Diversified Houston Spared Recession … So Far

By Jesse Thompson

Oil and gas exploration, production and services firms nationwide drastically cut spending and employment after oil prices plunged 40 percent in the second half of 2014. Thousands subsequently lost their jobs as the U.S. rig count leveled off at 861 in June 2015—1,064 fewer than in October 2014. The industry's capital expenditures, typically for equipment and facilities, have been cut.

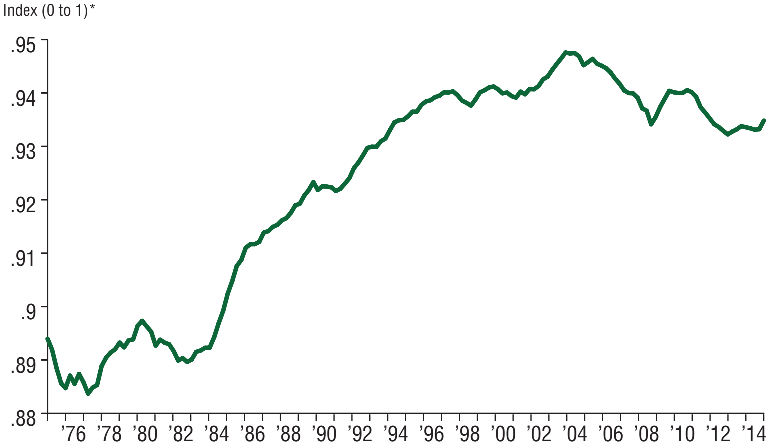
In Houston, headquarters of the energy industry, manufacturing was the first sector to respond, losing 15,000 jobs by June (after peaking at 261,300 in December)—the largest decline since the Great Recession. Fabricated metals was particularly hard hit, with employment falling at an annual rate of 16.4 percent in the first half of 2015; support activities for mining slid at an annualized 17 percent during the period.

Still, negative spillover to the rest of the Houston-area economy has appeared only slowly. Despite significant losses in manufacturing and oilfield services, total jobs in Houston only declined by an annualized rate of 0.6 percent in the first half of 2015. While not a large reduction, this represents a reversal from the 4.1 percent pace of job growth last year.

Three factors may be limiting the impact of the exploration and production downturn.

First, Houston is the center of the nation's refining and petrochemical industries, which benefit from low oil and gas prices. Petrochemical production is booming. Construction of new facilities by firms such as Chevron Phillips Chemical and Dow Chemical, and the thousands of workers needed for the build-out, will help prop up employment until at least 2017. Second, conservative bank lending practices, increased hedging against oil price declines and a low "opportunity cost" for investing in the energy industry have arguably kept the rate of bankruptcies and mergers and acquisitions relatively low among exploration and production companies. Third, the region's industry mix has become more diversified.

Diversification Makes Houston Industry Mix More Like U.S.



*Higher values mean regional industry mix resembles national industry mix.
NOTE: Industry definitions changed in 1990.
SOURCES: Bureau of Labor Statistics; seasonal and other adjustments by the Federal Reserve Bank of Dallas.

An index measuring how Houston's industry composition is similar to the nation's shows that from 1982 to 2004, Houston became more like the U.S. (*see chart*). Of particular importance, professional and business services and health services, as a share of Houston employment, grew 6.5 percentage points to 26 percent from 1990 to 2014.

Above-average wages in these industries helped real (inflation-adjusted) per capita income grow 63 percent locally between 1990 and 2013, compared with a 43 percent increase nationally. The housing boom of the mid-2000s boosted construction's share of the region's economy. The proportion of manufacturing and wholesale trade employment also grew during the period, and the shale revolution allowed the energy industry to expand after the Great Recession. Mining's share of Houston employment—which tumbled from a peak of 7 percent in 1982 to a low of 2.6 percent in 2000—stood at 3.8 percent in 2014. Energy sector growth spurred a flurry of commercial and residential real estate development as the energy sector consolidated into the region.

With so much recent economic development tied to oil and gas, some have questioned how diversified Houston has become, especially since exploration and production firms outsource many legal, professional and financial services.

In an econometric model that incorporates real U.S. gross domestic product (GDP), exploration and production firms' real capital expenditures and Houston employment from 1991 through 2014, a 30 percent decline in exploration and production capital expenditures—such as occurred in first quarter 2015—yields a 1 percent drop in Houston employment (about 30,000 jobs) by year end, holding all else constant.

That is *one-quarter* of the 3.9 percent employment loss that would have occurred in the pre-1990 era. The model also suggests that Houston's reaction to U.S. GDP growth was 68 percent *larger* post-1990—meaning that even serious oil industry declines can now be mostly offset by economic growth elsewhere. On balance, these changes indicate that Houston's oilfield connection, while strong, has weakened. By becoming more like the U.S. economy, the region can better weather oil market volatility.