At the Heart of Texas: Cities' Industry Clusters Drive Growth

Dallas Fed Special Report | Second Edition

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The views expressed are my own and do not necessarily reflect official positions of the Federal Reserve System.

Overview

- Texas economic activity is concentrated in the eight key metros:
    - Austin, Dallas, El Paso, Fort Worth, Houston, McAllen, Midland-Odessa and San Antonio
- Smaller metros are new to the second edition and are part of the larger Texas mosaic:
    - Amarillo, Beaumont-Port Arthur, Lubbock, Tyler and Longview
- Commercial make-up of each metro is unique and shaped in part by its history, geography, geology and demography
- Industrial composition drives economic expansion

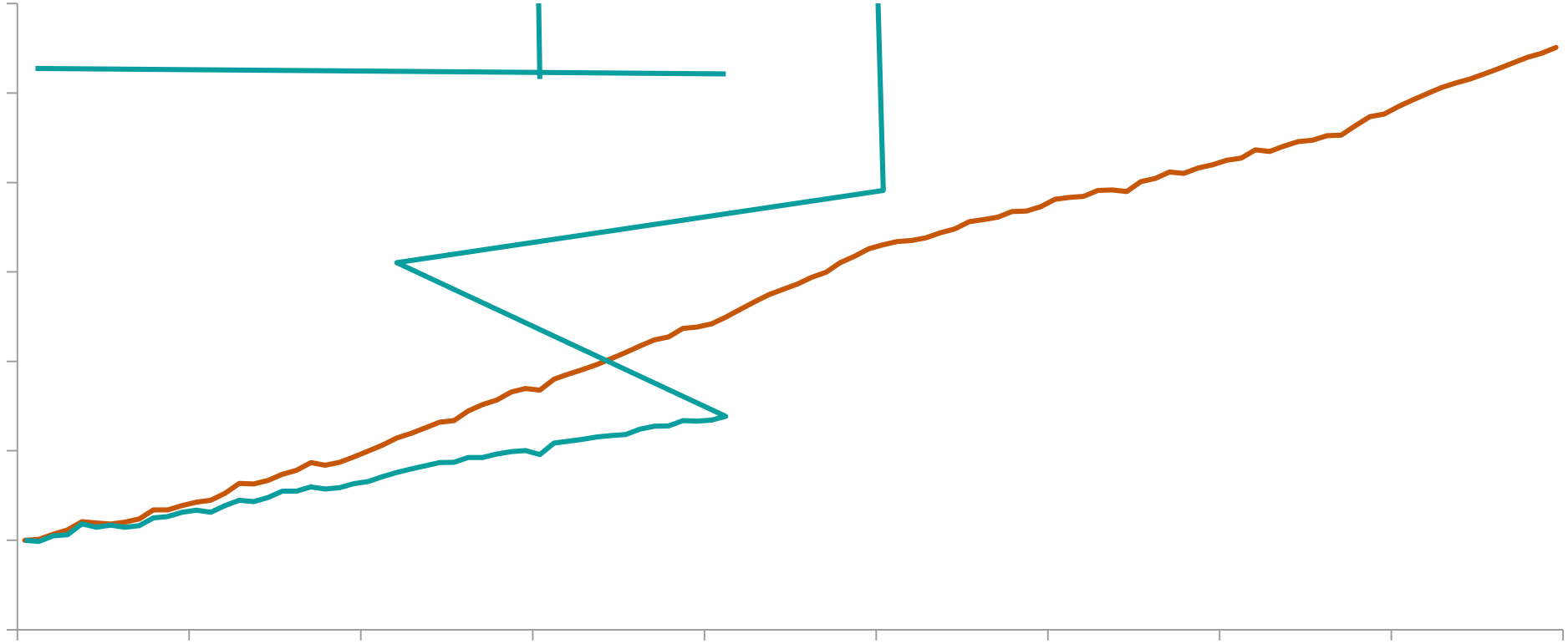
It’s the Age of the City

- Cities have been centers of population, commerce, learning and economic opportunity over the long term
- Movement toward urbanization since the Industrial Revolution
- Cities enjoy higher productivity and wages than non-cities
- “Mankind’s greatest invention”--- Harvard economist Ed Glaeser

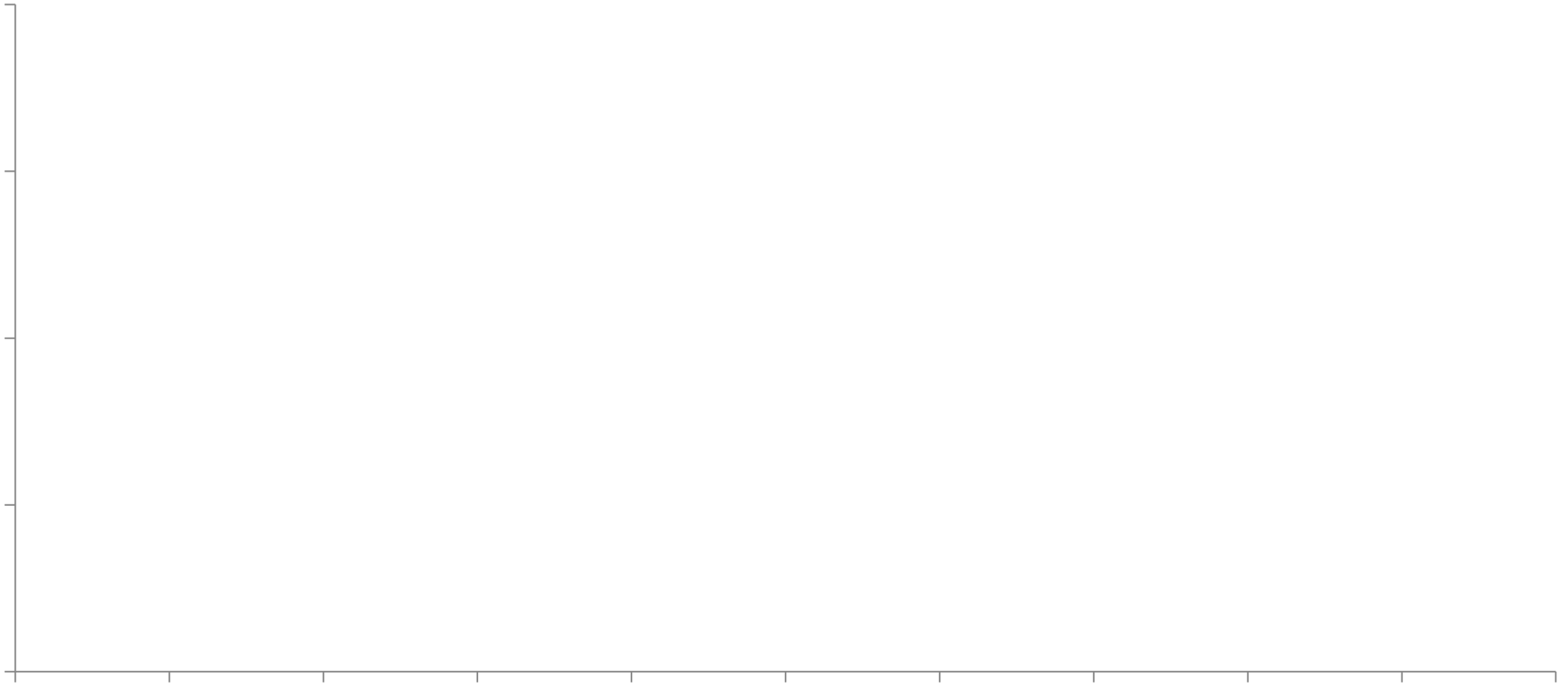
Texas Advantages

- Texas benefits from an outsized number of metros with 2 million or more residents
- Dallas–Fort Worth and Houston rank among the top six largest U.S. metro areas in population and economic output
- Other favorable economic factors
    - Central location, oil and gas deposits, land and seaports, proximity to Mexico, young and fast growing population, low cost of living and doing business

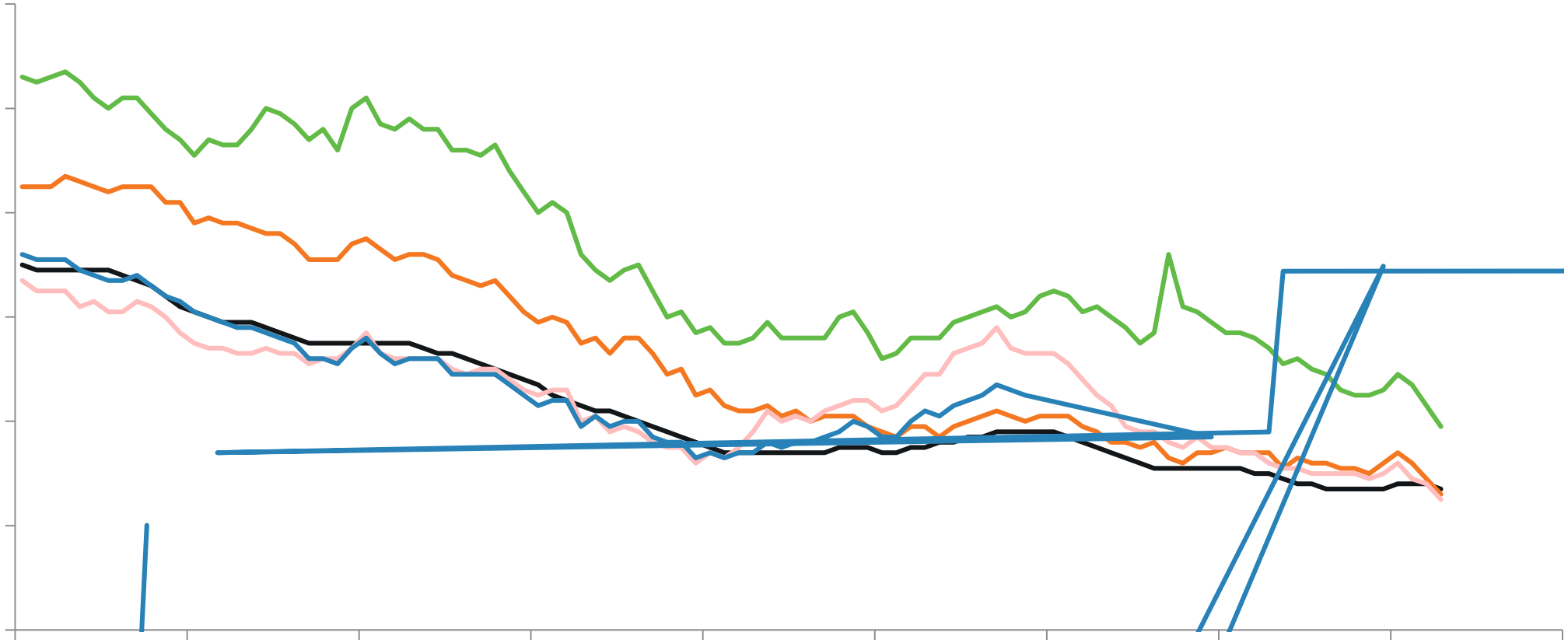
Employment Growth in Large Texas Metros Outpaces Small Ones



Modest Job Gains in Small Metros



Unemployment in Most Metros Below Texas Rate



Measuring Cluster Concentration

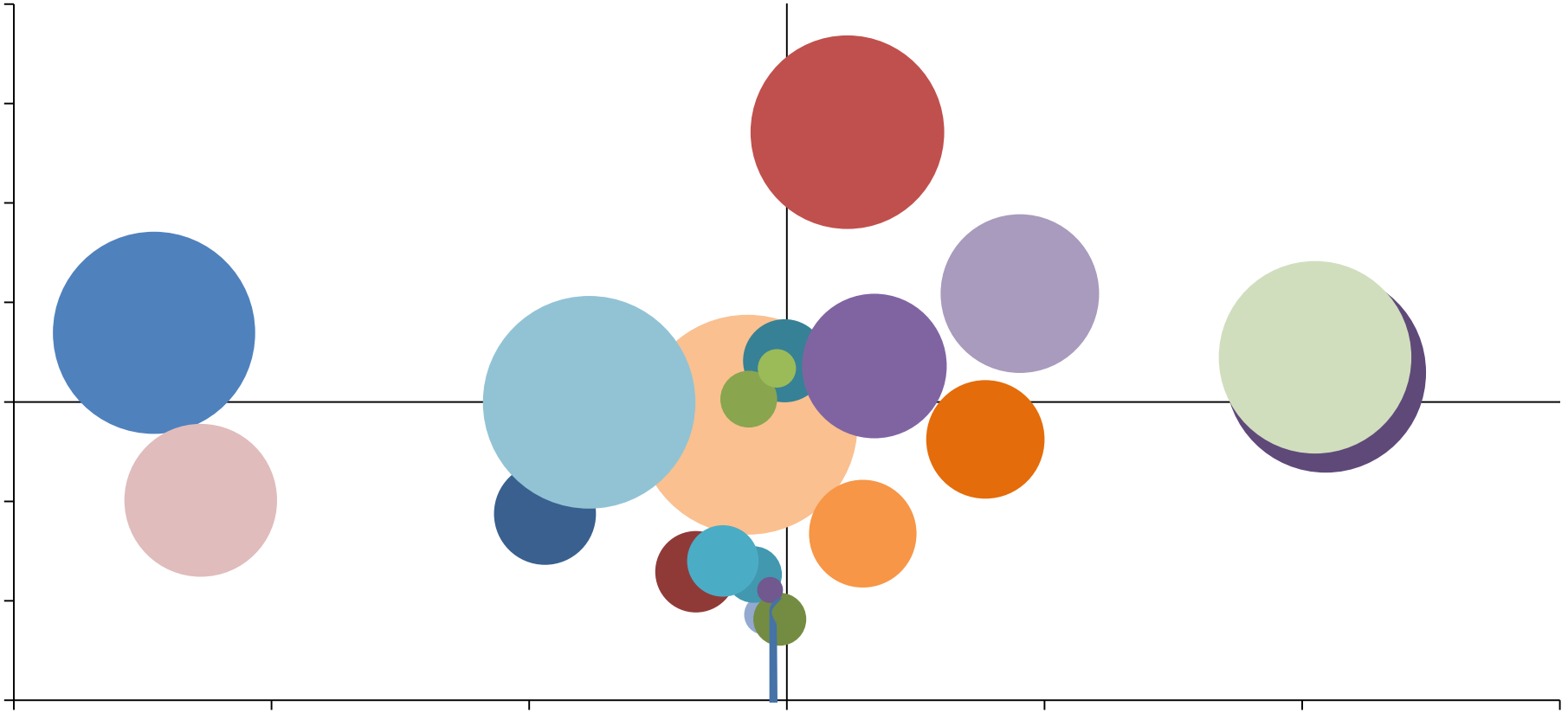
- Location Quotient (LQ):

$$\frac{\text{Local Industry Employment / Local Total Employment}}{\text{National Industry Employment / National Total Employment}}$$

- LQ >1 → Clustering or specialization
- LQ <1 → No specialization
- Period measured: 2010-2018
- Clusters increase productivity, stimulate innovation and facilitate new business formation
- Higher productivity leads to higher wages

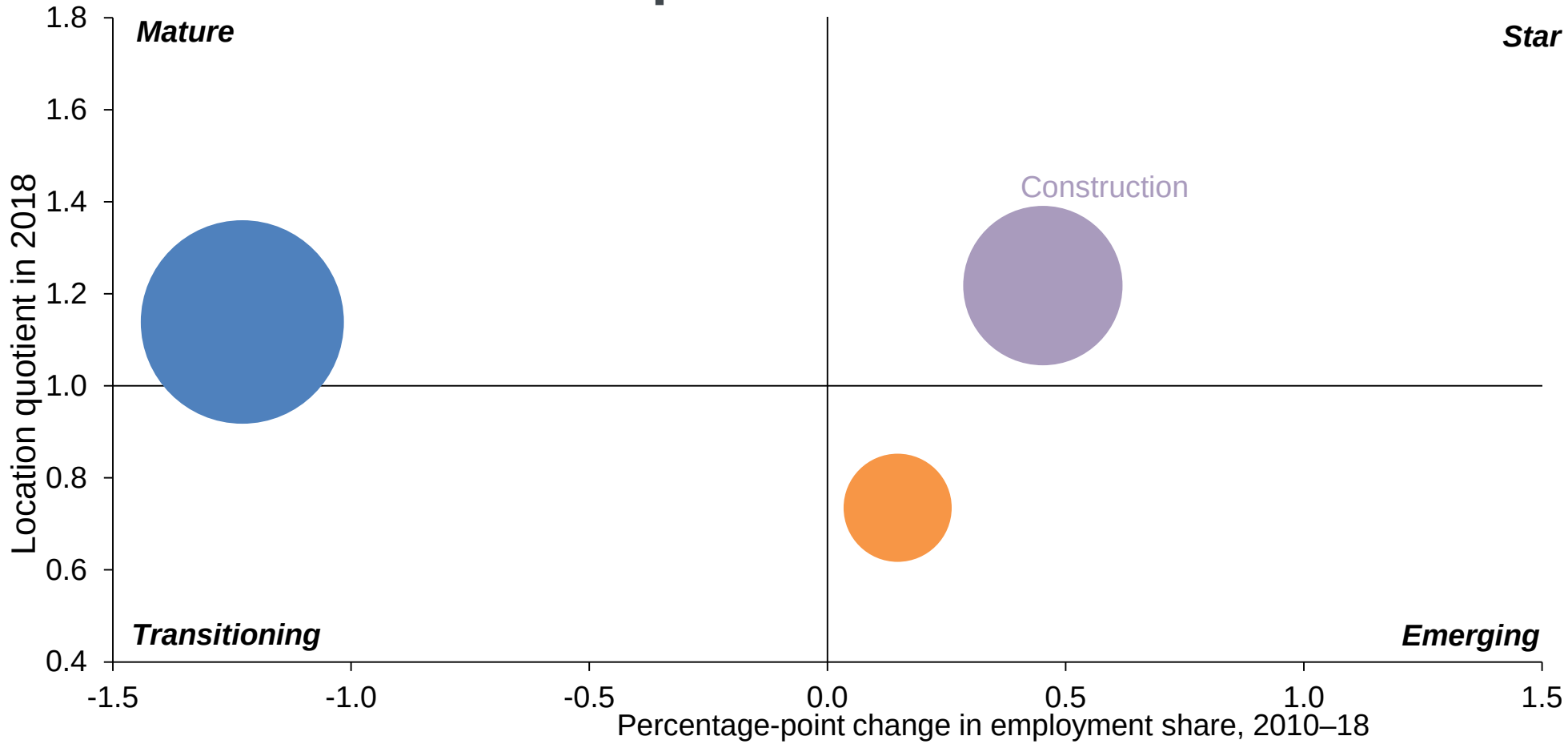
Texas Overview

Energy, IT and Business and Financial Services Help Set Texas Apart from Nation



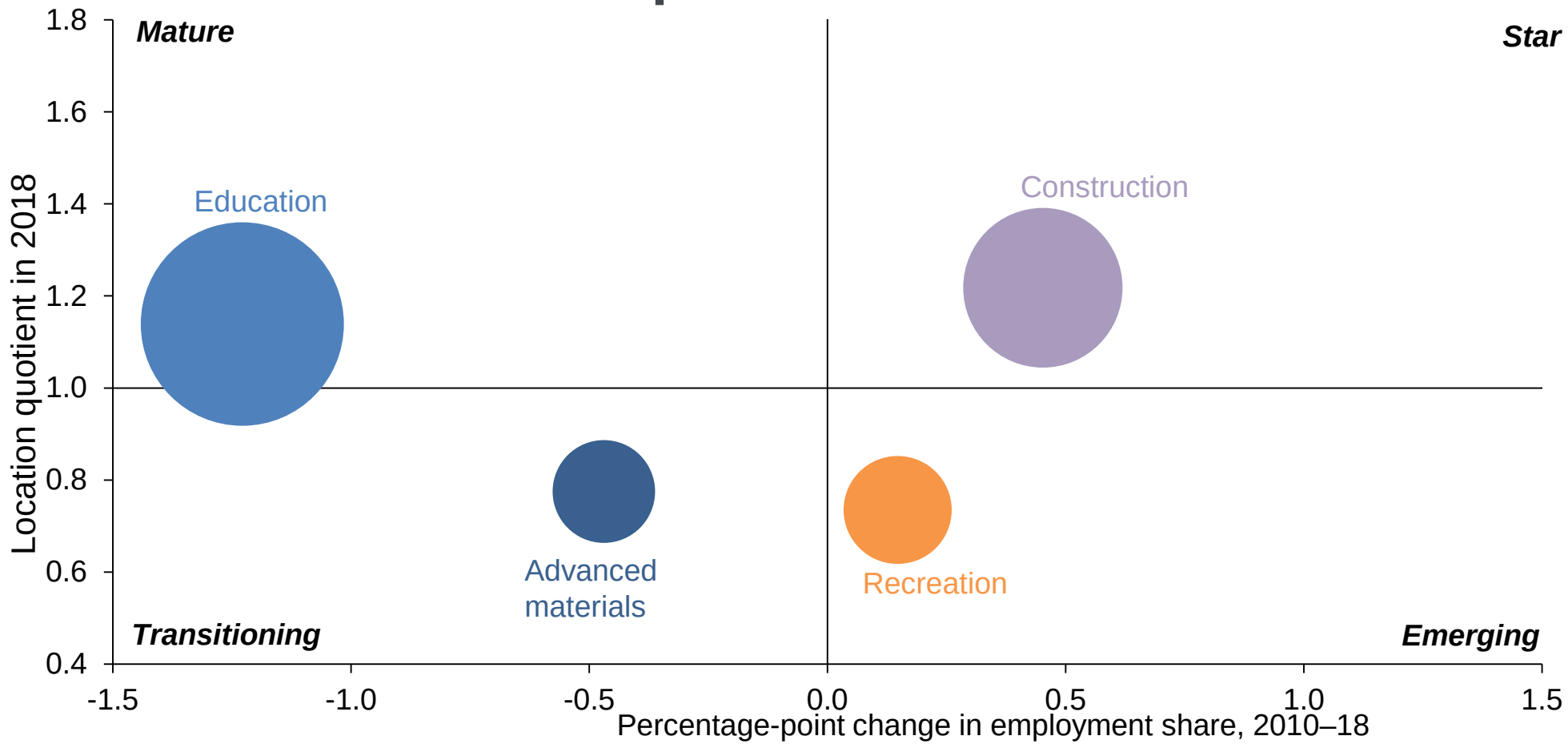
Energy

Energy, IT and Business and Financial Services Help Set Texas Apart from Nation



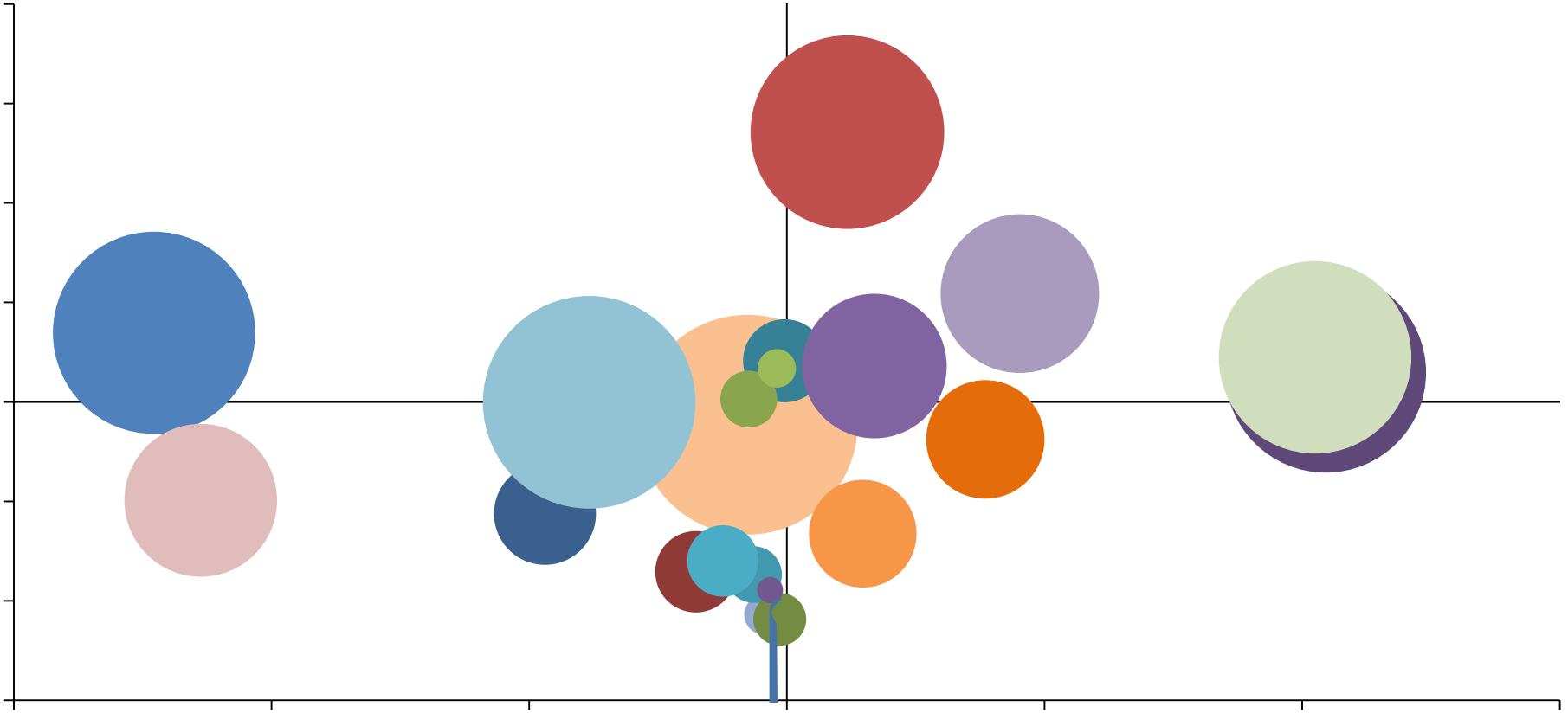
NOTE: Bubble size represents cluster share of metropolitan statistical area employment.
SOURCES:

Energy, IT and Business and Financial Services Help Set Texas Apart from Nation

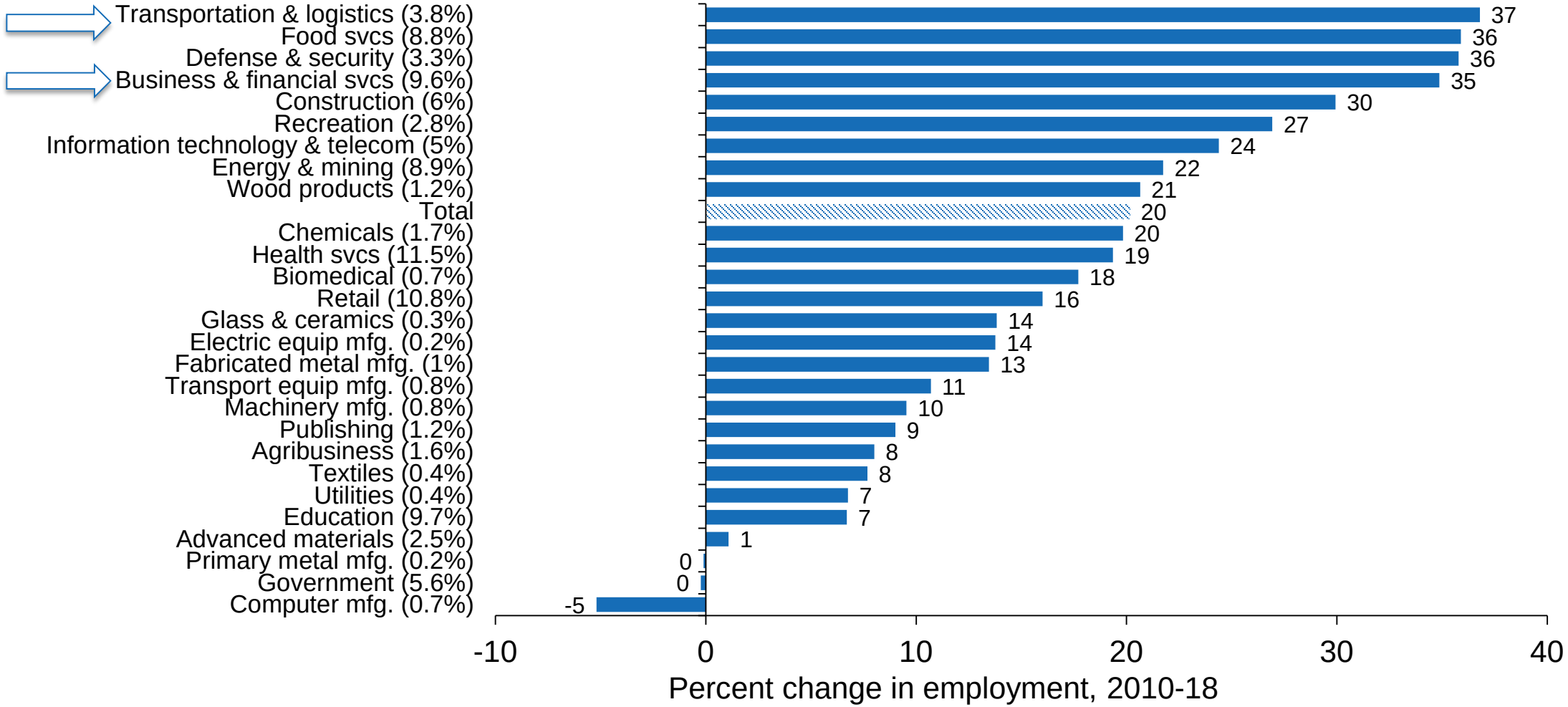


NOTE: Bubble size represents cluster share of metropolitan statistical area employment.
SOURCES: Texas Workforce Commission; Bureau of Labor Statistics.

Energy, IT and Business and Financial Services Help Set Texas Apart from Nation

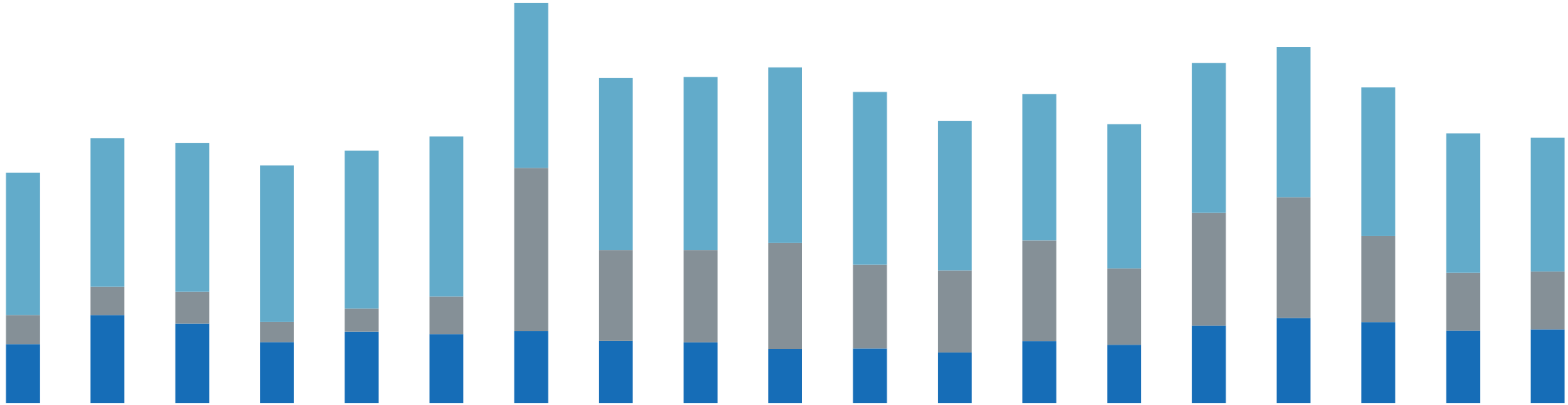


Transportation, Defense and Business Services Among State's Fastest-Growing Clusters

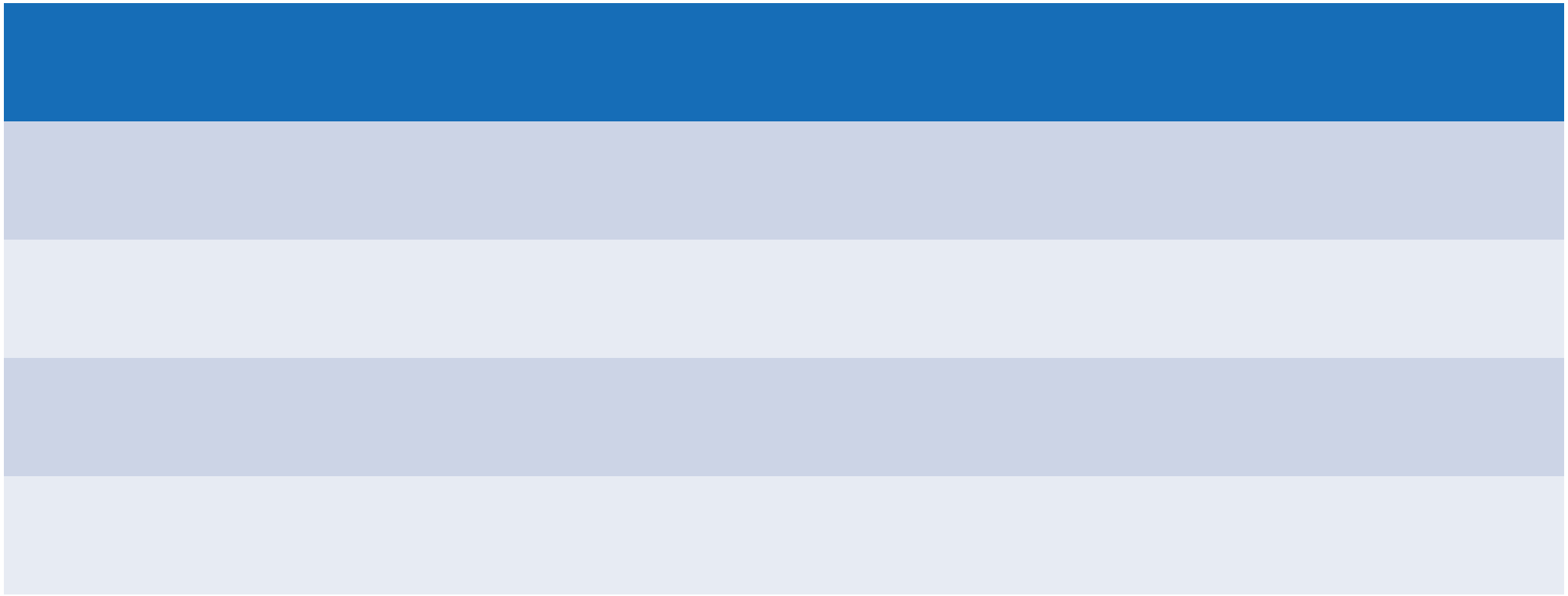


NOTE: Each cluster's share of total jobs is shown in parentheses.
SOURCES: Texas Workforce Commission; authors' calculations.

Migration and Natural Increase Contribute Almost Equally to Population Growth



Reason for Migrating to Texas Versus Elsewhere



NOTE: Data refer to 2010-2018.
SOURCES: CPS-ASEC, author’s calculations.

Beaumont—Port Arthur

The Golden Triangle Shines as Petrochemicals Boom

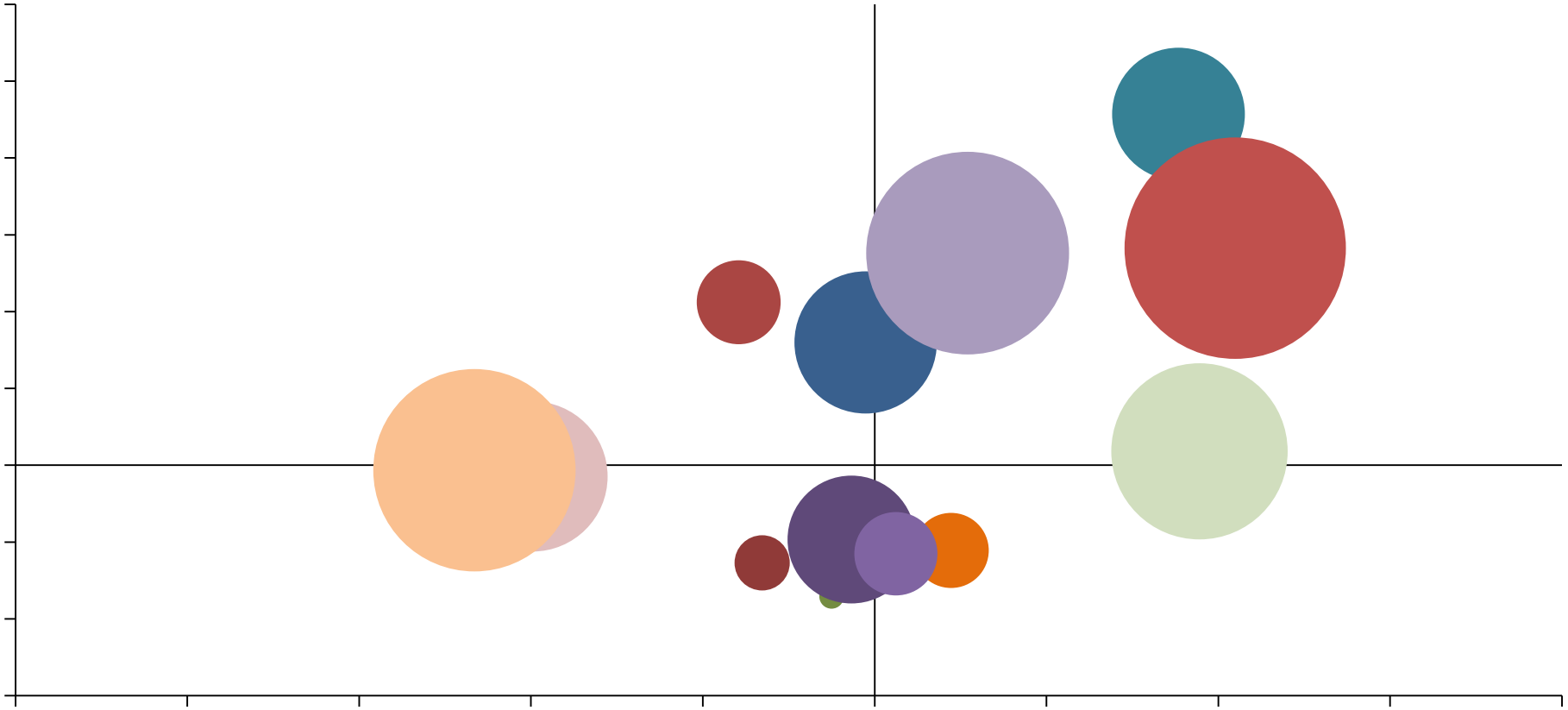
Federal Reserve Bank of Dallas

Beaumont-Port Arthur Metropolitan Division: At a Glance

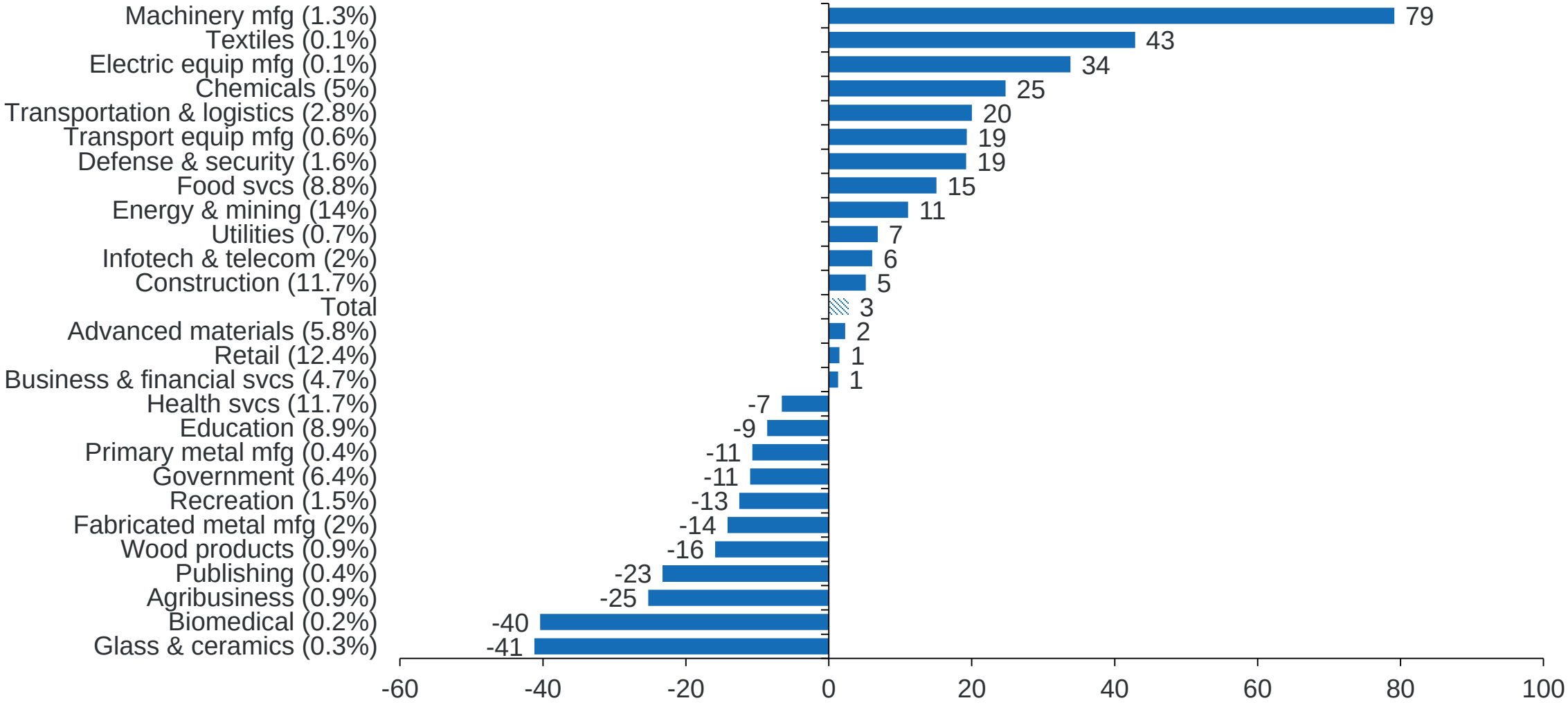
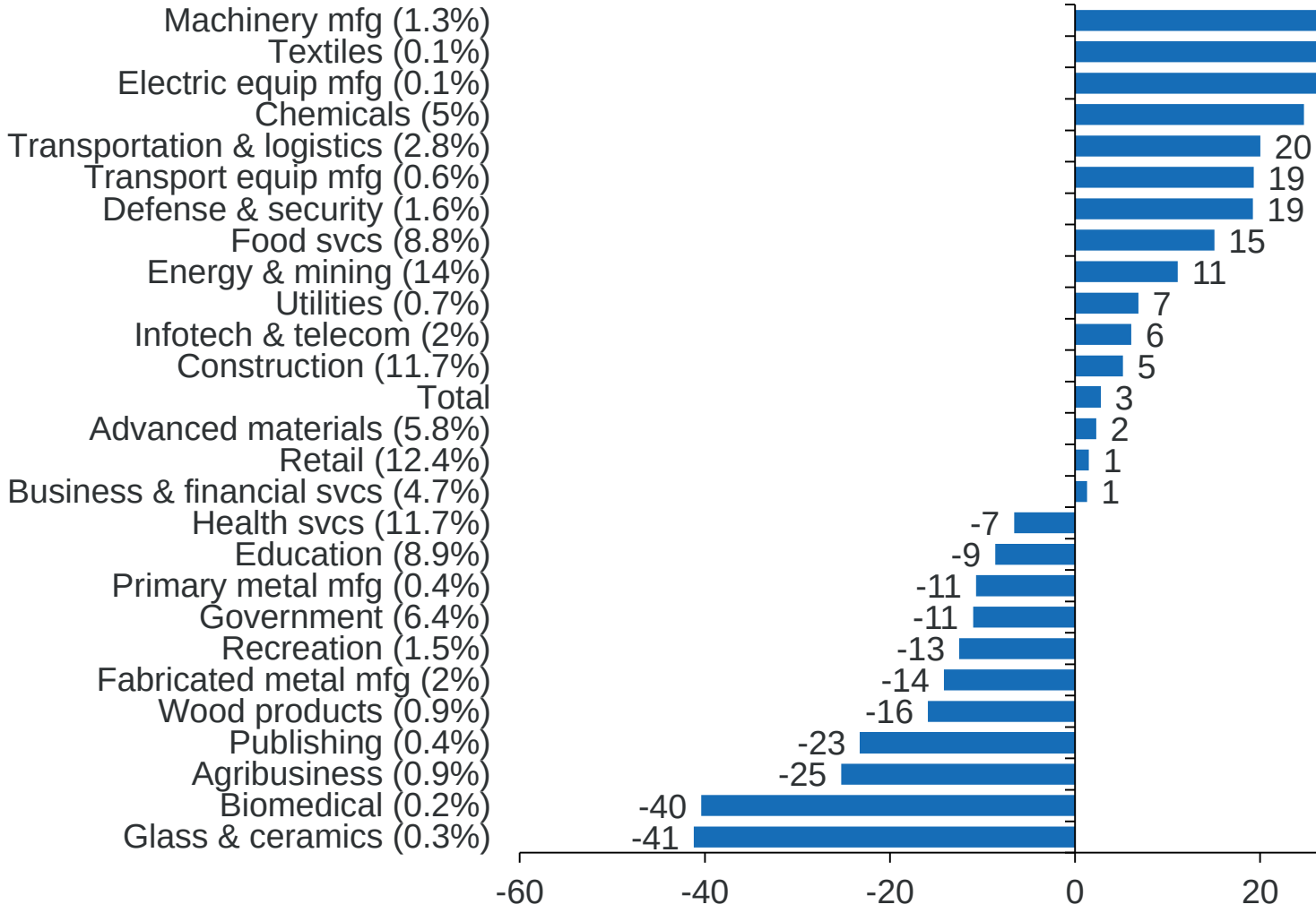
- Population (2018): 409,526
- Population growth (2010–18): 1.4% (Texas: 13.7%)
- Median household income (2017): $49,875
    - Texas: $59,206; U.S. $60,336
- Median household income growth (2010-17): 7.5% (Texas: 8.3%)

Beaumont-Port Arthur: Overview

- Thriving oil and gas hub, with the nation's largest concentrations of refineries, petrochemical plants and related businesses
- Rapid growth in chemicals, energy and energy-related manufacturing since 2010
- Other important industries such as transportation have grown in support of its outsized manufacturing and energy base
- Sizeable earnings premium in several dominant clusters
- A relatively less-well-educated workforce compared with the state and nation



Energy and Manufacturing Payrolls See Strong Growth



Energy and Manufacturing Payrolls See