



# HoustonBusiness

*A Perspective on the Houston Economy*

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## What's Wrong with Houston's Job Market?

*In past decades, the current outstanding performance of the U.S. and global economies, a falling dollar and current high energy prices would have brought Houston annual job growth of 4 percent or more. But the reality has been 12-month growth of only 1.3 percent.*

**O**ver the past eight quarters, the U.S. economy has nearly equaled its performance during the 1990s tech boom, with average gross domestic product (GDP) growth of 3.7 percent. However, between the last peak in economic activity in March 2001 and September 2004, the U.S. economy added barely a quarter million new wage and salary jobs, a number that would have been typical of one month's job growth in the late 1990s.

Every indication is that Houston's economy is following the national lead. We don't have a good measure of production for Houston, like gross product, but plenty of signs point to solid growth—a rig count inching up to near record levels for the post-1980s era, a purchasing managers index that shows steady growth since January 2003 and a strong industrial real estate market. In past

decades, the current outstanding performance of the U.S. and global economies, a falling dollar and high energy prices would have brought Houston annual job growth of 4 percent or more. But the reality has been 12-month growth of only 1.3 percent.

This article focuses on job growth in the United States and Houston: the reasons for slow growth and the various ways we measure job growth. We will look at several measures of employment and its components and the conflicting stories they tell right now. Controversies about these different measures have arisen at the national level, with some experts suggesting that the United States is experiencing faster job growth than we realize. Could this mean faster job growth for Texas and Houston as well?

### Where Is the Job Growth?

How could U.S. job growth come to a virtual standstill for the past two years in the midst of strong expansion in output? The answer seems to be a surge in productivity growth, best explained by a simple identity between output (O), employment (E) and productivity, or

**Table 1**  
**Job Growth in Houston and Other Texas**  
**Metropolitan Areas According to Measures**  
**of Employment, March 2001–September 2004**

	Household	Establishment
Houston	113,277	4,900
Austin	5,625	-23,300
Dallas	-6,120	-90,000
Fort Worth	21,104	-12,000
San Antonio	50,865	10,600
Galveston	6,556	1,600
Brazoria	7,127	1,700
Texas	529,226	-64,000
U.S.	1,986,000	249,000

NOTE: Based on 1999 MSA definitions.

SOURCES: Bureau of Labor Statistics; author's calculations.

output per worker (O/E):

$$O = E \times (O/E).$$

In terms of growth rates, this becomes additive:

$$\text{Growth rate of output} = \text{growth rate of employment} + \text{growth rate of productivity}$$

Over the past eight quarters, U.S. GDP growth has averaged 3.7 percent, and productivity has surged at a 4.1 percent annual rate. A little arithmetic indicates this leaves room for job growth of -0.4 percent.

To most economists, a surge in productivity is hardly a bad thing. In the short run it may be a job killer, but at the same time it lowers the cost of production, allowing for some combination of higher producer profits, higher employee wages and lower consumer prices. All of these argue for an eventual strengthening of demand for product and workers, following on the heels of stronger investment and consumption. In other words, while productivity kills jobs in the short run, it should generate many more jobs in the long run.

Explanations of why we have waited so long for the long-term gains to arrive vary: Round after round of uncertainty, from 9/11 to accounting scandals to Iraq, has postponed investment; structural change is only slowly moving workers

out of declining industries; or the tight and overheated 1990s labor market may have over-shot equilibrium and is just now adjusting back to normal. Whatever the reason, we have lived with the short-run, job-killing features of productivity for over two years, waiting for the long-term benefits to arrive.

Houston should not be immune to these gains in productivity. It is a city of engineers and technicians in oil and gas production and exploration, petrochemicals and refining, medicine, international construction and space exploration. It is a community that should embrace technological change, and oil and gas exploration is often cited as a leader in adopting the new technology of the 1990s.

### Establishment Versus Household Employment Measures

Controversy has recently surrounded two alternative measures of employment level (and, hence, job growth) produced each month by the Bureau of Labor Statistics (BLS).<sup>1</sup> The two surveys are produced for different reasons and measure different concepts, but comparisons between the two are inevitable. Table 1 shows job growth between the March 2001 economic peak and September of this year. The more widely watched and cited establishment survey indicates little growth, while the household survey points to significantly more jobs—almost 2 million in the United States, over a half million in Texas and more than 100,000 in Houston.

Every comparison in Table 1 points to higher growth in the household survey. Surely there should be some story about a dark corner of the job market captured by the household measure but neglected by the establishment survey—new

business formation, multiple-job holders or proprietorships, for example. Unfortunately, the more you try to pin down the differences between these series, the less sure you can be of how to interpret them.

The Current Employment Statistics survey, or establishment survey, is based on administrative records kept for the national unemployment insurance program. It provides a monthly estimate of the number of private sector and government employees covered by unemployment insurance, based on a monthly sample of over 400,000 work sites and about one-third of all nonfarm workers. Annually, accurate totals of the number of non-farm wage and salary workers can be obtained from administrative records, ensuring that recent sample values can be corrected to actual values and continuing sample values are linked to a solid anchor in the recent past.

The Current Population Survey, or household survey, is based on a monthly sample of 60,000 households interviewed in person or by telephone. The universe measured here is much broader than wage and salary jobs; it includes all civilian, noninstitutional population age 16 and over. Unlike the establishment survey, it counts the self-employed (proprietors and partners), agricultural workers, unpaid family members and workers absent from the job without pay. There is no direct way to benchmark the survey to administrative totals, but annual re-estimates are produced along with new population estimates.

There is no question that the establishment data are more accurate.<sup>2</sup> For a month-to-month change to be significant in the establishment survey, for example, it must be  $\pm 108,000$  jobs,

while the comparable figure for the household survey is 290,000 jobs. However, when two series diverge for a long time, as these have, we have to look beyond month-to-month accuracy.

One place to look for a discrepancy is the broader coverage of the household sector. Perhaps a sector not included in the establishment survey is growing rapidly. Agriculture, for example, has over a million workers but has not grown in recent years. Unpaid family members (working in the family business 15 or more hours per week) are less than half of 1 percent of employment in the United States, Texas and Houston, and other categories are smaller—except for proprietors. Proprietors totaled more than 9.6 million in 2002, and since March 2001 they have grown by 434,000, a number that could account for 22 percent of the difference between the household and establishment surveys. We will return to the self-employed below.

The other important difference between the surveys is that one counts workers and the other counts jobs. In the household survey, each person 16 and over and in the noninstitutional population is “tagged” one time—with their primary occupation. If they hold two jobs, they still get only one tag based on primary employment. Establishment employees can be tagged two or more times, once for every nonfarm wage and salary job they hold. They must hold a job in the nonfarm wage and salary sector (first tag), and then get an additional tag for every other wage and salary job held. If, however, they run their own business after hours, they get no additional tags because they are proprietors, not wage and salary workers. When we count

the number of nonfarm wage and salary tags, we get the number of jobs held—the number of workers plus multiple nonfarm jobs held.

The household survey has tracked multiple-job holders since 1994. The survey has shown no trend since the latest recession began. The September 2004 numbers are only a few thousand higher than the March 2001 peak. The rate of multiple-job holding held steady in Texas between 2002 and 2003 at 4.7 percent, below the national average of 5.3 percent.

This is not the first time these two series have diverged for a long period. Between 1994 and 2000, the two series moved apart by more than 5.3 million in terms of indicated job growth but in opposite directions from today, with the establishment survey indicating faster growth. Sophisticated efforts to resolve this 1990s difference are not encouraging. After all the definitional and coverage differences discussed above were considered (along with a number of others), only 21.5 percent of the difference in estimated growth could be accounted for.<sup>3</sup>

The other significant factor in closing the 1994–2000 growth gap could be seen only with a great deal of hindsight. Interim population estimates of different regions of the country are critical in expanding sample estimates to represent the total population. The 2000 census indicated that population growth

**Table 2**  
Growth of Total Employment, Wage and Salary Jobs, and Proprietors, First Year of Recovery, 2001–02

	Proprietors (Percent share)	Percent job growth, 2001–02		
		Total	Wage and salary	Proprietors
Houston	18.9	.6	–.4	5.4
Austin	19.0	–.1	–2.2	5.9
Dallas	16.9	–.6	–2.9	5.6
Fort Worth	18.5	–.1	–1.3	4.9
San Antonio	18.9	1.1	.3	5.2
Galveston	21.1	1.5	.5	5.2
Brazoria	23.4	1.7	.8	4.9
Texas	19.4	.2	–.8	4.7
U.S.	17.7	.1	–.9	5.5

NOTE: Based on 1999 MSA definitions.

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

was consistently underestimated in the 1990s, and this underestimation significantly biased the household survey downward. While the low population estimate accounted for another 1.7 million of the gap between household and establishment growth, it still left 2.1 million jobs, or 45 percent of the gap, unexplained.

Referring to the data in Table 1, what does this consistent discrepancy in job growth in the two surveys mean? We know that the last time such a prolonged difference occurred (albeit in the opposite direction), we could explain only about 22 percent of the difference with the kind of data we currently have in hand and based on methodological and coverage differences. Is the consistency of the differences compelling? Not if it reflects another statistical sampling problem common to the state. Suppose that the depth and prolonged nature of the Texas recession have led to below-normal immigration and population growth, such that population growth is now *overestimated*. This is pure speculation, but it would inappropriately inflate all the household employment estimates in Table 1. Texas was one of the states most affected by the underestimates of 1994–2000.

**Table 3**  
**Annual Percent Change in Wage and Salary Jobs and Proprietorships, Houston and Comparable Cities, 1970–2002**

	Wage and salary jobs		Proprietors	
	Mean	Standard deviation	Mean	Standard deviation
Houston	3.1	3.3	4.6	3.7
Austin	4.6	2.8	5.5	3.9
Dallas	3.1	2.7	4.3	4.3
Fort Worth	2.9	2.6	4.1	4.1
San Antonio	2.3	1.7	4.1	3.6
Galveston	2.8	4.8	4.7	4.3
Brazoria	1.5	2.0	3.9	4.1
Texas	2.6	2.0	3.3	3.2
U.S.	1.7	1.7	2.7	1.2

NOTE: Based on 1999 MSA definitions.

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

### Proprietors and Partnerships

The addition of 434,000 proprietors in the household survey was one of the few positive clues that something interesting might be going on outside the scope of the nonfarm wage and salary survey since March 2001. The Census Bureau defines a proprietor as a person who works for profit or fees in his or her own unincorporated business, profession or trade, or who operates a farm. To learn about proprietors at the local level, the best place to look is the Regional Economic Information System (REIS), produced by the Bureau of Economic Analysis (BEA). It is not comparable to the two employment surveys examined already, in that it is designed to provide data on employment and income in great geographic detail, is only produced annually (not monthly), and the latest year's data are only made available with a lag of about 18 months.

The REIS employment data appear in two series: a wage and salary series and another series on the number of proprietors, divided into both farm and nonfarm proprietors. Construction of the wage and salary data in REIS begins with the BLS establishment data, but the BEA then adds a number of wage and salary jobs not covered by

the unemployment insurance program.

The result is a BEA series that shifts up in level—in 2002, the BEA added about 5.4 percent more wage and salary workers to the U.S. establishment data, 5.5 percent more in Texas and 4.2 percent more in Houston—but

does not otherwise alter its statistical characteristics.<sup>4</sup> Despite all the adjustments, the BEA wage and salary series brings little new information to the table beyond that seen in the establishment series.

The proprietor data in REIS are unique, however. They are not based on a sample but are taken from income tax filings with the Internal Revenue Service. To be consistent with the wage and salary data, the BEA counts jobs (not workers) and allows multiple-job holdings. Recall that the household survey counts only workers and the BLS counts only proprietors whose primary job is running their own business. The difference in the count is striking once part-time entrepreneurship is allowed: In the United States in 2002, there were 8.9 million proprietors and partners in the household survey and 29.6 million in the BEA count. The BEA counted 2.4 million proprietors in Texas in 2002 and 429,000 in Houston. Obviously, part-time ownership of a business is common; examples are barber and beauty shops, child care providers, real estate agents, carpenters, plumbers and tax preparers.

Did the number of proprietors matter over the course of the business cycle's latest turns?

The long lag in the delivery of the data lets us see only the first year of recovery. Table 2 shows the percent change in 2001–02 in the total number of jobs, wage and salary jobs, and number of proprietors. Note that in the United States, Texas and all the cities examined, proprietors account for at least 16 percent of all jobs. Changes in the number of wage and salary jobs are quite close to the story told by the BLS establishment data in every area; changes in the number of proprietors are quite large, in contrast to the wage and salary numbers. Adding proprietors into the total job count improves the job growth estimates in 2001–02 by about a full percentage point in every area.

Table 3 compares annual average changes for BEA wage and salary jobs and for proprietors for all years from 1970 to 2002. On average, the proprietors have larger changes—faster growth—than wage and salary jobs (4.6 percent versus 3.1 percent in Houston, for example). Moreover, proprietorships are typically more volatile in that the series has a larger standard deviation than wage and salary jobs (3.7 percent versus 3.3 percent in Houston). A simple average of all the Texas metro areas in Table 3 shows typical annual changes of 2.9 percent in wage and salary jobs and 4.3 percent for proprietors, and standard deviations of 2.8 percent versus 4.1 percent.

Figure 1 suggests at least anecdotal evidence that the proprietor growth may have a countercyclical element. The figure shows the annual change in the number of proprietors in Houston from 1970 to 2002. Note the surge in new proprietors to near a 10 percent annual rate in 1981 and 1982—the two years that marked the onset of the oil bust—and the



spike to near 17 percent in 1987, the year after oil plunged to \$10 per barrel. Hard times may be a generator of proprietorships, provoking the increases in 2001–02 as well.

Are these good jobs? Or are they just a Band-Aid following recession? Certainly, some people may turn to their own business in difficult economic times if they feel threatened in their primary employment or if a slowdown brings less overtime. If laid off, some professionals may simply print business cards and become instant consultants. Others may find themselves pushed by circumstances into starting a business they have long considered. And others may find new opportunity in the general economic housecleaning that a recession brings. One study found that the oil bust in Texas and Louisiana cities led to a quick surge in the number of proprietors, but that it took several years for a large increase in proprietors' income to follow.<sup>5</sup> Recessions are also sometimes compared to a forest fire, which leaves the seeds of economic regeneration on the forest floor after it passes. These proprietorships may well be the seeds of future growth.

## Conclusion

The Houston job market has brought us a stream of dreary news in recent years, mostly the product of the widely followed nonfarm establishment survey. To see if perhaps the establishment data were understating job growth, we turned to a simmering controversy at the national level over how to interpret the much stronger job growth indicated by the household employment survey. This national pattern of substantially more jobs in the household survey was in fact found to also hold in Houston and through-

out Texas. However, like many researchers before us, we were unable to find any concrete basis to support the higher numbers in the household survey in terms of its coverage or definitional differences.

The household survey did yield one clue about job growth that fell outside the establishment survey: strong growth in the number of proprietors since early 2001. Looking at data on full- and part-time employment in Houston and other Texas metropolitan areas, we find that in the first year of recovery the number of proprietors surged 5 to 6 percent, while wage and salary jobs remained flat. New proprietor employment added about 1 percent to total job growth in 2001–02.

Even if this proprietor job growth carried over into 2003 and 2004, adding a percentage point to growth in Houston or Texas or the United States, the numbers remain disappointing. The primary factors still shaping job growth at present are the short-run, job-depressing effects of productivity, along with some structural readjustments to the 1990s tech boom and bust. We are still waiting for the long-term, job-growing benefits of higher productivity

growth that seem sure to follow.

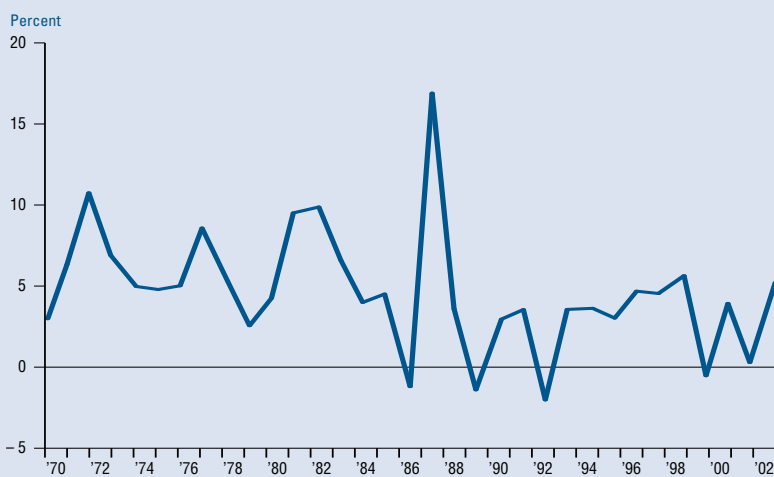
—Robert W. Gilmer

*Gilmer is a vice president and senior economist at the Federal Reserve Bank of Dallas.*

## Notes

- <sup>1</sup> For a summary of the controversy, including a number of issues not touched on in this article, see “Employment from the BLS household and payroll surveys: summary of recent trends,” on the BLS web site at [www.bls.gov/cps/ces\\_cps\\_trends.pdf](http://www.bls.gov/cps/ces_cps_trends.pdf).
- <sup>2</sup> For a spirited defense of the establishment survey based on accuracy, see “Measuring Employment Since the Recovery: A Comparison of the Household and Payroll Surveys,” by Elise Gold, EPI Working Paper no. 148, Economic Policy Institute, Washington, D.C., December 2003.
- <sup>3</sup> “Examining the Discrepancy in Employment Growth Between the CPS and CES,” by Mary Bowler, Katie Kirkland, Jurgen Kropf, Thomas Nardone and Signe Wetrogan, a paper prepared for the Federal Economics Statistics Advisory Committee, Washington, D.C., October 17, 2003.
- <sup>4</sup> For Houston, for example, the average first difference of the logarithms of annual data from 1970 to 2002 was 1.9 percent for the BLS establishment series versus 1.7 percent for the BEA adjusted series. The standard deviation for the BLS series was 1.8 percent and for the BEA, 1.7 percent. The correlation between the series was .965.
- <sup>5</sup> See “Finding New Ways to Grow: Recovery in the Oil Patch,” by R. W. Gilmer, *Houston Business*, July 1996.

**Figure 1**  
Year-over-Year Change in the Number of Proprietors in Houston, 1970–2002



**G**rowing economic strength was reported by most respondents in Houston. The U.S. recovery from its summer “soft patch” seemed to help, and higher oil prices finally seem to be filtering through to the local economy. Retail, real estate, refining, oil services and chemicals all had a positive story to tell about current conditions.

### Retail and Auto Sales

Retailers reported that November is off to a great start, with double-digit sales increases early in the month. Except for some big-ticket items such as furniture, third-quarter sales were at or above same-period sales last year for all retail categories. Even big-ticket items are sharing in November’s fast start, and optimism is growing for a solid holiday season.

Auto sales are still struggling, with October sales 1.6 percent below last year. Sales seem to be pulling closer to break-even in recent months, but year-to-date sales are still lagging by 6 percent.

### Real Estate

Demand for apartments is strong, with absorption at the highest level in three years and driven mostly by class A units. Supply also continues to grow, and rents are flat compared with both the last quarter and last year. Office space has also seen a couple quarters of positive absorption but is still strongly negative over 12 months; the central business district and West Loop have been the top gainers in this

market. The industrial market, led by northwest Houston, has now recorded positive absorption for six quarters.

Despite some signs of cooling in other parts of the country, Houston’s housing market remains strong. New home sales ran at double-digit rates above last year’s pace through the third quarter, and existing home sales were up in October.

### Oil Services and Machinery

Oil services and machinery business is improving. The trickle-down from high oil prices to oil services finally seems to be happening. Most industry segments are busy and enjoying better prices, with growing backlogs and expectations that the market will stay good for a while. Reported bottlenecks were mostly in people- and skill-intensive wellhead services such as fracturing, pressure pumping and tubular makeup.

### Chemicals

Chemical markets are tight, with robust demand reported for a long list of products—ethylene, polyethylene, polyvinyl chloride, chlorine and caustic soda. Export demand is strong based on a favorable ratio of oil to gas, a weaker dollar and operating problems in Europe and Venezuela. Most

firms report significant cost pressure, primarily from energy, but also from transportation and a variety of other material inputs. However, strong demand is allowing higher costs to be passed through to customers, and profit margins are being maintained or improved.

### Refining

Refiners are ending their fall maintenance period, where operating rates have fallen below normal even for this time of year. At the end of October, operating rates were still only in the low 90s, but they improved rapidly in early November. With inventories near the bottom of the five-year range, the slow return of capacity and cool fall weather have raised concerns about heating oil supplies for the coming winter. Distillate (including heating oil) prices have been whipsawed by doubts about the refinery system’s ability to refill inventories before winter arrives. Supplies have been helped by high levels of imports from Europe.

Refiners’ margins have improved steadily in recent weeks, rebounding from a significant late-summer decline. Gulf Coast refiners that can handle sour (high-sulfur) crude have earned much wider margins because of the lower feedstock costs.



For more information or copies of this publication, contact Bill Gilmer at (713) 652-1546 or [bill.gilmer@dal.frb.org](mailto:bill.gilmer@dal.frb.org), or write Bill Gilmer, Houston Branch, Federal Reserve Bank of Dallas, P.O. Box 2578, Houston, TX 77252. This publication is also available on the Internet at [www.dallased.org](http://www.dallased.org).

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