HOUSTON BUSINESS BRIEFS

Recession and Recovery End in Houston: But What Have We Become?

Houston employment reached an all-time high in May 1990 with 1,581,200 jobs. This is according to revised data on nonagricultural wage and salary employment recently released by the Texas Employment Commission, figures that show significantly more growth in Houston than was previously believed. The May data passed the previous peak of March 1982 and officially marked the end of eight years of recession and recovery in Houston. By the end of 1990, another 35,100 jobs were added to the city's employment base.

This return to record-high employment levels is a significant landmark, and it has been widely celebrated in the press and by various civic groups. But how meaningful is this long, slow return from a very deep recession? We look at the broader implications of this recovery by addressing two questions here. First, why did it take so long—some 97 months—for this recovery to occur? Second, given that the city has indeed diversified and reshaped itself, what has it become? If we entered the 1980s as the nation's oil capital, what are we now?

We think the answers to these questions suggest that this landmark of a new employment high is not very meaningful in an economic sense. But they also suggest that the "lost decade" of the 1980s reshaped Houston in unexpected ways. No, we are no longer the Houston of 1982. But neither are we much more like the United States as a whole. Building on its history in oil and gas, Houston has transformed itself into a major national center for applied technology and engineering.

Why So Long to Recover?

Figure 1 plots nonagricultural wage and salary employment in Houston since 1975, illustrating the three phases of the business cycle: recession, recovery and expansion. *Recession* is a decline in output or employment from a previous peak; *recovery* is movement from the trough of the previous recession to the old peak; *expansion* is growth from the old peak to a new one. According to these definitions, recession ended in Houston in January 1987, and recovery came in May 1990. The new expansion is not yet one year old.

It is easy to casually lump Houston in with the Texas recession, but what happened in Houston

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Figure 1
Total Nonagricultural Employment in Houston

SOURCES: Texas Employment Commission
U.S. Bureau of Labor Statistics

was of a different magnitude than in much of the rest of the state. First, the losses in Houston were much more severe. From peak to trough, Houston lost 212,000 jobs from its nonagricultural employment base—nearly one job in eight. Compare this to the losses in Dallas (26,000), Austin (14,000), San Antonio (6,000) or El Paso (3,000).

Second, growth in all these other Texas cities continued strongly long after Houston entered decline. The Dallas recession, for example, began in January 1986. Compare the length of the recession in Houston (57 months) to that in other Texas cities: Dallas, 19 months; Austin, 19 months; San Antonio, 12 months; El Paso, 7 months. Recovery quickly followed the trough in all these cities except Houston. Although Houston has grown much faster than the rest of the state since early 1987, it also remained in recovery long after recovery was complete elsewhere in the state.

Why so long? First, we must recognize the extent of the error made on the front end. In the early 1980s, Houston was home to tens of thousands of jobs, based on the assumption that the price of oil would rise to $50 per barrel and beyond. In early 1982, the world price was $34 per barrel; the domestic rig count was more than 4,000; some 200,000 jobs in Houston were directly related to oil exploration, at least as measured by their location in mining or machinery industries. When the trough was reached in early 1987, the world price was $16; the rig count fell to only 900; Houston's upstream oil employment was reduced by more than 100,000 jobs. Few of Houston's job gains since early 1987 are attributable to upstream oil operations.

Normally, we think of the recovery phase of a recession as the quick and easy part of the growth process. The factories and machines needed to return to the old peak were left in place by the short downturn. As demand expands once more, all we have to do is return people to work quickly. It is the expansion phase that should be more difficult, slowed by the need for new investment and the lags encountered in meeting new capital requirements.

Clearly, this was more than a normal recovery for Houston. The city was never able simply to bring back the upstream oil operations of 1982. Houstonians watched rust accumulate in pipe yards all over the city for eight years. Optimistic estimates at the start of the Persian Gulf War put the *potential* domestic rig count at 1,500 in an emergency situation—nothing close to the peak of 4,000 reached previously. Certainly, the growth process in Houston since 1987 has done much more than mechanically return workers to their previous position on the assembly line or on the drilling rig. Indeed, "recovery" in the sense of returning to a previous peak merged with the expansion phase as we were forced to add new capacity to return. Diversification and a partially reinvented Houston are part and parcel of this so-called recovery.

What Has Houston Become?

It is often said that diversification means Houston has become more like the United States. While Houston has certainly changed its industrial mix since early 1982, evidence that it has become more like the typical U.S. city is not clear. Objective measures of how a place is like or unlike a typical place indicate that Houston remains far from the norm. One problem is simply that the energy sector shrank everywhere—including Houston—and the large energy sector remaining in the city leaves it as "unlike" other places as ever.

Neither is Houston evolving into a diversified regional financial and distribution center on the order of Atlanta or Miami. Indeed, the role filled by Atlanta in the Southeast is already filled in the Southwest by Dallas. Houston shows few signs of competing effectively with the Dallas/Fort Worth Airport, the growing number of corporate headquarters, or the broad retailing and financial base of Dallas. (*Houston Business Briefs* addressed this point at length last July.)

What, then, is Houston now? We think the best way to characterize Houston is as an important national center for applied technology. If you associate science with high technology, then associate engineering with applied technology. Engineering and applied technology capture most of the large or important business institutions in the city.

Houston still dominates the nation in upstream oil and gas. Mining operations alone contribute $3 billion earnings annually to the Houston economy; Dallas is a distant number two with $1 billion. And this ignores the extensive backward linkages with Houston's manufacturing base, linkages that are not as extensive in other oil and gas centers, such as Dallas, New Orleans or Denver.

Also, unlike many other oil cities, Houston is a center for downstream oil operations in refining and petrochemicals. Some 25 percent of the nation's refining capacity lies along the Texas Gulf Coast from Lake Charles to Corpus Christi. These refineries attracted more than $1 billion per year in new capital spending in the 1980s, based largely on changes for environmental controls and production of unleaded gasolines. Furthermore, 45 percent of the nation's basic petrochemical capacity, plants that turn oil into plastics and synthetic rubber, is in Houston. This booming industry was a major source of Houston's momentum in the late 1980s. At one point, six world-scale ethylene plants were announced for construction along the Texas Gulf Coast. Although some plans have been canceled, scaled back, or stretched out, billions of dollars of new construction remain under way.

The reconstruction of Kuwait has highlighted the role of Houston's large engineering firms, but companies like Bechtel, Brown and Root, CRSS, Fluor Daniel, and M.W. Kellogg have been the focus of much of Houston's recent employment growth. The worldwide boom in petrochemical construction in the late 1980s was an important catalyst for this growth, and both Kuwait's reconstruction and the Clean Air Act promise Houston a healthy decade ahead.

Another layer of applied technology is NASA and the aerospace complex that has grown up around it. The Johnson Space Center accounts for roughly 20 percent of NASA's budget, and about half of that feeds directly into Houston. NASA employs 3,750 civil servants and supports 12,700 aerospace and other contractors in the Houston vicinity.

Finally, serving as another key part of Houston's applied technology complex is the Texas Medical Center. With 55,000 employees and 10,000 students on its various campuses, it generated rapid employment growth in the 1980s. Furthermore, the Medical Center spawned a high-growth industry in the many biotechnology and genetics firms in Houston, much of it geared to linking the Medical Center's human research to the region's traditional roots in farming and livestock.

Implications

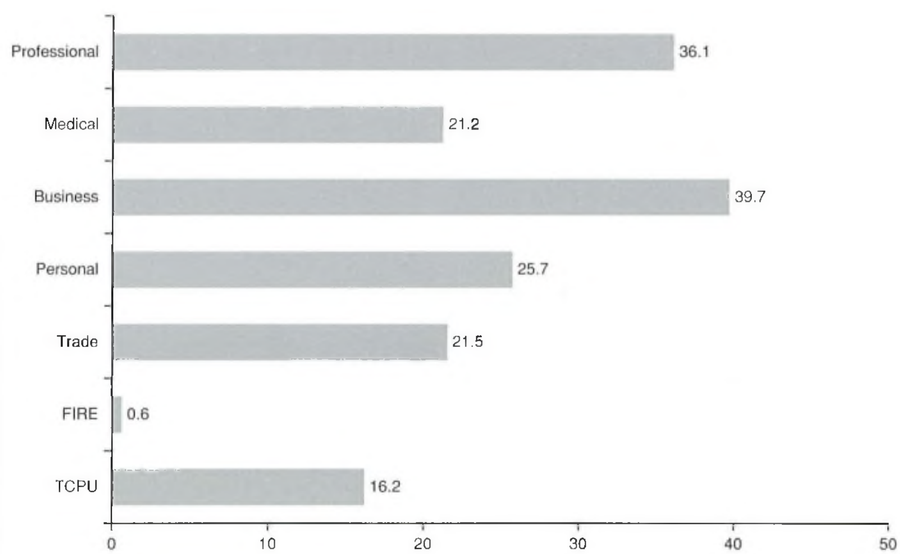
Between the January 1987 trough and January 1991, Houston added 250,000 new jobs. Of these new jobs, only 42,000 were in mining or manufacturing, making up just one-third of the losses sustained in these sectors during the oil bust. Another 23,000 were in construction, and 25,000 were in government. But most of the new jobs, some 160,000, were in the private service sector.

Figure 2 shows that transportation, communications and public utilities (TCPU) and finance, insurance and real estate (FIRE) together added only 18,000 new jobs. Trade and personal services are industries that simply respond to growth in the local economy; together, they added 47,000 new jobs. About 100,000 new jobs came in business, medical and professional services. It is these last three sectors that encompass much of the recent growth in "applied technology" described above.

In conclusion, Houston did not have the luxury of a traditional recovery—a quick and easy return to a previous peak. The recent return to 1982 employment levels meant several years of economic expansion as the city found new and innovative paths to growth. With its tradition of engineering and of building oil and gas facilities around the world, Houston has "diversified" by applying this know-how to infrastructure, medicine and aerospace. While these changes may have extended the width and breadth of Houston's ties to the rest of the U.S. economy, they have not made Houston's economic role on the national stage any less distinctive. ❖

Figure 2
New Private Service-Sector Jobs in Houston, January 1987–January 1991

Thousands of Jobs



SOURCES: Texas Employment Commission
U.S. Bureau of Labor Statistics

Houston Beige Book
April 1991

Signs of the national recession continue to emerge in Houston as the beneficial effects of the fall 1990 oil-price spike subside. Based on employment growth over the preceding 12 months, Houston's expansion peaked at a 6.1-percent growth rate last July. Growth has remained positive, but its rate has declined steadily every month since July, sinking to 3.3 percent in March. This rate of expansion is still very healthy, but data collected from our most recent survey of Beige Book respondents are consistent with a continued moderation in the growth rate through April.

Retail Sales

Retailers found their current position difficult to judge because Easter came early this year and late last year. Although they need to see April results, most respondents felt they would come out of the spring season 5 percent to 7 percent ahead of last year.

In contrast, Houston auto sales posted a poor performance, off some 14 percent for the first quarter. Despite this showing, there was still room for some guarded optimism about the near-term future. War, a weak national economy and very wet weather combined to depress consumer confidence and enthusiasm in the first quarter. Conditions should generally improve this spring. The first quarter is not an important sales period in the auto business. But if the situation does not improve soon, 1991 could be a down year for car and truck sales.

Upstream Oil

Seasonal declines in the rig count are normal this time of year, but the U.S. rig count has slipped to nearly 100 less than the number working at the same time last year. Wet weather may account for part of the decline, but depressed natural gas prices almost certainly play a major role. The offshore sector (largely geared to gas exploration) has suffered the most serious setback. The Austin Chalk continues to hold the same number of working rigs as last year in Railroad Commission District 1, and horizontal drilling is gaining ground in District 3. Although the outlook for domestic exploration continues to diminish, growth continues in international exploration. Oil services will be the biggest winner in the reconstruction of Kuwait.

Downstream Oil

The petrochemicals industry continues to feel the effects of overexpansion and the domestic recession. The higher value of the dollar and lower oil prices have hurt foreign markets because Europe and Japan depend more on oil and less on natural gas than domestic producers. Refiners are enjoying excellent margins as gasoline prices fall more slowly than crude oil inputs. Refiners' product sales are off in the first quarter, mostly attributable to the recession. Inventories, currently very tight, should quickly return to normal as some big refineries that are down for seasonal turnaround come back on stream.

Paper and Wood Products

East Texas plants reported that the volume of shipments of containerboard for packaging was up, but only at the cost of some large price cuts. Bleached paper markets showed strength and were profitable. Wet weather hurt area lumber markets, forcing shutdowns at construction sites and creating conditions too wet for logging. Respondents said the pricing picture for building products, hurt badly in recent months by national recession, was significantly improved thus far through the second quarter.

Home Sales

In contrast to auto sales, both new and existing home sales jumped dramatically in February and remain strong. Builders, who had been very conservative in putting new houses on the ground early in the year, now have inventories that are far below normal. Financing generally remains available to this segment of the construction industry in Houston, so a jump in home construction seems likely in coming months. Rising rents in apartments are helping fuel single-family home construction. Some 3,000 new apartment units may be built in Houston this year, despite limited financing available for this segment of the real estate market. ❖

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