



# HoustonBusiness

*A Perspective on the Houston Economy*

FEDERAL RESERVE BANK OF DALLAS • HOUSTON BRANCH • NOVEMBER 2003

## Economic Progress in the Texas Economy 1969–2001

*In this article,  
we measure the  
success of the  
Texas economy  
not by its size,  
growth rates or  
ranking but by the  
state's ability to  
improve the  
welfare of its  
citizens as  
measured by per  
capita income.*

Since 1969, the Texas economy has grown rapidly, consistently matching or exceeding the nation's economic growth. Table 1 shows that real personal income growth rates in Texas matched the U.S. rate even during the oil bust years of 1979–89 and greatly exceeded it in other periods. Measured by total population, growth in Texas was substantially greater in all periods. The state's largest metropolitan areas—Houston, Austin, San Antonio and the Dallas/Fort Worth metroplex—which together make up what is known as the Texas Triangle in the heart of the state, contributed the largest part of this growth, especially since 1979. Outside the Texas Triangle cities, real income growth has failed to match the United States' since 1979, although population growth has been a little faster.

This growth has improved Texas' economic position relative to the rest of the United States. Texas moved from the nation's fourth most populous state in 1969 to second in 2001, trailing only California but ahead of New York and Florida. In personal income, Texas has moved from the sixth largest state economy in 1969 to third today, behind California and New York.

The state's large metropolitan areas have similarly moved up the ranking of the nation's largest cities.<sup>1</sup> As seen in Table 2, Houston, the D/FW metroplex and San Antonio made most of their climb through these rankings between 1969 and 1979.<sup>2</sup> Since 1979, Houston and the metroplex have shared the ninth and tenth positions in population, while San Antonio slowly moved upward to rank 32nd in population and 35th in personal income. Austin, however, has made steady and dramatic gains. In 1969, at No. 75 in population, Austin was the size of Canton, Ohio, or Fort Wayne, Ind. But by 2001 (at No. 39), it compared favorably with Nashville or New Orleans.

**Table 1**  
Growth of Personal Income and Population in Texas and the United States (Average percent per year)

	Personal income		
	1969–79	1979–89	1989–2001
United States	3.7	3.0	2.9
Texas	6.0	3.0	4.3
Houston	8.0	2.4	5.1
Dallas/Fort Worth	5.4	4.7	4.7
Austin	2.3	5.6	8.3
San Antonio	4.7	4.2	4.0
Texas Triangle	6.5	3.8	5.0
Rest of Texas	5.2	1.7	2.9

	Population		
	1969–79	1979–89	1989–2001
United States	1.1	1.0	1.2
Texas	2.3	1.9	2.0
Houston	3.4	1.9	2.3
Dallas/Fort Worth	2.4	3.0	2.6
Austin	4.1	3.8	3.9
San Antonio	1.9	2.1	1.8
Texas Triangle	2.8	2.5	2.5
Rest of Texas	1.7	1.2	1.3

**Table 2**  
U.S. Rank of Texas Triangle Metro Areas by Population and Personal Income

	Population			
	1969	1979	1989	2001
Houston	13	10	10	9
Dallas/Fort Worth	12	9	9	8
San Antonio	37	33	33	32
Austin	75	63	63	39
Texas Triangle	4	4	4	3

	Personal income			
	1969	1979	1989	2001
Houston	16	9	10	9
Dallas/Fort Worth	13	10	9	8
San Antonio	45	39	38	35
Austin	86	69	55	37
Texas Triangle	9	4	3	3

SOURCE: Bureau of Economic Analysis, Regional Economic Information System.

**Table 3**  
Contribution to Texas Personal Income Growth (Percent)

	1969–79	1979–89	1989–99	1989–2000	1989–2001
Texas	100	100	100	100	100
Houston	28.5	23.8	28.2	28.6	29.7
Dallas/Fort Worth	23.6	31.9	30.7	31.3	30.6
Austin	4.1	6.0	8.7	8.6	8.3
San Antonio	6.3	8.1	7.1	6.9	7.0
Texas Triangle	62.6	69.8	74.6	75.4	75.5
Rest of Texas	37.4	30.2	25.4	24.6	24.5

SOURCES: Bureau of Economic Analysis; author's calculations.

Table 3 summarizes the contribution of these different metro areas to Texas' personal income growth. Except for the oil bust years, Houston contributed about 30 percent of the growth, and Dallas/Fort Worth contributed the same by the late 1970s. San Antonio has provided a steady 6 to 8 percent, and Austin's contribution doubled from 4.1 percent to 8.3 percent. All the metro areas combined (collectively designated the Texas Triangle) contributed three-fourths of the state's income growth between 1989 and 2001.

In this article, we will measure the success of the Texas economy not by its size, growth rates or ranking but by the state's ability to improve the welfare of its citizens—that is, raising its per capita income levels to those of the nation, joining and perhaps outperforming the U.S. mainstream. Per capita income presents a number of flaws as a measure of general welfare, but it serves here simply as a widely recognized and useful summary of the standard of living.<sup>3</sup>

### Per Capita Income in Texas

In 1969, Texas per capita income was \$3,373, or 87.7 percent of the U.S. level. But

fueled by the oil boom after 1973, Texas per capita income grew rapidly and briefly exceeded that of the United States by 1981–82 (*Figure 1*). The oil and real estate bust of the 1980s quickly erased these gains, and by the end of the decade Texas income returned to 87.9 percent of the U.S. figure.

The 1990s brought new advances relative to U.S. income as oil, high tech and a NAFTA/maquiladora boom along the border fueled another burst of Texas economic growth. By 1998, Texas per capita income returned to 94.4 percent of U.S. levels, but did not progress further through 2001.

We can examine the sources of per capita income growth, both geographically and by income components, such as wages and salaries, proprietor's income, transfers and property income. From a geographic perspective, the Texas Triangle cities fueled both the state's growth and most of its recent convergence with U.S. per capita income. By component, the most interesting results come from the growth of wages and salaries and proprietor's income.

### Framework for Study

The general framework used here is shown in Table 4,

which summarizes Texas per capita income growth by component of income, geographic area and time period (1969 through 2001).<sup>4</sup> The data are presented as percentage point contributions to average annual real per capita income growth in each region and time period.<sup>5</sup> For example, the growth of per capita income in Texas from 1969 to 1979 averaged 3.6 percent per year, with most of the growth (3 percent per year) coming from wages and salaries and smaller contributions from property income (0.2 percent), transfer payments (0.2) and other per capita income (0.4). Proprietor's income per capita grew more slowly, reducing the overall growth rate by 0.2 percent.

The components of income definitions follow standard conventions for accounting for personal income in the national income and product accounts. The definitions are fairly obvious: wages and salaries; farm and nonfarm proprietor's income earned by sole proprietorships, partnerships and tax-exempt corporations; prop-

erty income from dividends, rent and interest; and transfer payments for no current services rendered. The "Other income per capita" category is a residual made up primarily of benefits paid to wage and salary workers, but it also includes a residence adjustment for workers who live and work in different areas.

The rationale for the geographic focus on the Texas Triangle, as partly discussed above, is primarily that three-fourths of the region's personal income

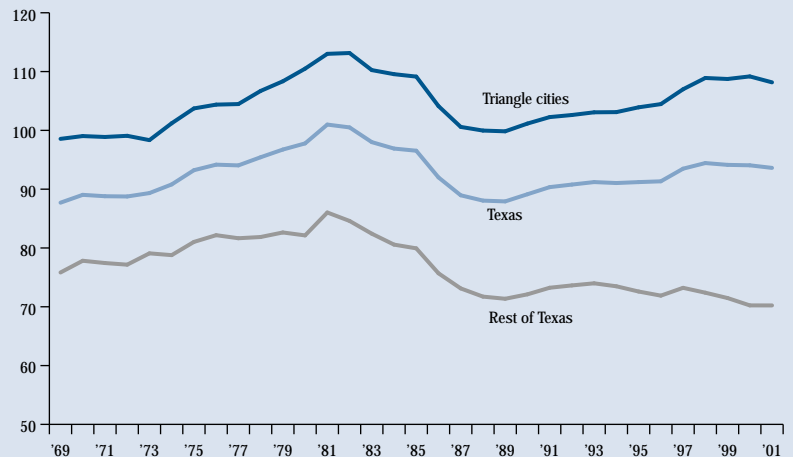
growth came from these metro areas after 1989. Also, these cities have provided most of the forces driving income convergence. While per capita income levels were, on average, well above national norms and rising through the 1990s within the Triangle, they were falling back to near 70 percent outside of it.

Figure 2 shows the income growth relative to the United States of the four Triangle cities since 1969. The gains and losses of the oil and real estate boom and bust are visible in all four cities, but most notably in Houston and Austin. All cities made gains in the 1990s, especially Austin; San Antonio made the least progress, despite beginning from the lowest per capita base. The two high-tech metros began losing ground against the national average well before the U.S. recession began in 2001, with Austin peaking at 110 percent of U.S. levels in 1999 and Dallas/Fort Worth at 112 in 2000. Houston reached 115 percent of U.S. per capita income in 2001 and San Antonio 88 percent.

The different income levels and very different behavior over

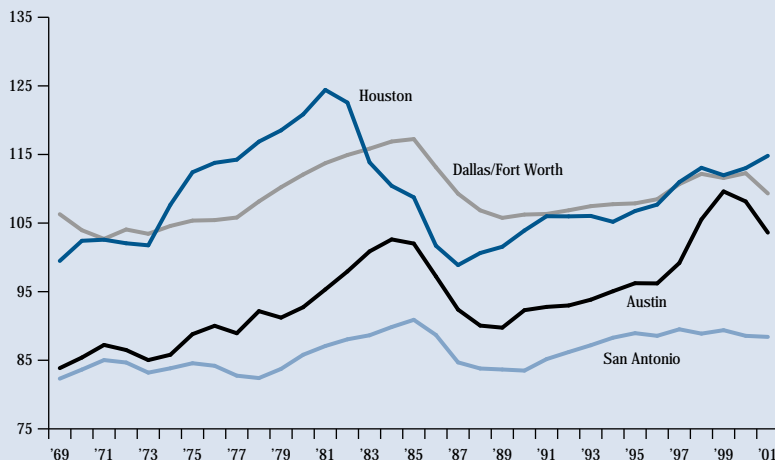
**Figure 1**  
Convergence of Texas to U.S. Per Capita Income Levels

Index: U.S. per capita income = 100



**Figure 2**  
Convergence of Texas Triangle Cities to U.S. Per Capita Income Levels

Index: U.S. per capita income = 100



**Table 4**  
**Growth Rate of Real Per Capita Personal Income and Factors Contributing to Its Growth (Average percent per year)**

	Personal income per capita	Nonfarm wages and salaries per capita	Proprietor's income per capita	Property income per capita	Transfer payments per capita	Other income per capita
<b>1969–79</b>						
United States	2.6	1.6	–.1	.3	.4	.4
Texas	3.6	3.0	–.2	.2	.2	.4
Houston	4.4	4.2	–.1	–.1	.1	.3
Dallas/Fort Worth	2.9	2.1	.1	.2	.2	.4
Austin	3.4	2.7	–.1	.3	.1	.5
San Antonio	2.7	1.3	.1	.3	.4	.6
El Paso	1.4	.9	.2	.3	.6	–.6
Texas Triangle	3.5	2.9	0	.1	.1	.4
Rest of Texas	3.4	2.8	–.5	.4	.3	.4
<b>1979–89</b>						
United States	2.0	1.4	0	.7	.1	–.1
Texas	1.1	.2	0	.7	.2	0
Houston	0.5	–.8	.5	.6	.2	0
Dallas/Fort Worth	1.6	1.1	.1	.4	0	–.1
Austin	1.9	1.7	–.6	.6	0	.1
San Antonio	2.0	1.1	.1	.7	.1	.1
El Paso	1.7	.2	–.2	.7	.1	.9
Texas Triangle	1.2	.3	.2	.6	.1	0
Rest of Texas	.6	–.6	–.5	1.1	.4	.2
<b>1989–2001</b>						
United States	1.7	1.8	.1	–.1	.2	–.2
Texas	2.2	2.4	.4	–.4	.1	–.3
Houston	2.7	2.3	1.0	–.6	.1	–.2
Dallas/Fort Worth	2.0	2.4	.2	–.3	.1	–.3
Austin	2.9	4.2	.1	–.7	–.1	–.6
San Antonio	2.2	2.1	.7	–.3	.2	–.5
El Paso	1.7	.9	.8	–.2	.5	–.3
Texas Triangle	2.4	2.5	.5	–.4	.1	–.3
Rest of Texas	1.6	1.5	0	–.4	.4	0

SOURCES: Bureau of Economic Analysis, Regional Economic Information System; author's calculations.

time of the four cities might seem surprising in light of their geographic proximity. But in fact, it may be this very proximity that guarantees their different personalities. Because no pair of cities is more than 240 miles apart, each city has assumed a role in the state economy that sets it apart and makes it distinct from the others.

Although we will return to this subject in the next issue of *Houston Business*, one could speculate that if Texas geography had been different—navigable rivers or a saltwater inlet

that cut into the heart of the state—the four cities could easily have been one. The port, inland distribution point and political capital could all have been in the same place. Thus, adding the cities' current population produces a not far-fetched approximation of what might have been a single metro area, because the cities play such diverse economic roles. The bottom of Table 2 shows how such a combination would rank among U.S. metro areas today: behind New York and Los Angeles but moving ahead of Chi-

cago in both personal income and population in the 1990s.

It is difficult to generalize about or easily characterize the area outside the Triangle, which includes cities as different as El Paso, Amarillo, Texarkana and Beaumont. The decline of agriculture in the second half of the 20th century certainly played a role in the region's poor performance. In addition, the proximity to the Mexican border presents challenges to state economic development, specifically acting as a drag on any measure of state economic pro-

gress or welfare, including per capita income.

Gilmer, Gurch and Wang have examined the Texas border cities using the same framework employed here.<sup>6</sup> The border cities' average per capita incomes are only 50 to 60 percent of the national average and have only occasionally matched or exceeded the growth rate of the state as a whole, as Laredo did in the 1990s. Per capita income for El Paso, by far the largest city on the Texas–Mexico border, fell from 73 percent of the U.S. average in 1969 to 63 percent in 2001. Although the border saw rapid gains in income and jobs in the 1990s, rapid growth in population due to high birthrates and in-migration meant living standards did not improve nearly as much as overall growth statistics might indicate.

### What the Numbers Mean

Except for the oil bust years, Texas' per capita income outgrew the United States' by a significant margin. The difference was a full percentage point from 1969 to 1979 (3.6 percent versus 2.6 percent) and a half percentage point from 1989 to 2001 (2.2 percent versus 1.7 percent). Over the entire 32-year period, however, with the oil bust and recovery factored in, the difference in favor of Texas narrows to 0.2 percent—2.3 percent versus 2.1 percent—and per capita income rises from 88 percent to 94 percent of the national average.

Also except for the oil bust years, most of the growth in real per capita income came from increases in real wages and salaries—80 percent in 1969–79 and 109 percent in 1989–2001. Over the entire 32-year period, gains in real wages and salaries

account for 72.6 percent of per capita income growth. During the growth years, wages and salaries contributed at least 80 percent of income growth both inside and outside the Texas Triangle cities.

Proprietor's income makes its largest contribution from 1989 to 2001. Houston has the strongest contribution from the self-employed in this period (1 percent) and during the previous period (0.5 percent) as well. Gilmer shows that in 16 Texas and Louisiana cities, all with strong ties to oil, the first result of the oil bust was generation of a large number of new "proprietors," presumably a result of forced entrepreneurship as people unemployed by the downturn started new businesses.<sup>7</sup> This was followed in the late 1980s and early 1990s by rapidly growing proprietor's income, the fruit of successful new businesses started years earlier. The analogy of a forest fire leaving behind the seeds for regenerating the forest seems to apply to Texas in recent years, with entrepreneurship sowing the seeds. On average, proprietor's income contributed 0.5 percent to per capita income growth in Texas Triangle cities in the late 1990s.

The property income component (dividends, rent and interest) is the biggest contributor to per capita income growth during the oil bust and recovery years. These periods saw a large run-up in property values, which fell back slowly in the late 1980s, and a sharp increase in interest rates due to inflation and tight monetary policy. The contribution is small during 1969–79 and negative during 1989–2001.

Other income per capita contributes most in 1969–79, is

small in 1979–89 and turns slightly negative in the most recent period.

### A Closer Look at Wage and Salary Growth

Because wage and salary growth per capita accounts for such a large share of Texas per capita income, we will look at it more closely. We can divide wages and salaries per capita ( $WS/P$ ) into two parts: wages and salaries per employee ( $WS/E$ ) and employment population ratio ( $E/P$ ).

$$WS/P = WS/E \times E/P.$$

Further, there are two reasons for the growth of wages and salaries per employee: (1) improvements in the industry mix that allow workers to move into higher-paying industries, and (2) specific advantages the region offers in resources, labor supply, infrastructure or other local factors. This region-specific advantage is called differential regional earnings.<sup>8</sup>

$$\begin{aligned} WS/P &= WS/E \times E/P \\ &= \text{Industry Mix} \\ &\quad \text{Differential} \\ &\quad \times \text{Regional Earnings} \\ &\quad \times E/P. \end{aligned}$$

Table 5 summarizes the contribution of each element to real per capita income. The first column is wages and salaries per worker; the second and third columns divide this category into two parts. Industry mix was clearly a significant factor in all areas and in every period. Texas was clearly shedding low-wage jobs and replacing them with better-paying jobs throughout the entire period.

We also see gains from differential regional earnings in the two periods of rapid growth. In the

**Table 5**  
**Impact on Per Capita Income of Three Factors:**  
**Industry Mix, Differential Regional Earnings and Jobs Per Capita**  
 (Percentage point contribution to annual growth rate)

	Wages and salaries per worker	Industry mix	Differential regional earnings	Jobs per capita
<b>1969–79</b>				
Texas	1.52	1.30	.22	1.47
Houston	1.90	1.12	.78	2.33
Dallas/Fort Worth	.81	1.05	–.24	1.26
Austin	1.21	1.23	–.02	1.45
San Antonio	1.15	1.50	–.34	.16
Texas Triangle	1.41	1.16	.24	1.53
Rest of Texas	1.54	1.51	.03	1.23
<b>1979–89</b>				
Texas	.27	.79	–.51	–.08
Houston	–.16	.66	–.82	–.64
Dallas/Fort Worth	.91	.86	.05	.20
Austin	1.19	1.17	.02	.55
San Antonio	.53	.82	–.29	.56
Texas Triangle	.38	.80	–.42	–.05
Rest of Texas	–.25	.78	–1.03	–.38
<b>1989–2000*</b>				
Texas	1.79	1.38	.41	.84
Houston	1.86	1.53	.33	.50
Dallas/Fort Worth	2.11	1.30	.81	.68
Austin	3.65	1.29	2.36	1.48
San Antonio	1.16	1.36	–.20	1.09
Texas Triangle	2.06	1.45	.62	.75
Rest of Texas	.74	1.04	–.30	.79

\* Data extend only to 2000 because of the change from the Standard Industrial Classification system to the North American Industry Classification System, beginning in 2001. This makes it impossible to compare the distribution of jobs and income by industry in 1989 and 2001.

SOURCE: Bureau of Economic Analysis; author's calculations.

1990s, the Texas Triangle cities added 0.6 percent per year to per capita income, thanks to these advantages. The measure clearly highlights the state's booms and busts. Houston adds 0.8 percent per year from 1969 to 1979, which turns to –0.8 percent in the following decade. Large regional differentials in Austin (2.4 percent) and Dallas/Fort Worth (0.8 percent) mark the tech boom of the 1990s. A look back at Figure 2 shows that these cities were already giving back some of these tech gains by 2001.

During the two decades of strong growth, the state gener-

ated jobs faster than the rate of population growth, despite rapid in-migration (*Table 6*). Per capita job growth has occurred both inside and outside the Triangle cities, despite the fact that the border regions, as mentioned above, were unable to attain job growth at rates much faster than the population grew. Growth in jobs per capita has, in turn, pushed up per capita income at a 1.5 percent annual rate during 1969–79 and 0.7 percent during 1989–2001. The slight decline in the contribution of jobs to income during the

1980s oil bust (–0.1 percent) is primarily due to Houston and areas outside the Triangle cities.

### Conclusion

Measured by standards of population, employment and income growth, the Texas economy has outperformed the U.S. economy since 1969. As shown in Table 7, by 2001 the state as a whole had raised its per capita income to 94 percent of the national average, up from 88 percent in 1969. Over the same period, the average annual growth rate of per capita income was 2.3 percent for Texas versus 2.1 percent for the United States.

**Table 6**  
**Employment and Population Growth**  
 (Annualized growth rates, 1969–2001)

	Job growth		
	1969–79	1979–89	1989–2001
United States	2.17	1.76	1.52
Texas	3.79	1.84	2.68
Houston	5.77	1.28	2.69
Dallas/Fort Worth	3.61	3.19	3.01
Austin	5.54	4.37	4.90
San Antonio	2.03	2.64	2.70
Texas Triangle	4.34	2.47	3.03
Rest of Texas	2.98	.78	1.99

	Population growth		
	1969–79	1979–89	1989–2001
United States	1.10	.95	1.22
Texas	2.32	1.93	2.02
Houston	3.44	1.93	2.33
Dallas/Fort Worth	2.35	2.99	2.62
Austin	4.09	3.82	3.94
San Antonio	1.87	2.07	1.76
Texas Triangle	2.82	2.52	2.52
Rest of Texas	1.74	1.16	1.28

	Jobs per capita		
	1969–79	1979–89	1989–2001
United States	1.07	.81	.30
Texas	1.47	–.08	.66
Houston	2.33	–.64	.36
Dallas/Fort Worth	1.26	.20	.39
Austin	1.45	.55	.96
San Antonio	.16	.56	.94
Texas Triangle	1.53	–.05	.51
Rest of Texas	1.23	–.38	.71

SOURCE: Bureau of Economic Analysis.

**Table 7**  
**Performance of Regions of the Texas Economy**

	2001 per capita income	Percent of U.S. level	Annual growth rate 1969–2001 (percent per year)
United States	\$30,413	100	2.1
Texas	28,472	94	2.3
Houston	34,916	115	2.5
Dallas/Fort Worth	33,247	109	2.2
Austin	31,511	104	2.8
San Antonio	26,887	88	2.3
Texas Triangle	32,897	108	2.4
Rest of Texas	21,357	70	1.8

SOURCE: Bureau of Economic Analysis.

Economic progress has been uneven over time. The oil boom briefly pushed Texas per capita income above the nation's in 1981–82. In the subsequent collapse of oil, banking and real estate, Texas fell back to almost its 1969 position relative to the United States. Most of the progress has occurred since 1989.

Table 7 also indicates the uneven geographic progress. In fact, the forces of convergence toward U.S. levels have mostly come from the Texas Triangle metropolitan areas of Houston, the D/FW metroplex, San Antonio and Austin. All these cities have outperformed the United States since 1969, with the most dramatic gains coming out of Austin. The addition of a large high-technology workforce to a stable, if less well-paid, government and university base fueled both rapid growth and rising per capita income in the state capital. Except for San Antonio, all the Texas Triangle cities enjoy living standards above the U.S. average.

The uneven nature of Texas' economic history makes it difficult to judge the future. The geographic concentration of growth seems unlikely to change, but the state's advantages relative to the rest of the nation (as measured by differ-

ential regional earnings) were dominated by the oil boom from 1969 to 1979 and to some extent by the high-tech expansion of 1989–2001. Advantages were concentrated first in Houston, then in Austin and Dallas/Fort Worth. Predicting the source or location of the next great round of expansion is impossible; however, since 1969 Texas' low cost of living and doing business, tax advantages, climate and lifestyle have prepared the state for further growth and development, including periodic excesses. These Sunbelt advantages should make renewed economic expansion in Texas—and continued progress in raising the state's living standards—simply a matter of time.

### Notes

<sup>1</sup> The consolidated metropolitan statistical area definition for Houston and Dallas/Fort Worth is used for all statistics in this article. The ranking of metro areas includes consolidated statistical metropolitan areas, but then excludes all the parts of these CMSAs (metropolitan and primary metropolitan statistical areas) in the subsequent ranking process.

<sup>2</sup> The end years used here—1969, 1979, 1989 and 2001—are all peak years in the U.S. business cycle. Although Texas and its metro areas did not always follow the U.S. business cycle, particularly in the 1980s, these years were typically periods of economic expansion for Texas, mak-

ing comparisons with the United States appropriate.

<sup>3</sup> The most notable flaw is insight into the size distribution of income among the population. However, this article divides per capita income into enough categories by component and geography to give insight into how income growth is affected by regional wage levels, job growth, population growth and location of the state's largest metro areas.

<sup>4</sup> The framework was developed by Daniel H. Garnick and Howard L. Friedenberg (1982), "Accounting for Regional Differences in Per Capita Personal Income Growth, 1929–79," *Survey of Current Business* 62 (September): 24–34. Also see Daniel H. Garnick (1990), "Accounting for Regional Differences in Per Capita Income Growth: An Update and an Extension," *Survey of Current Business* 70 (January): 29–40.

<sup>5</sup> Constant dollars are obtained by deflating with the personal consumption expenditure deflator (1996 = 100) for all areas.

<sup>6</sup> Robert W. Gilmer, Matthew Gurch and Thomas Wang (2001), "Texas Border Cities: An Income Growth Perspective," in *The Border Economy*, Federal Reserve Bank of Dallas, June, 2–5.

<sup>7</sup> Robert W. Gilmer (1996), "Finding New Ways to Grow: Recovery in the Oil Patch," Federal Reserve Bank of Dallas *Houston Business*, July.

<sup>8</sup> The calculation of industry mix and differential regional earnings is spelled out carefully in Garnick and Friedenberg (1990). The calculation depends on the definition of hypothetical income ( $H$ ), total wages and salaries that would have been earned in Texas if compensation were paid at the national rate in each industry. Hypothetical income was calculated using the wage and salary employment categories in the Bureau of Economic Analysis's Regional Economic Information System, essentially a one-digit definition in the Standard Industrial Classification. Using this definition,  $WS/P = \text{Industry Mix} \times \text{Differential Regional Earnings} \times E/P = H/E \times WS/H \times E/P$ .

**F**or the first time since May 2001, Houston recorded back-to-back increases in wage and salary employment in August and September. Over the previous 27 months, an increase in jobs was recorded in only four widely scattered months. Meanwhile, the local unemployment rate appears to have peaked in May at 6.9 percent, although the rate remains stubbornly high at 6.7 percent.

#### Retail and Auto Sales

Retailer reports were mixed, partly because unseasonably warm weather has been a factor in keeping sales down. Clothing stores reported a cyclical uptick, apart from the effects of weather; furniture stores were flat to up nicely; department stores were flat or below last year; and discounters were well ahead of last year despite the warm weather. There was optimism that this holiday season in Houston would be much better than the two previous years.

Through September, local auto sales continued the long slump that began in mid-2001. Sales were down 14 percent from the July 2001 peak. However, October sales were only 1.1 percent below the same month last year, an improvement over September's 4.1 percent below last year.

#### Real Estate

The apartment market continues to struggle, with occupancy continuing to decline, especially in class A units. Reported rents are up, but effective rates—which include concessions like free rent and move-in bonuses—are down. Office markets show no signs of improvement, with both

occupancy and rents still falling.

The fear of higher interest rates ahead continues to drive the housing market, with existing home sales up 22 percent in September. New home sales were down slightly in September, however, and the inventory of speculative homes continues to grow—up 43 percent over last year's low levels.

#### Oil Markets

Crude oil prices traveled a long circle in September and October, beginning and ending with the price just over \$30 per barrel. OPEC's surprise announcement of a production cut pushed prices above \$30 in September, before rising inventories and warm weather dropped them briefly to \$27 in late October. Then fear of winter weather and strong economic growth pushed them back over \$30 in early November. Despite the increase, most analysts expect weaker crude prices ahead.

Heating oil should be supporting oil prices at this time, but inventories are ample. Imports of heating oil have run at a high 240,000 barrels per day for the last three months, and October weather was unseasonably warm. Beginning in mid-October, the price of heating oil and gasoline followed the price of crude downward, before adding back a few cents in early November as the price of crude rose once more.

Refiners cut back production seasonally in October, per-

forming maintenance and switching production from gasoline to heating oil, before picking up again in November. Profit margins for refiners weakened in October and then remained steady into November, matching the margins earned this time last year.

#### Oil Services and Machinery

Little has changed in oil and gas exploration, with the domestic rig count near 1,100, or 30 percent higher than last year. Improvement continues for international drilling, now higher than the 2001 peak and only 3 percent below the 1999 peak. The problem for the industry is not the number of rigs working but where the drilling is being done. Specifically, lucrative areas such as the Gulf of Mexico, the North Sea and West Africa are weak, and too much of the domestic drilling remains on land and shallow. This leaves revenues and profits weak, despite high activity levels.

#### Petrochemicals

Gloom continues to rule the petrochemical industry, as a recovery in the U.S. economy is not yet offering relief from excess capacity and weak pricing power. September saw a surge in demand, but it fell back again in October. Natural gas price remains the dominant factor affecting chemical prices, but falling gas prices have offered little relief to weak profit margins.



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