Houston Economic Indicators

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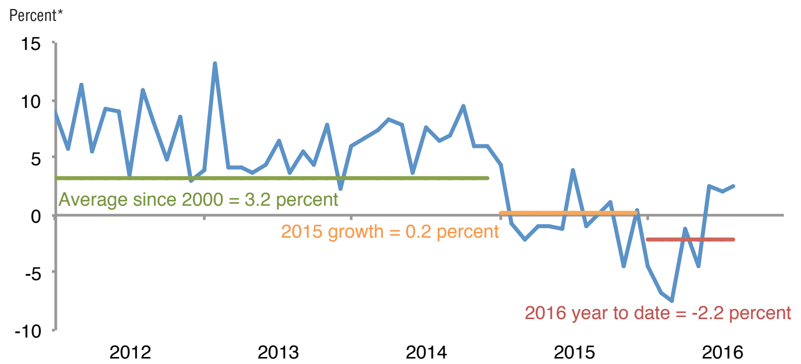
Summary Recent data suggest that while Houston is not yet recovering, the worst of the oil bust and its effects may be in the past. Employment grew in each of the past three months, and the energy industry is finding its balance. With drag from the mining sector likely abating in the second half of the year, the outlook for Houston is shifting from modestly negative to generally flat.

Business-Cycle Index

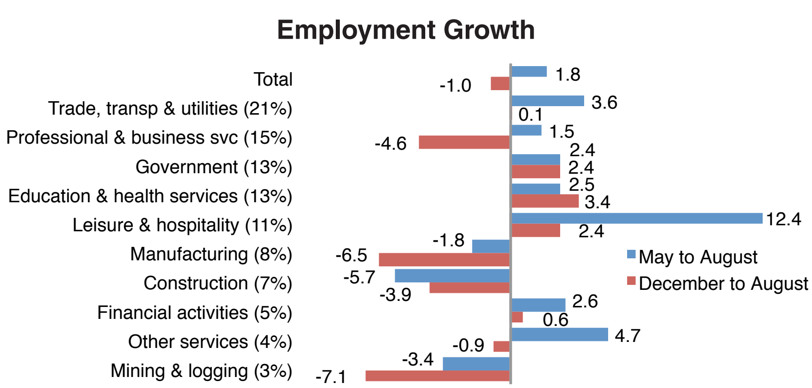


*Annualized month-over-month growth rate.

SOURCE: Dallas Fed.

- The annualized growth rate of the Houston Business-Cycle Index picked up to 2.6 percent in August after growing 2 percent in July and 2.6 percent in June. The stronger numbers were driven by employment estimates. Cumulatively, the index is down an annualized 2.2 percent in 2016. Future revisions to the index may change the picture, but it is now indicating that the economy has reversed course from the declines in the first half of the year.

Employment



NOTES: Data show seasonally adjusted and annualized percentage employment growth by industry supersector. Numbers in parentheses represent share of total employment and may not sum to 100 due to rounding.

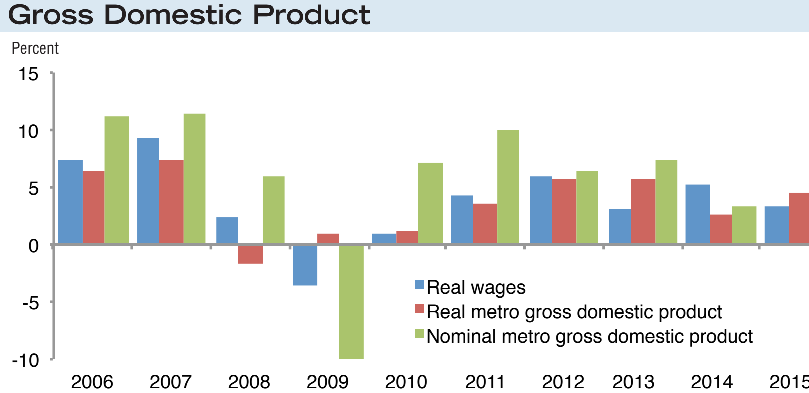
SOURCES: Bureau of Labor Statistics; adjustments by the Dallas Fed.

- Total nonfarm employment in Houston grew an annualized 1.8 percent over the three months ending in August—the strongest three-month period since February 2015. Job growth came mostly from leisure and hospitality (9,000) and trade, transportation and utilities (5,400). Private education and health services and government both added 2,300 jobs. Job losses were concentrated mostly in construction (–3,100). Manufacturing and mining both lost about 1,000 jobs.

- The annualized decline in total employment was –1 percent between December and August (–14,686 jobs).

- Houston's unemployment rate increased to 4.9 percent in August from a revised 4.4 percent in July due to a big rise in the labor force. The unemployment rate held at 4.9 percent in the U.S. and rose to 4.7 percent in Texas.

Gross Domestic Product



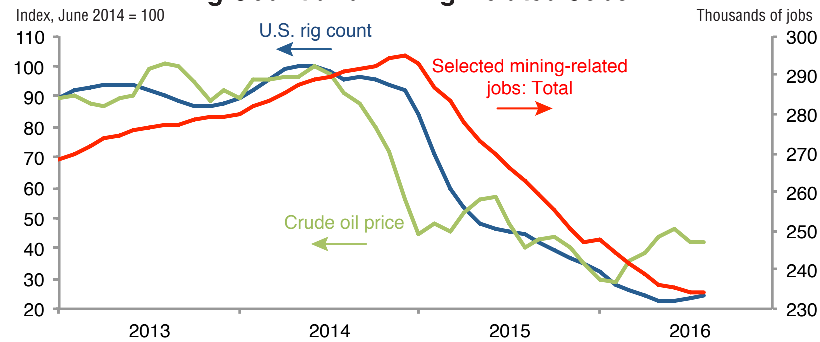
SOURCES: Bureau of Economic Analysis; the Dallas Fed.

- Without adjusting for price effects such as sharply falling commodity prices, Houston metropolitan area gross domestic product (GDP) fell 3.6 percent from 2014 to 2015. After adjustment, real GDP grew 4.6 percent.

- The inflation-adjusted sum total of all wages paid in Houston, which correlates strongly with real GDP, grew a more modest 3.4 percent in 2015. Quarterly wage data indicate the annual strength stemmed from a robust first quarter in 2015 and that total real wages have since fallen modestly as a result of the oil bust.

Oil and Gas

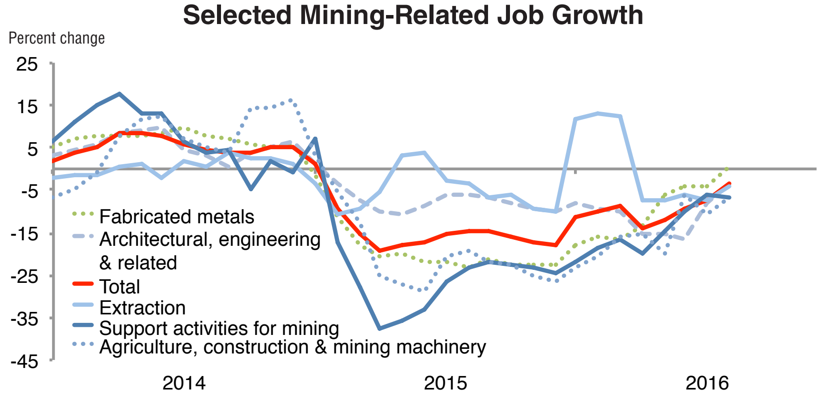
Rig Count and Mining-Related Jobs



NOTES: Rig count and crude production seasonally adjusted. Rig count and nominal oil price indexed to June 2014.

SOURCE: Energy Information Administration.

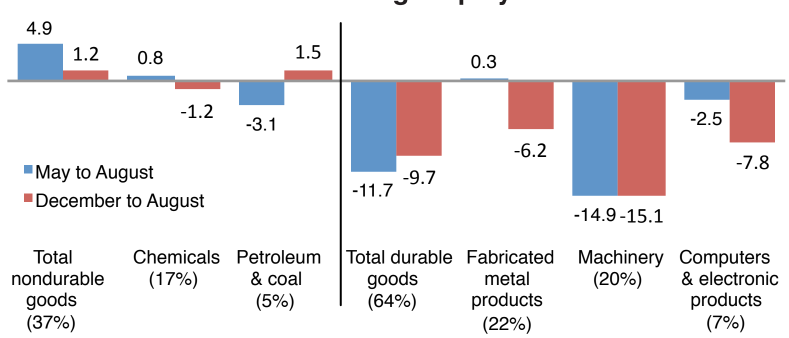
Selected Mining-Related Job Growth



NOTE: Data are three-month annualized percent changes.

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

Manufacturing Employment



NOTES: Data show seasonally adjusted and annualized percentage employment growth by industry supersector. Numbers in parentheses represent share of total employment and may not sum to 100 due to rounding.

SOURCES: Bureau of Labor Statistics; adjustments by the Dallas Fed.

▶ Oil prices held between \$40 and \$50 dollars per barrel over the summer. This helped stabilize the rig count, which climbed 35 rigs to 467 (seasonally adjusted) between May and August. Weekly data in September suggest the count will increase again in that month. This is mostly attributable to the Permian Basin, which has seen a marked increase in drilling, completion and acquisition activity over the summer.

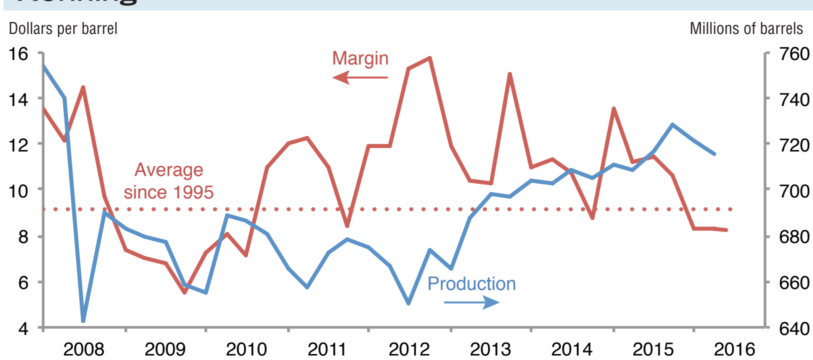
▶ Lagging behind the rig count, energy employment losses have tapered off from a hemorrhage to a bleed. The rate of decline across mining-related jobs has ebbed to an annualized –3.7 percent in the three months ending in August. Since the oil bust began, core mining-related industry jobs have now fallen more than 20 percent (61,000 jobs) in Houston.

▶ The number of bankruptcies in the oil industry tracked by Haynes and Boone, LLP continues to climb, suggesting that job losses in the industry are not over yet. A total of 195 companies have now filed for bankruptcy since 2014—possessing a combined \$81.9 billion debt.

▶ Declines in computer and electronics manufacturing slowed, and fabricated metals was essentially flat over the three months ending in August—its first nonnegative three-month growth rate since December 2014. Machinery, however, hasn't improved, as subsectors less dependent on mining have now weakened. A strong dollar, soft global demand and a petrochemical construction boom that is near its apex are among the likely culprits for continued weakness in durable goods jobs.

▶ Nondurable manufacturing growth was concentrated outside of chemicals and petroleum and coal products in industries such as plastic products, bakeries and beverage manufacturing.

Refining



NOTES: Margins adjusted to 2009 dollars with U.S. consumer price index. Data seasonally adjusted, Q3:2016 margin estimated.

SOURCES: Energy Information Administration; Pace Consulting; author's adjustments.

▶ Seasonally adjusted refinery production on the Gulf Coast dipped slightly in the second quarter, falling nearly 6 million barrels to 715.7 million barrels of product. Refinery margins have fallen in 2016 as robust global production met softer-than-expected global demand. At an estimate of \$8.21 per barrel in third quarter 2016, refining margins are below their 20-year average—well below levels seen from 2011 to 2015. Other measures of Gulf Coast refinery margins—not depicted here—are also at or near long-run averages. Lower margins may lead refiners to process less crude oil in coming months, putting downward pressure on oil prices.

NOTE: Data may not match previously published numbers due to revisions.

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