texas single-family permits increased 16.6 percent from December 2008 to November 2009, a rebound from a 32.6 percent decline in the same period a year earlier.

Year-over-year, November permits rose 14.1 percent as homebuyers rushed to buy before the credit’s initial expiration. In the U.S., November permits were up 22.4 percent year-over-year.

The credit’s long-term effects are ambiguous. The credit makes homebuyers act now rather than later, so demand for new and existing homes will most likely decline after July, placing downward pressure on sales and construction.

—Mike Nicholson

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Texas Economy Shakes Off Rough Ride in 2009

(Continued from page 7)

pace of 2.8 percent.

The recession has adversely affected many Texas industries and taken a toll on the state. Recent data and anecdotal evidence suggest, however, that output is growing, labor markets are beginning to stabilize and the state is on track for a modest recovery. The Texas economy has steadied, although it has not yet firmed enough to take off.

Assanie is an associate economist and Orrenius is a research officer and senior economist in the Research Department of the Federal Reserve Bank of Dallas.

Notes

¹ The employment data used in this article are benchmarked to third quarter 2009 and are subject to revision.

² Texas employs one of every two workers in the U.S. oil and gas extraction industry.

³ According to the Dallas Fed's Texas Business-Cycle Index, the 1982–83 recession was from February 1982 through March 1983, the 1985–87 recession lasted from September 1985 through February 1987 and the 2001–03 recession was from March 2001 through July 2003. The most recent recession began in June 2008 in Texas.

⁴ Employment declines and unemployment rate increases are measured from February 1982 to March 1983 for the 1982–83 recession, from September 1985 to February 1987 for the 1985–87 recession and from March 2001 to July 2003 for the 2001–03 recession. The most recent recession's employment and unemployment changes are from June 2008 to December 2009.

⁵ State GDP quarterly declines are measured from first quarter 1982 to fourth quarter 1982 for the 1982–83 recession, from

third quarter 1985 to second quarter 1986 for the 1985–87 recession and from first quarter 2001 to fourth quarter 2001 for the 2001–03 bust. The time period is third quarter 2008 to second quarter 2009 for the most recent recession.

⁶ The fourth-quarter state GDP estimate is not yet available. The Bureau of Economic Analysis does not provide quarterly state GDP data, but the Dallas Fed has a methodology for constructing quarterly data using the Chow–Lin procedure. For a description, see “A New Quarterly Output Measure for Texas,” by Franklin D. Berger and Keith R. Phillips, Federal Reserve Bank of Dallas *Economic Review*, Third Quarter, 1995, www.dallasfed.org/research/er/1995/er9503b.pdf.

⁷ Texas export data are from WISERTrade and have been seasonally adjusted by the Dallas Fed.

⁸ Mortgage foreclosure and delinquency data are from the Mortgage Bankers Association and have been seasonally adjusted by the Dallas Fed.

⁹ See “Texas Dodges Worst of Foreclosure Woes,” by D’Ann Petersen and Laila Assanie, Federal Reserve Bank of Dallas *Southwest Economy*, Fourth Quarter, 2009, www.dallasfed.org/research/swe/2009/swe0904c.cfm.

¹⁰ Commercial investment sales data are from Real Capital Analytics’ U.S. Capital Trends report.

¹¹ Venture capital data are from Thomson Reuters, PricewaterhouseCoopers and the National Venture Capital Association’s MoneyTree report.