



Analyzing Houston Metropolitan Area's Job-to-Job Flows Using US Census LEHD J2J Data

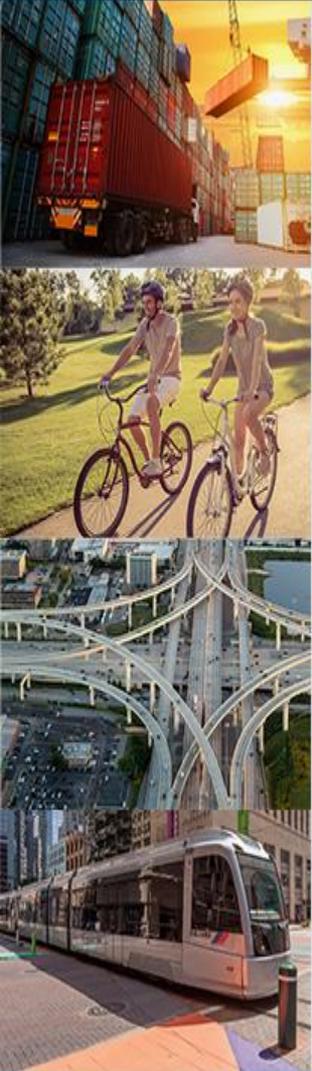


**Pramod Sambidi, PhD
Houston-Galveston Area Council**

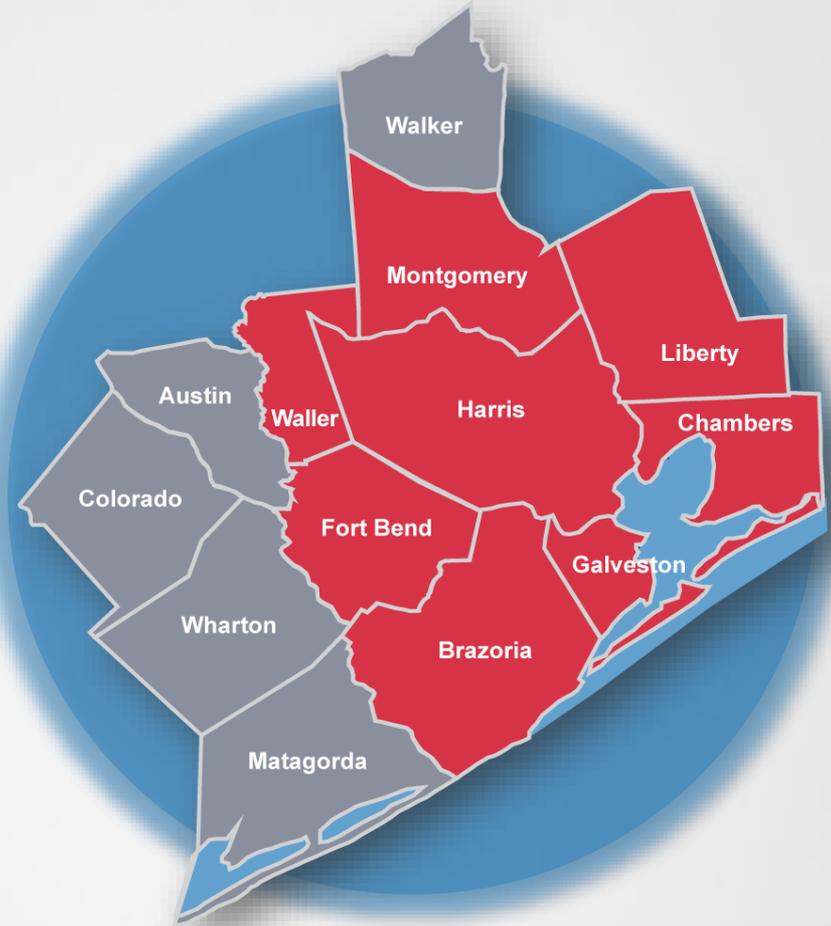
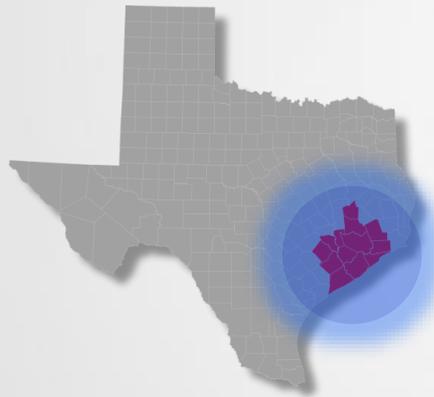
US Census LED , C2ER and LMI Webinar, July 22 2020



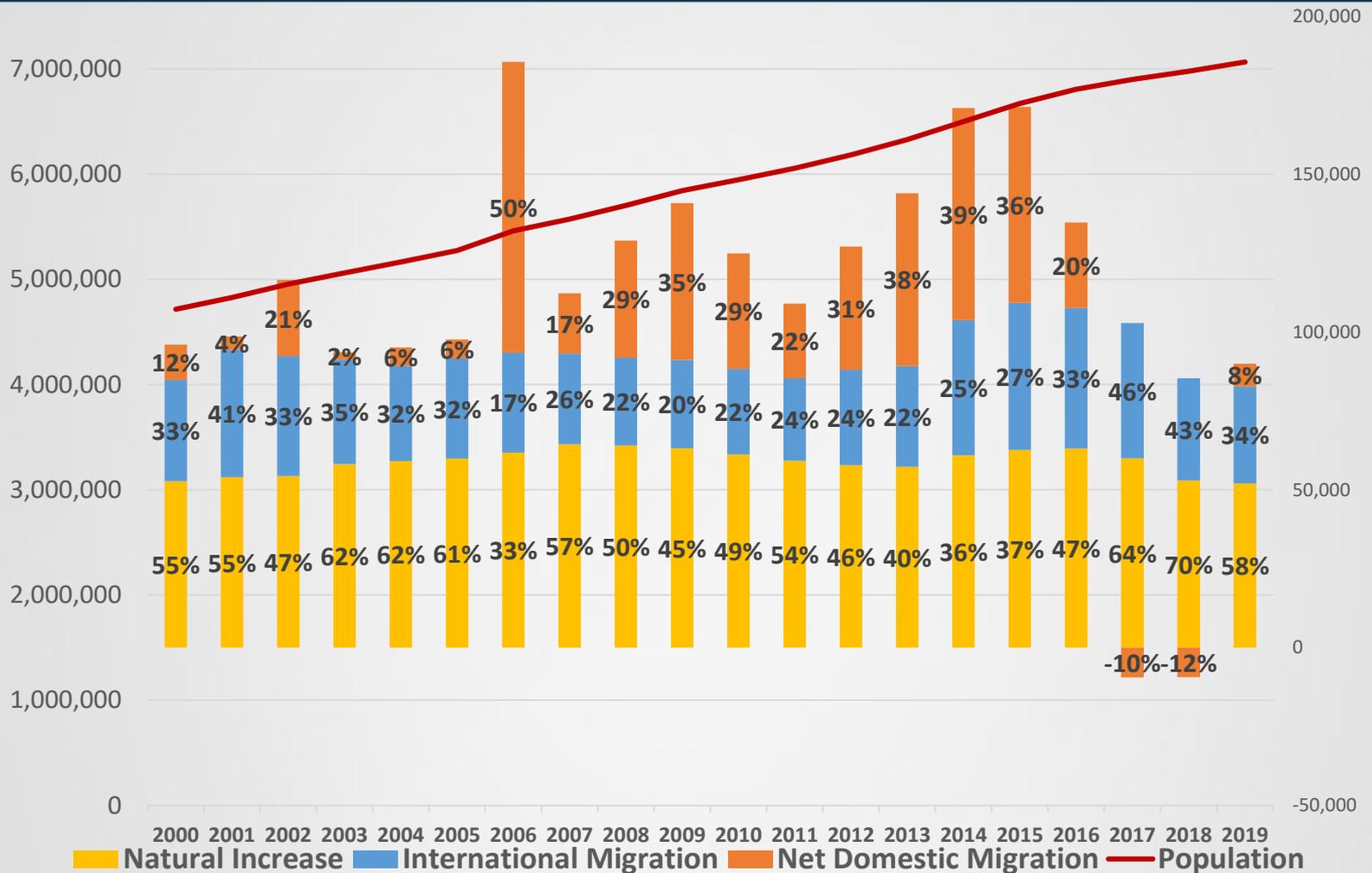
H-GAC serves:



- 13 counties
- 134 cities
- 7 million people
- 3 million jobs
- MPO for **8-county metro area**



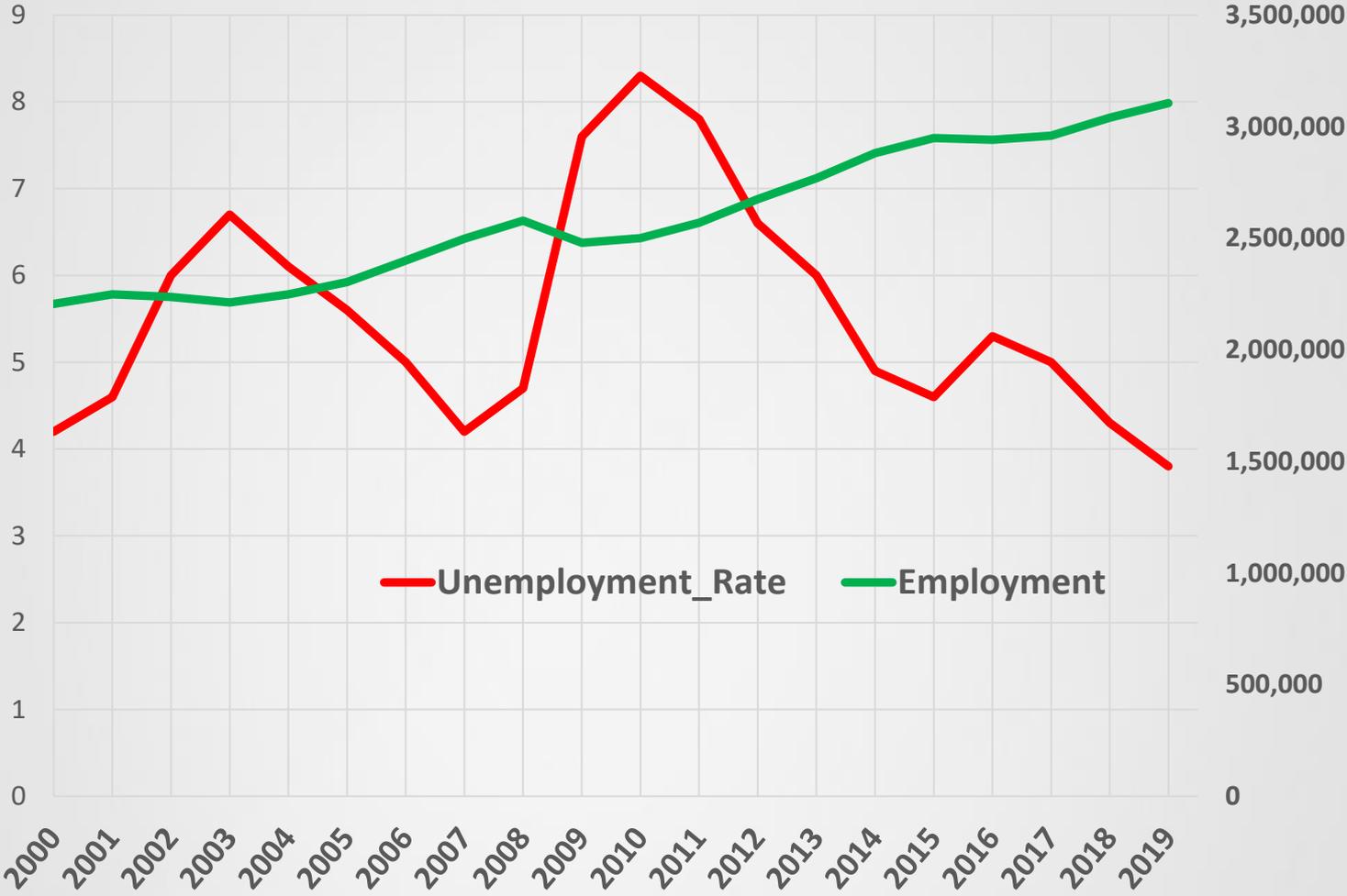
Houston MSA Population Growth



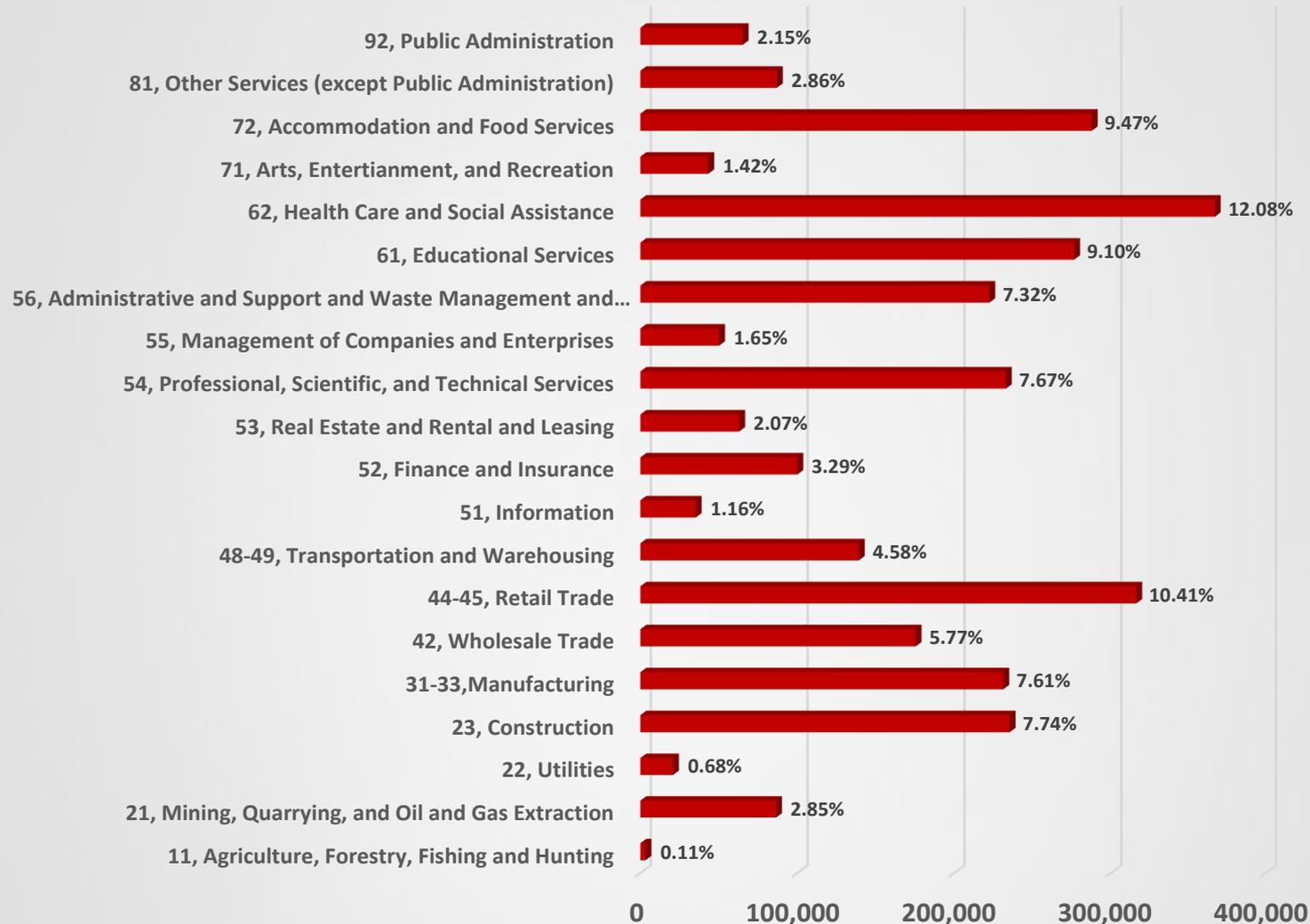
Source: US Census Population Estimates



Houston MSA Employment

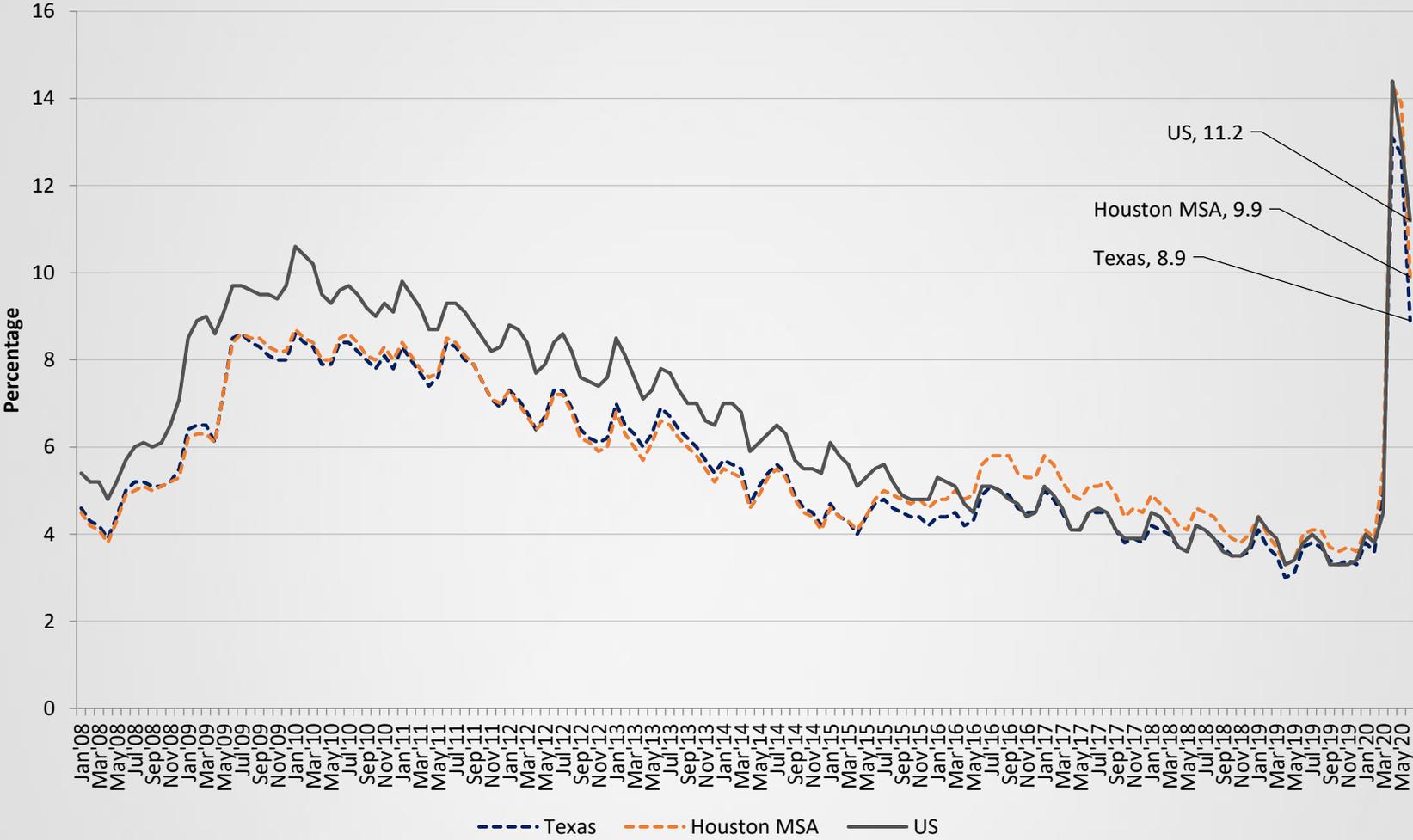


Houston MSA Employment by Industry



COVID-19 Impacts

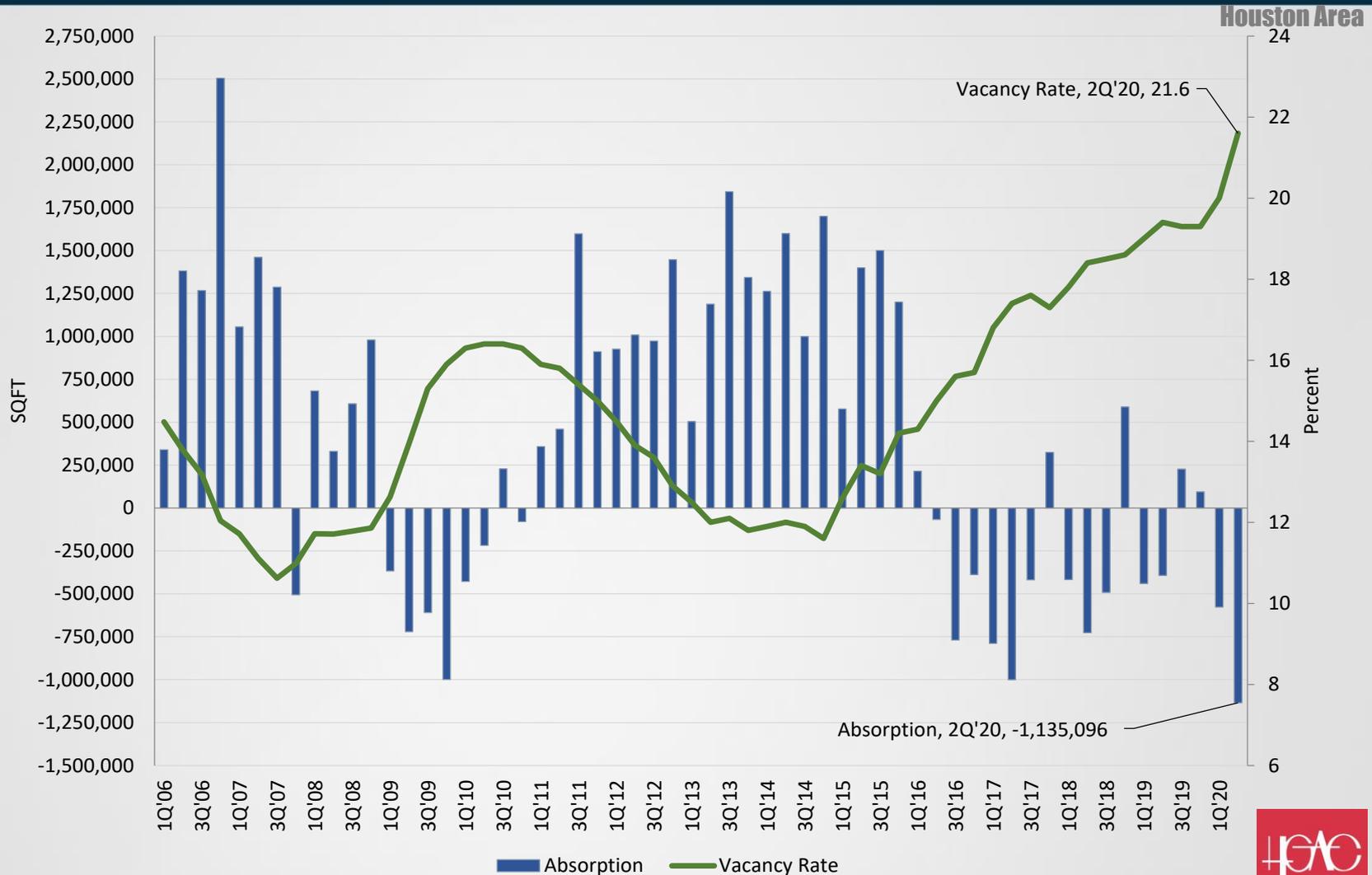
Unemployment Rate



Source: TWC and US Census Current Population Survey



Quarterly Office Net Absorption & Vacancy Rate



Source: CBRE

Google Mobility Report

Google's COVID-19 Community Mobility Report: **Texas**

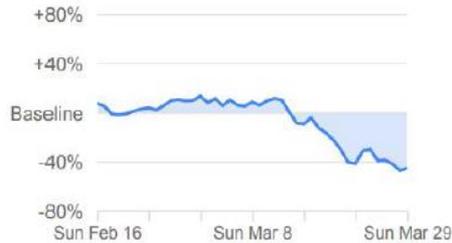
February 16th-March 29

Retail & recreation

Restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters.

-45%

compared to baseline

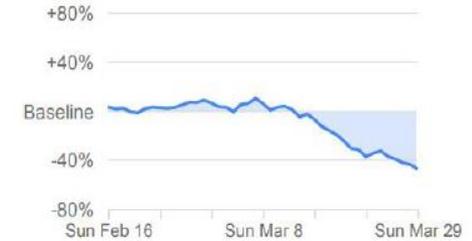


Transit stations

Public transport hubs such as subway, bus, and train stations.

-47%

compared to baseline

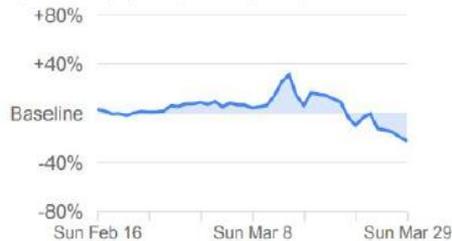


Grocery & pharmacy

Grocery markets, food warehouses, farmers markets, specialty food shops, drug stores, and pharmacies.

-23%

compared to baseline



Workplaces

-36%

compared to baseline

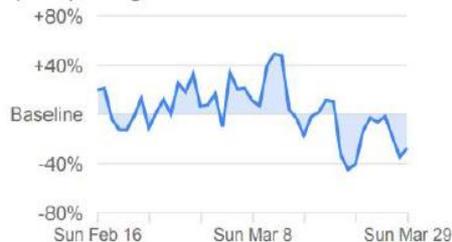


Parks

National parks, public beaches, marinas, dog parks, plazas, and public gardens.

-27%

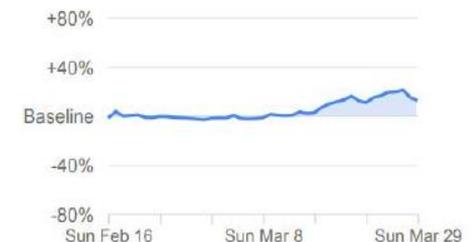
compared to baseline



Residential

+13%

compared to baseline



Google Mobility Report

Google's COVID-19 Community Mobility Report: Texas

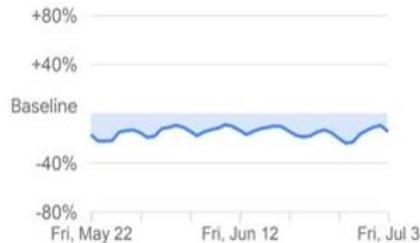
May 22nd - July 3

Retail & recreation

Restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters.

-15%

compared to baseline



Transit stations

Public transport hubs such as subway, bus, and train stations.

-29%

compared to baseline

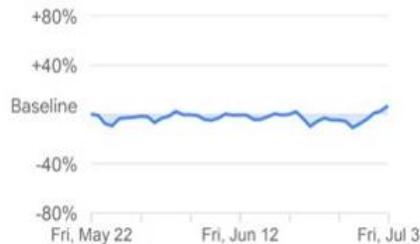


Grocery & pharmacy

Grocery markets, food warehouses, farmers markets, specialty food shops, drug stores, and pharmacies.

+7%

compared to baseline



Workplaces

-56%

compared to baseline

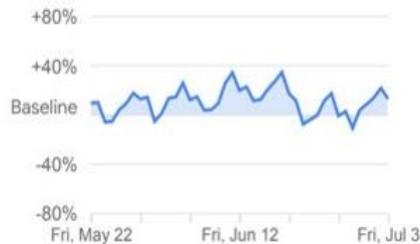


Parks

National parks, public beaches, marinas, dog parks, plazas, and public gardens.

+13%

compared to baseline



Residential

+17%

compared to baseline



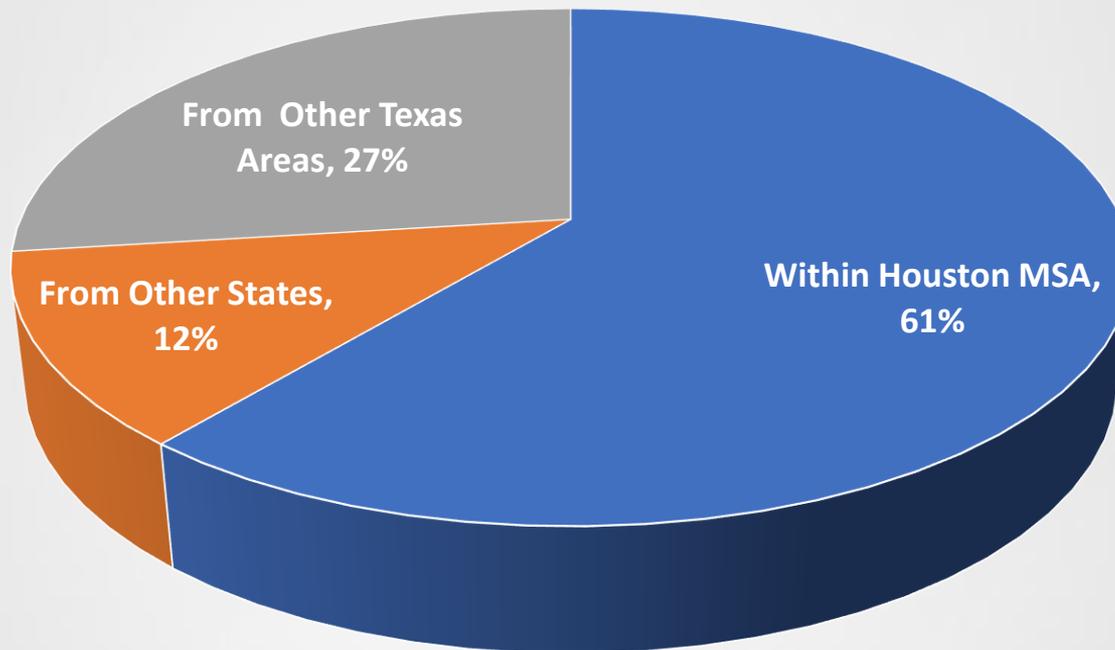
US CENSUS LEHD J2J

Does J2J have an answer to the following questions?

- At what magnitude are workers moving across industries and geographies?
- What industries are attracting workers from outside the region?
- Who are coming to the region?
- Who are leaving the region ?
- What is the impact of labor mobility on earnings ?
- How resilient are Houston area industries to economic crises ?

Job Flow Origin

Job-to-Job Flow Origins

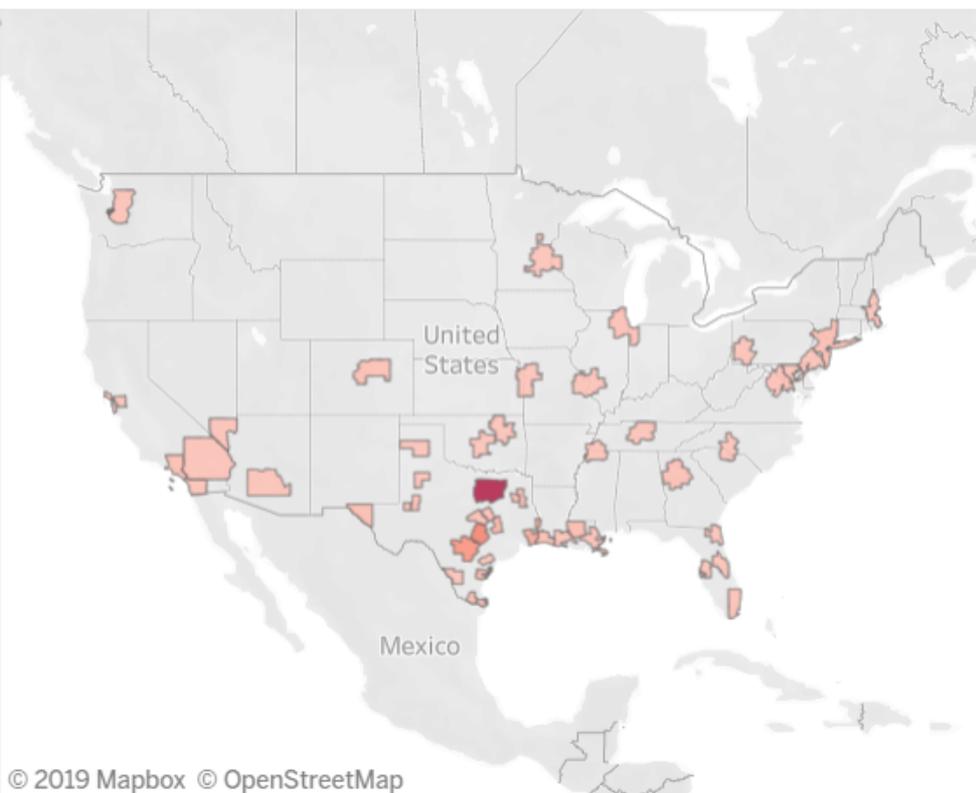
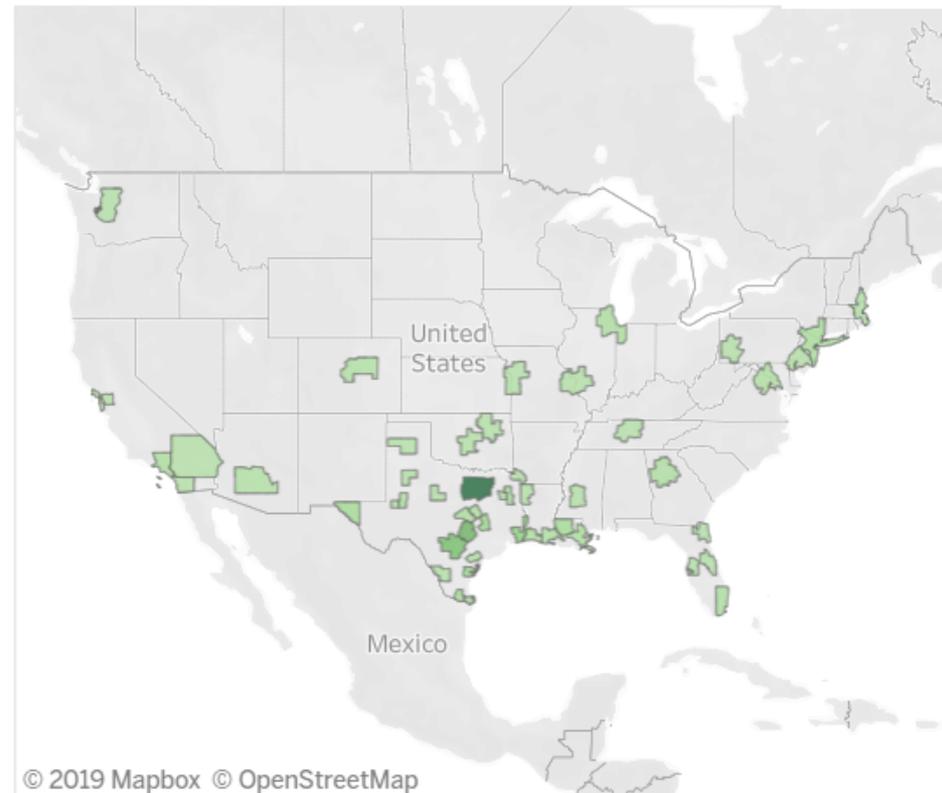


Year

2017

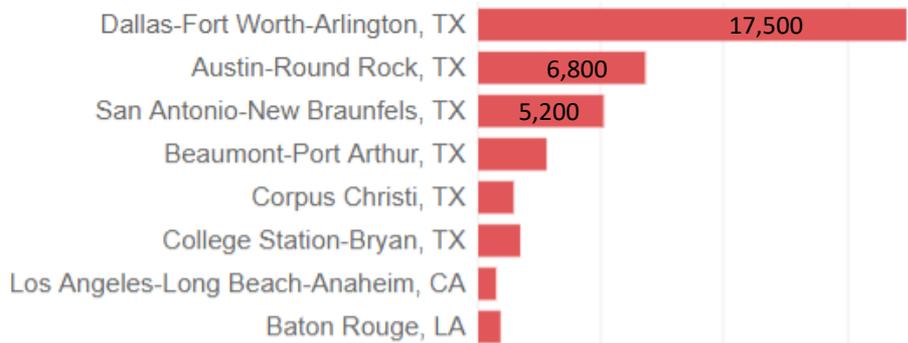
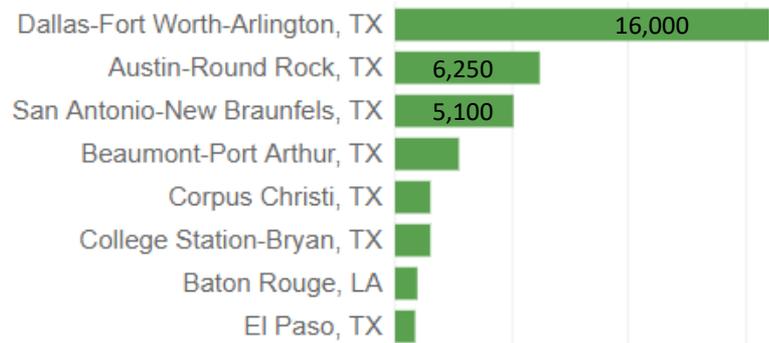
Job Inflows to the Houston MSA

Job Outflows from the Houston MSA



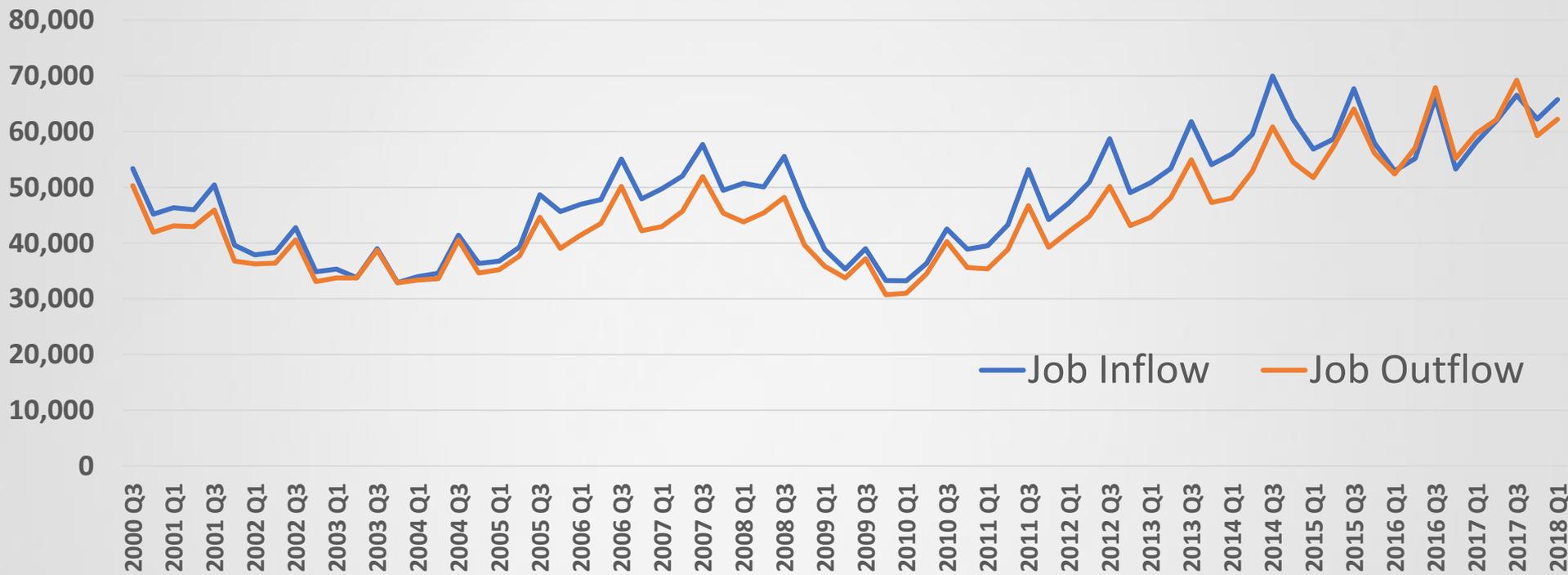
Origin Metropolitan Areas

Destination Metropolitan Areas



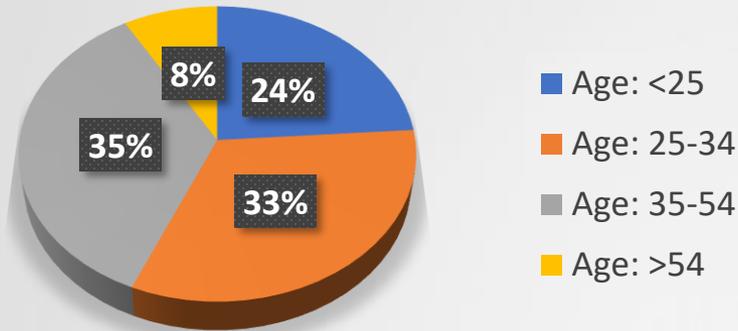
Job Flows

Quarterly Job Inflows to and Outflows from Houston MSA

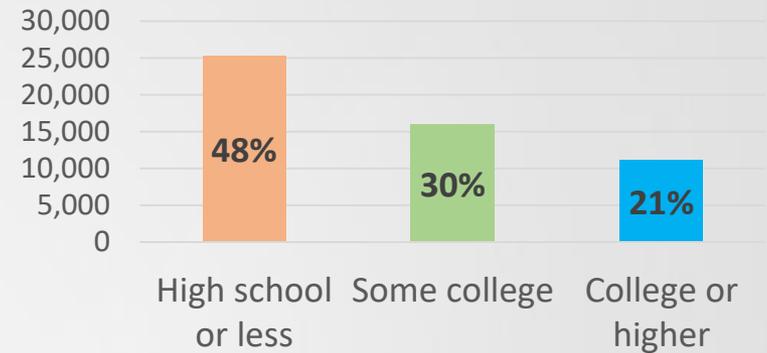


Job Inflows-Demographics

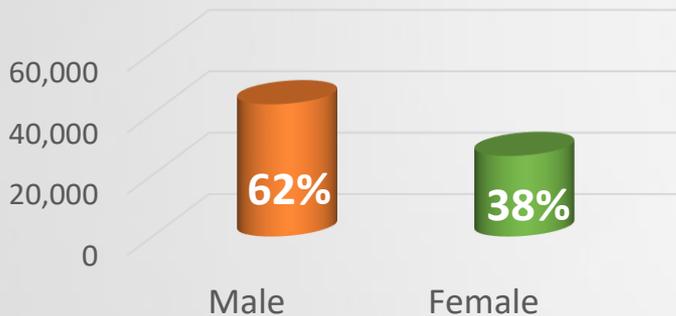
Age Group



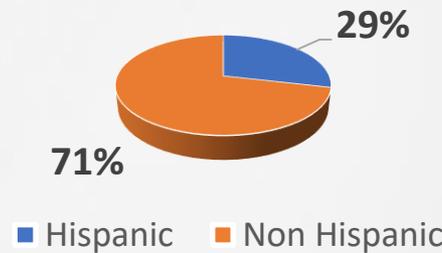
Education



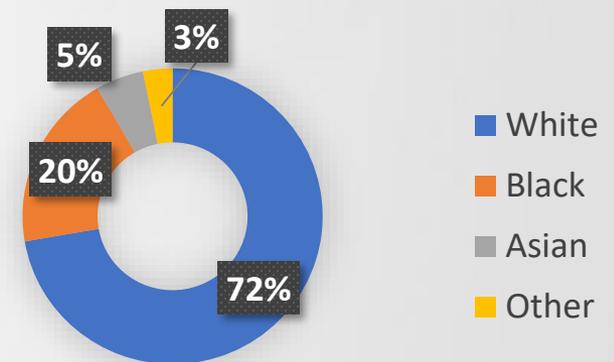
Gender



Ethnicity

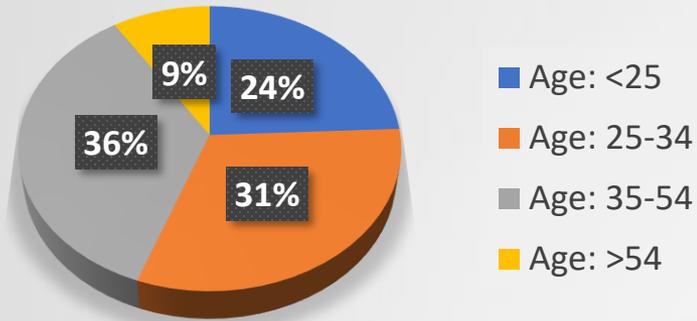


Race

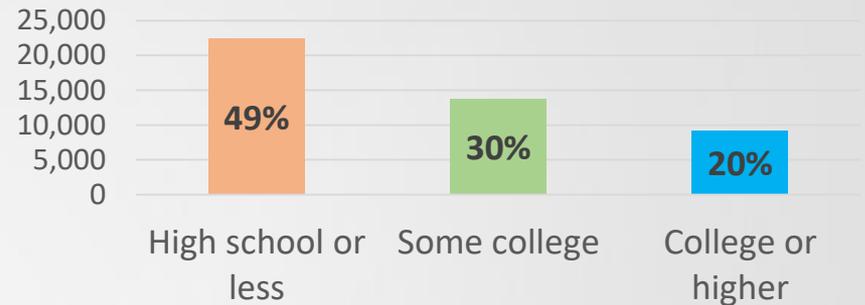


Job Outflows-Demographics

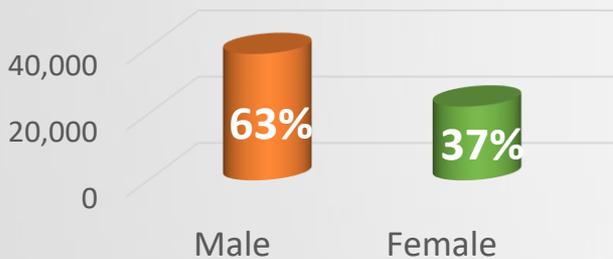
Age Group



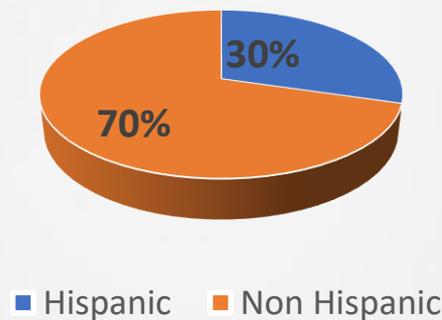
Education



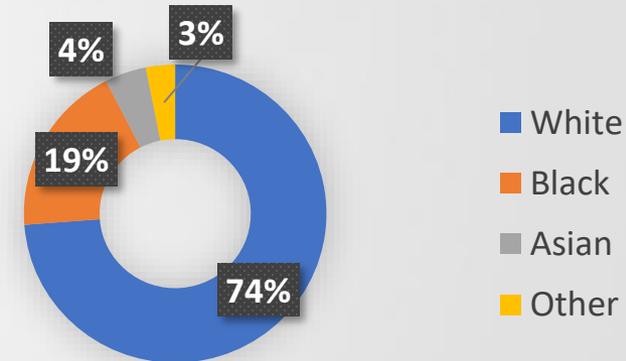
Gender



Ethnicity

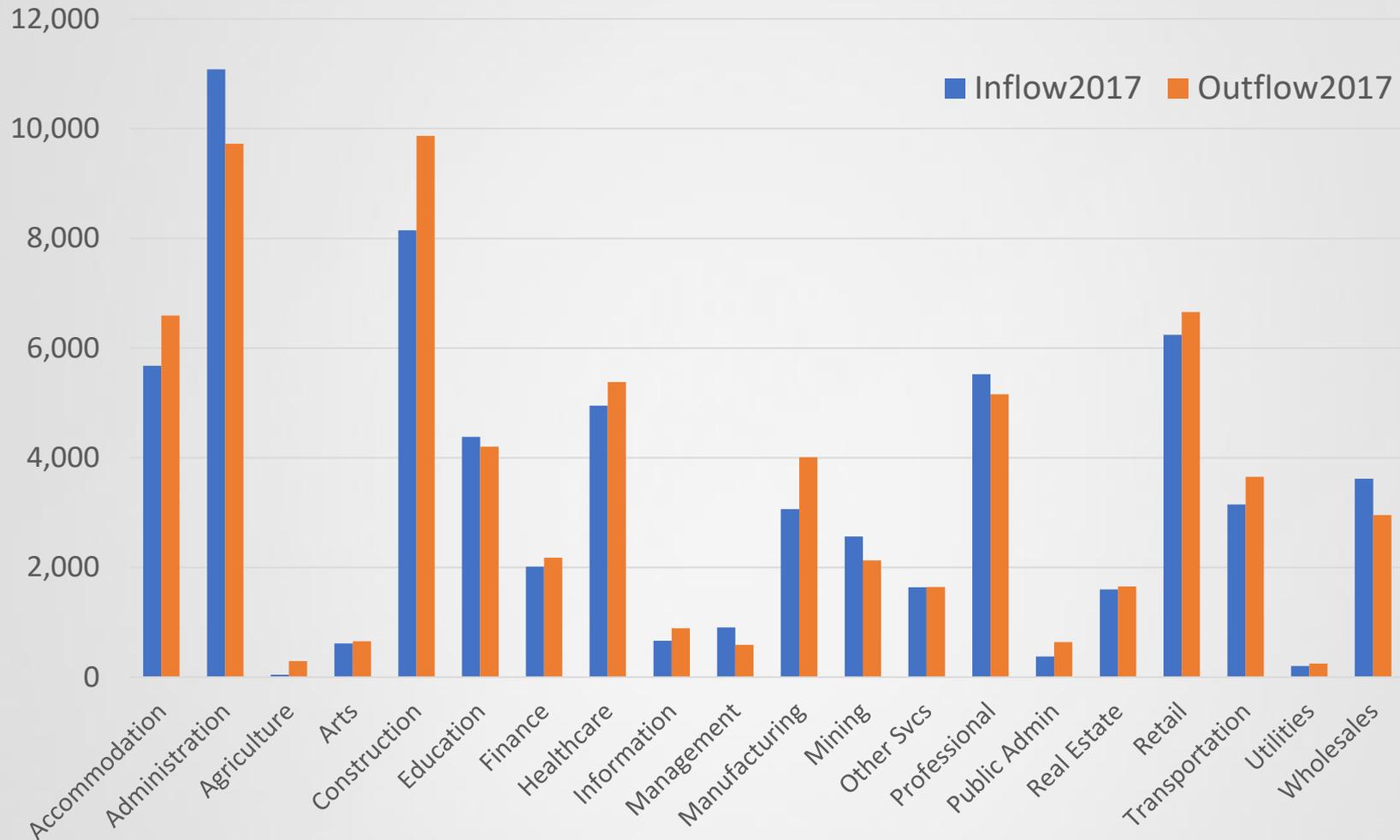


Race



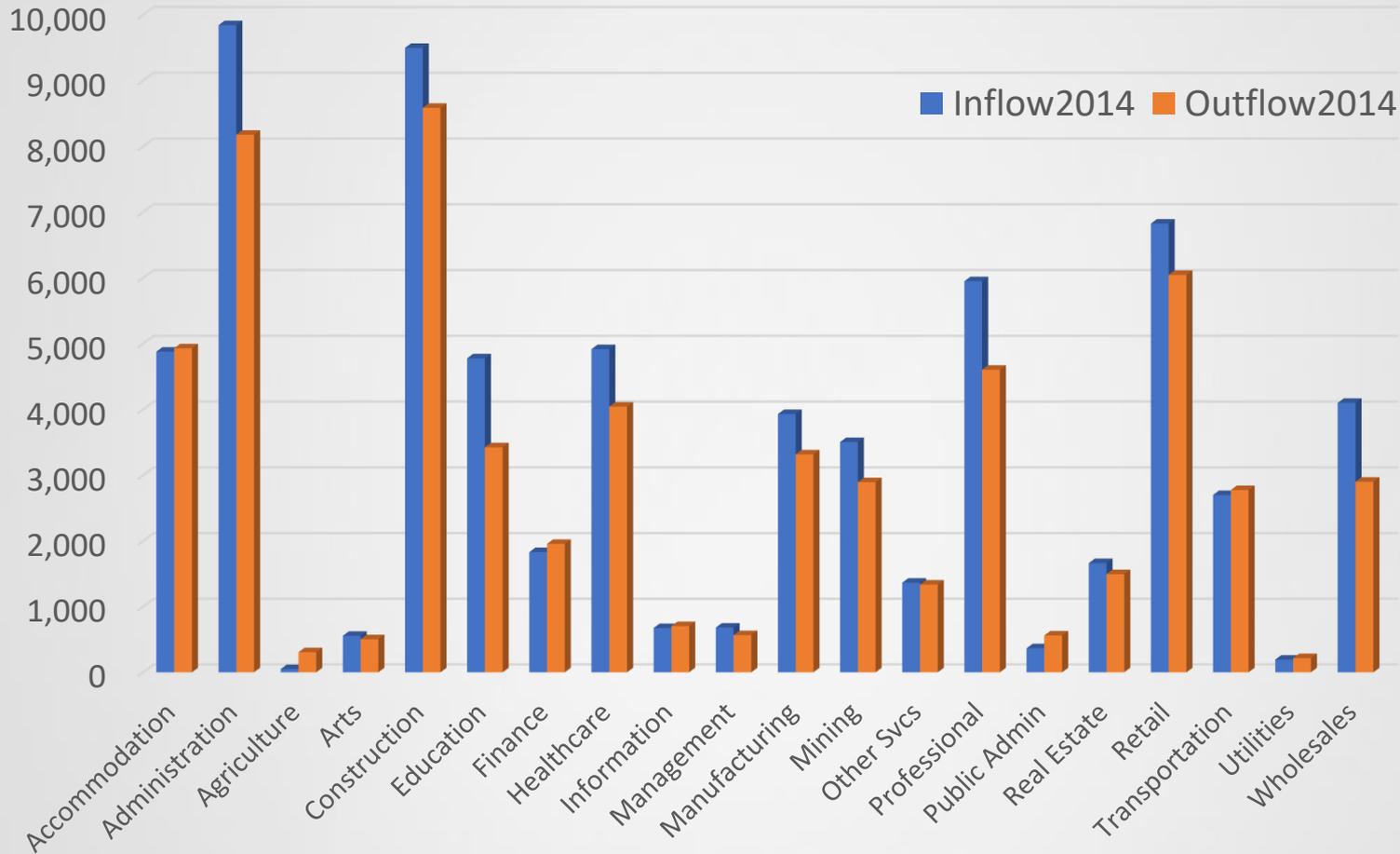
Job Flows by Industry in 2017

Job-to-Job Flows to and from Houston MSA by Industry



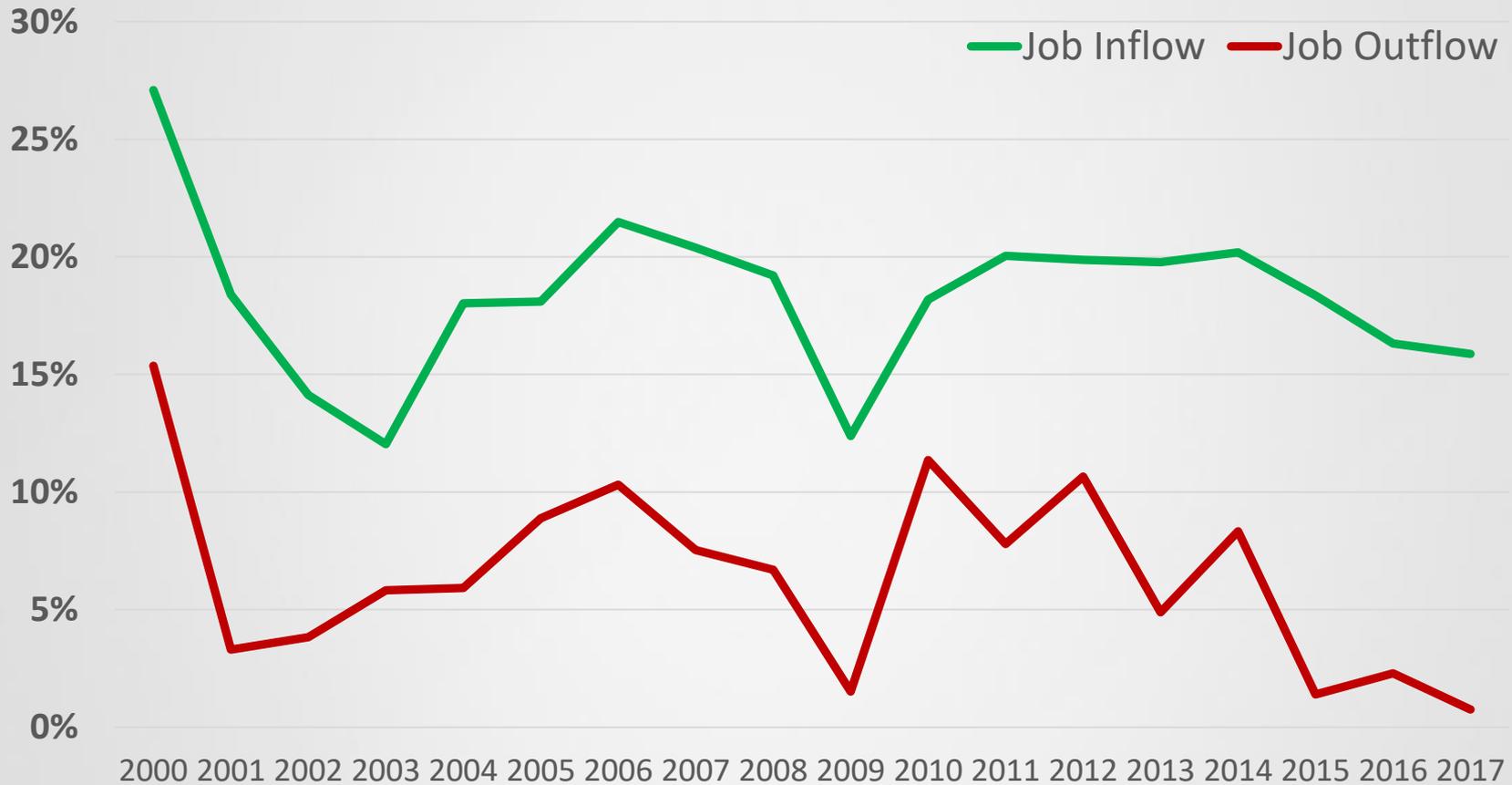
Job Flows by Industry in 2014 (Houston Economy at its Peak)

Job-to-Job Flows to and from Houston MSA by Industry



Job Flow-Earnings

Annual Earnings Changes of Job Inflows to and Job Outflows from the Houston MSA



Earnings Change by Industry

Median earnings changes of job-to-job flows within the Houston MSA by industry origin-destination

Agriculture	29%
Mining	0%
Utilities	4%
Construction	14%
Manufacturing	7%
Wholesale	9%
Retail	52%
Transportation	8%
Information	10%
Finance	10%
Real Estate	12%
Professional	7%
Management	2%
Administration	10%
Education	71%
Healthcare	21%
Arts	66%
Accommodation	96%
Other Svcs	24%
Public Administration	38%

Destination Industries

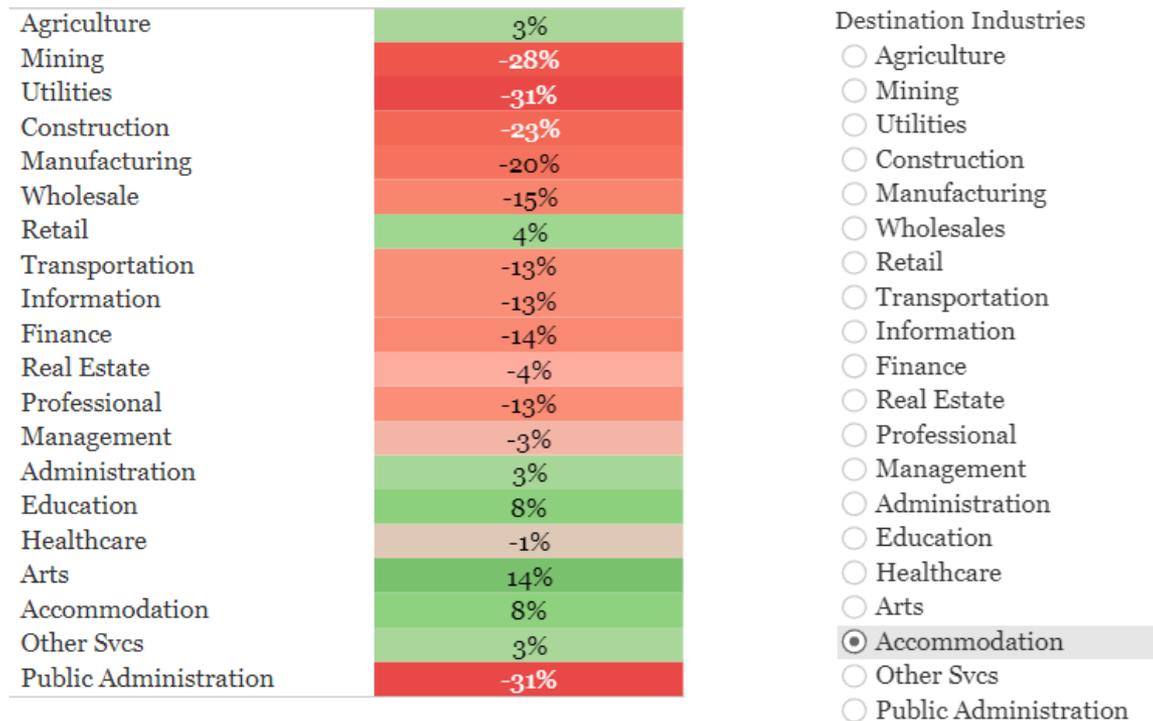
- Agriculture
- Mining
- Utilities
- Construction
- Manufacturing
- Wholesales
- Retail
- Transportation
- Information
- Finance
- Real Estate
- Professional
- Management
- Administration
- Education
- Healthcare
- Arts
- Accommodation
- Other Svcs
- Public Administration

Average percent change in annual earnings



Earnings Change by Industry

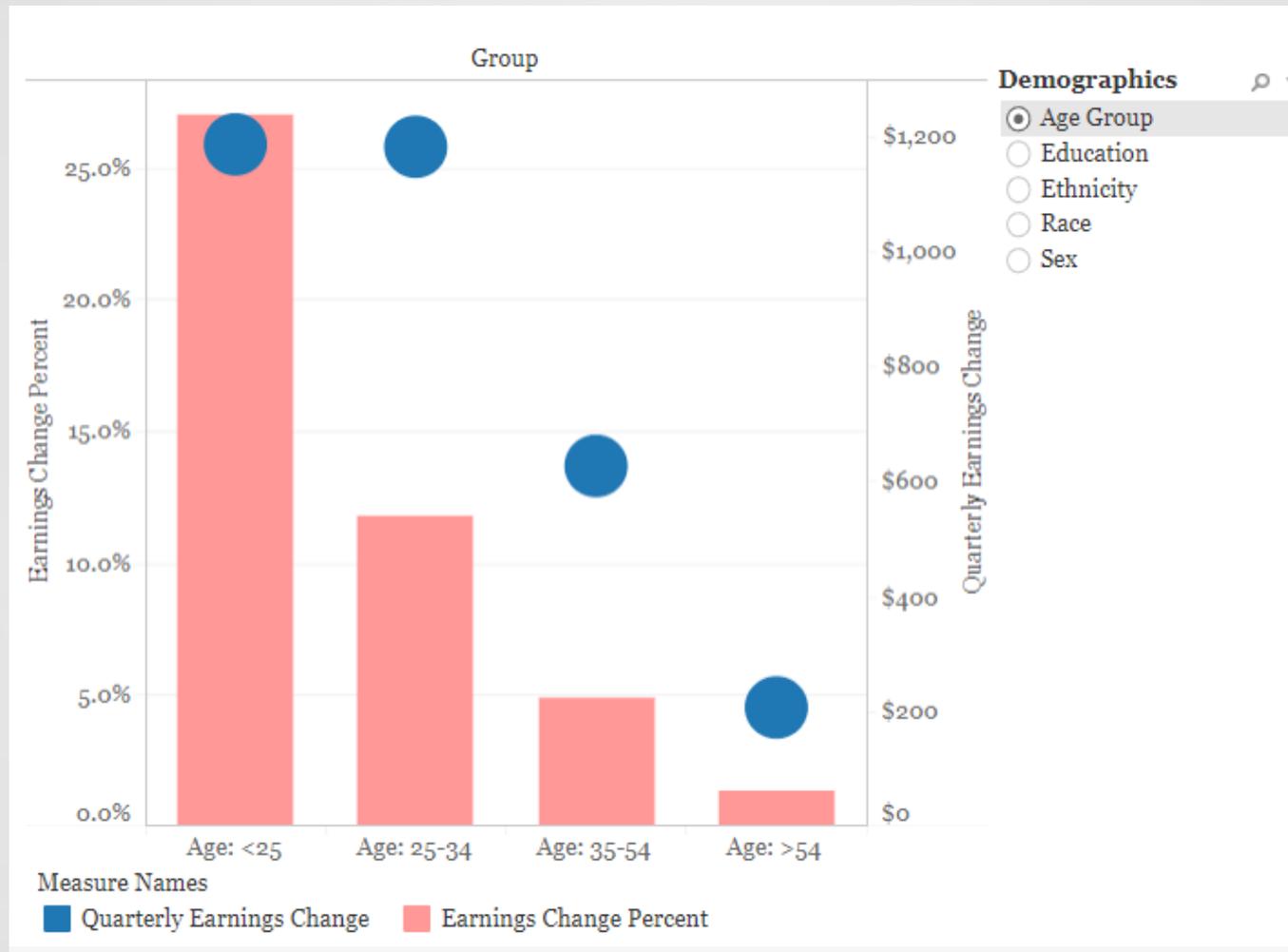
Median earnings changes of job-to-job flows within the Houston MSA by industry origin-destination



Average percent change in annual earnings

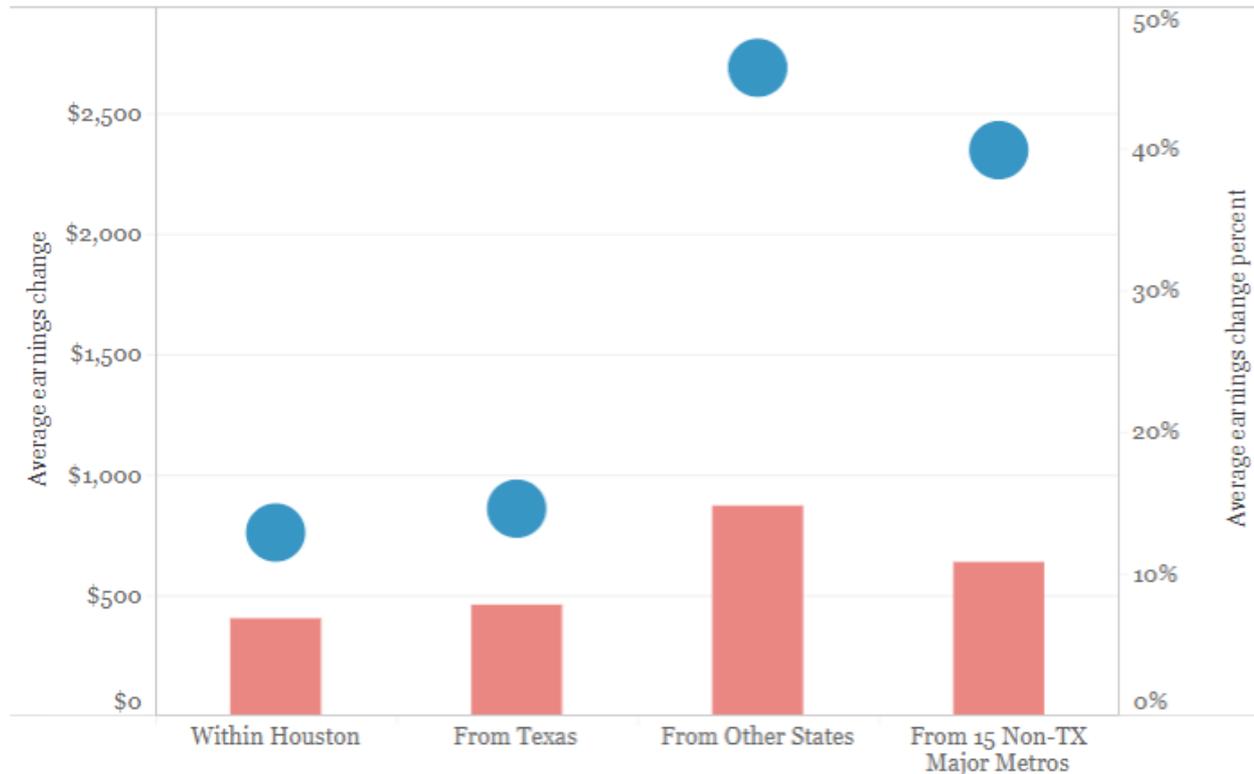


Earnings Change by Age Group



Earnings Change by Origin

Median earnings changes of job inflows to the Houston MSA by origin geography levels

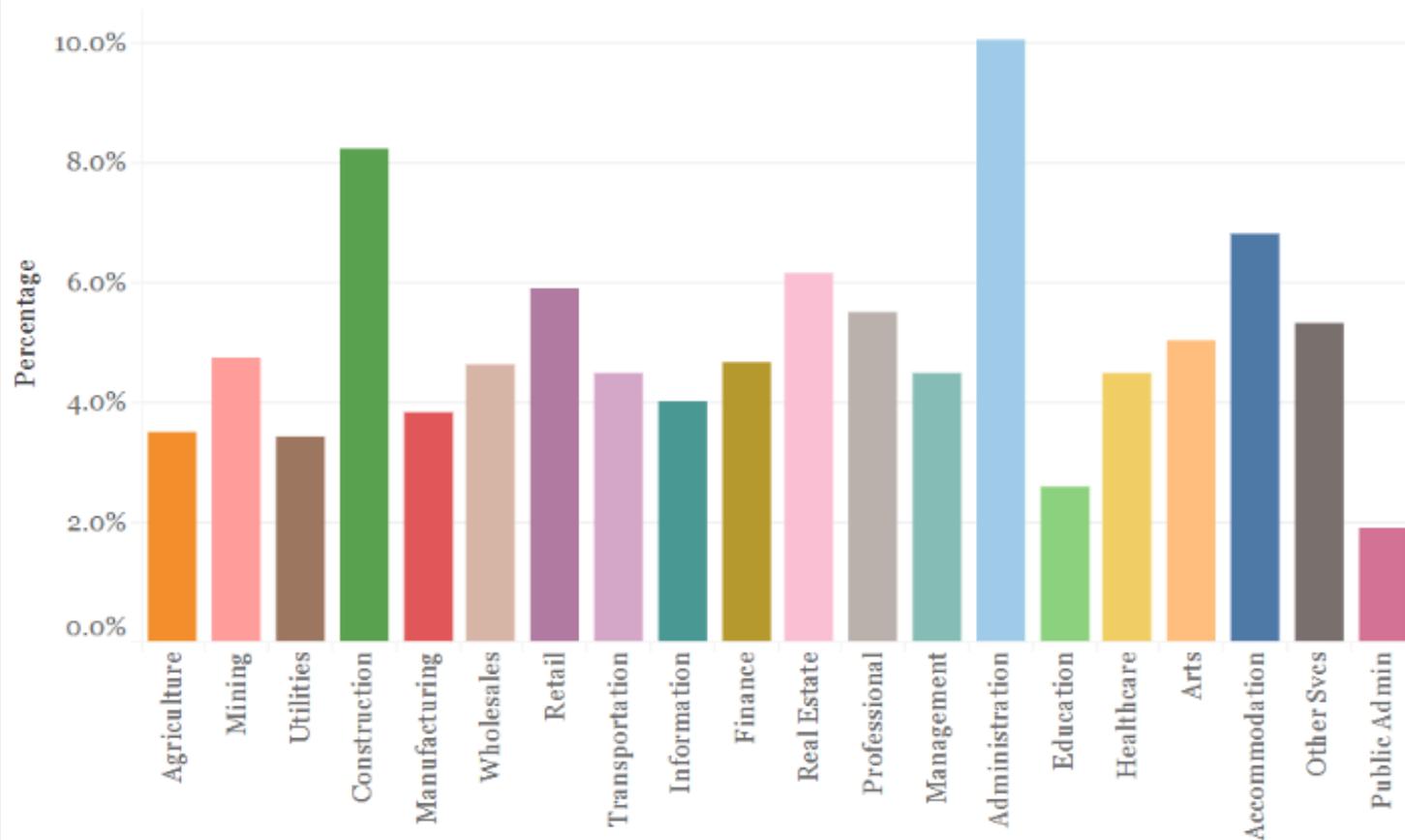


Measure Names

■ Average earnings change

■ Average earnings change percent

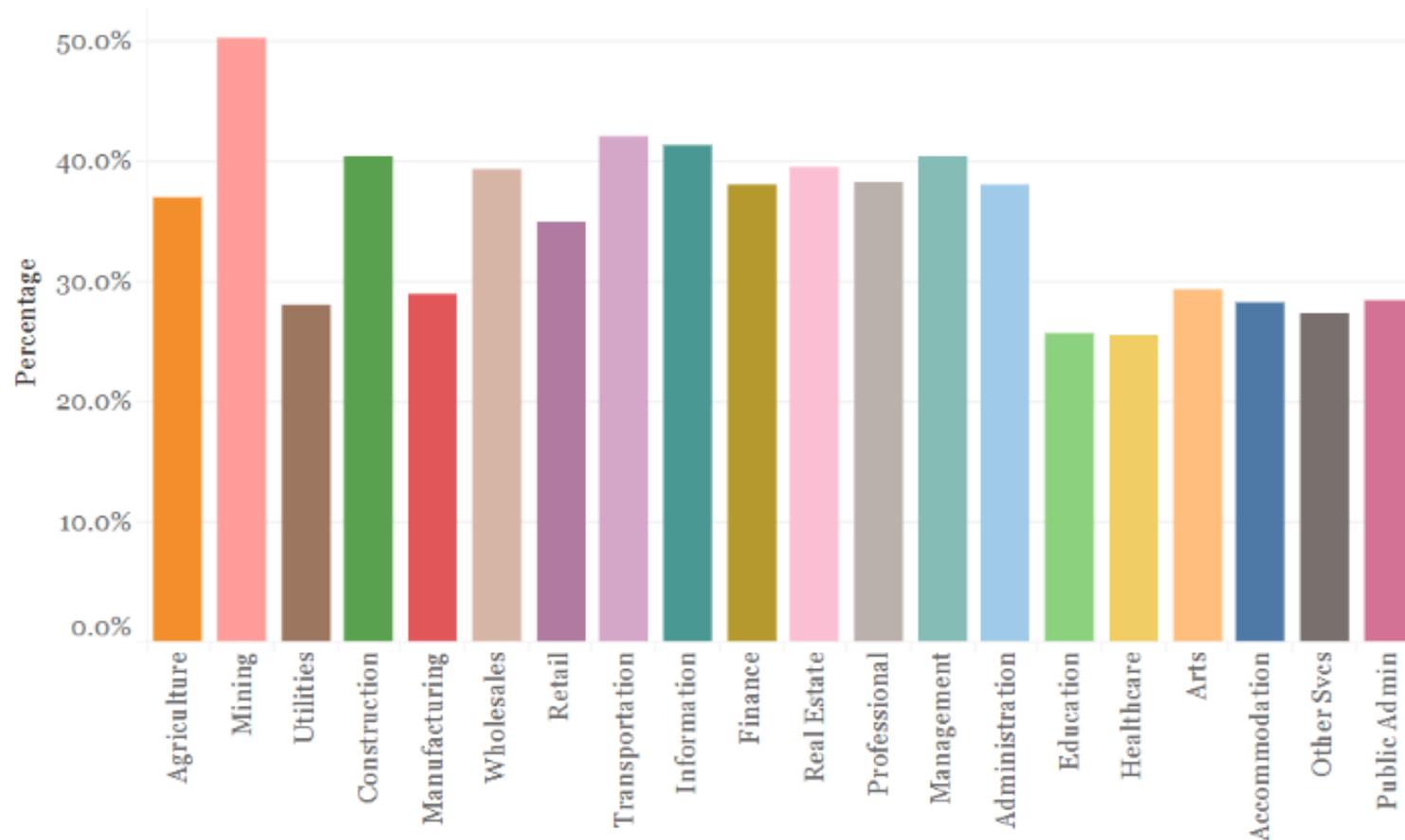
Job Mobility



Display Item

- Job mobility: job flows/total employment counts

Regional Competitiveness

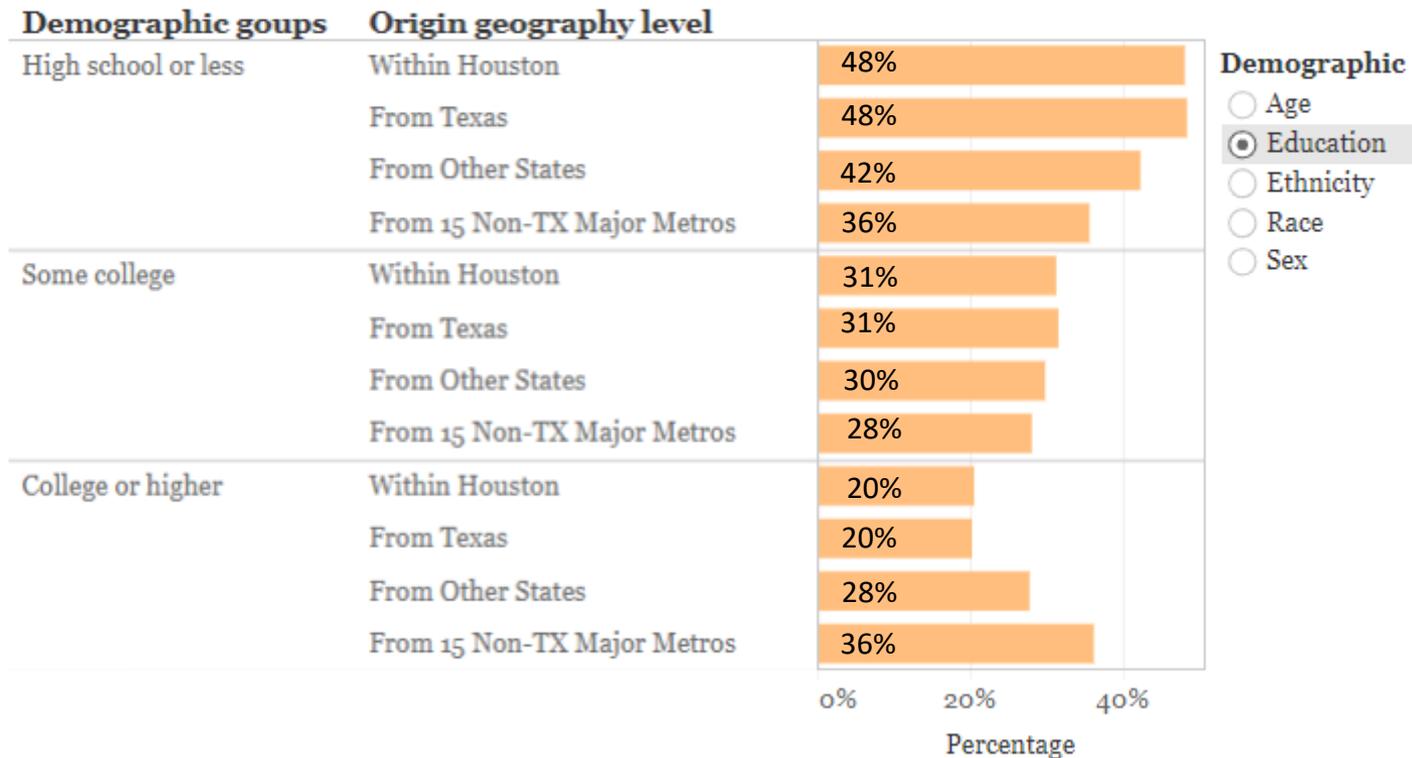


Display Item

- Job mobility: job flows/total employment counts
- Regional industry competitiveness: job flows from other regions/total job flows

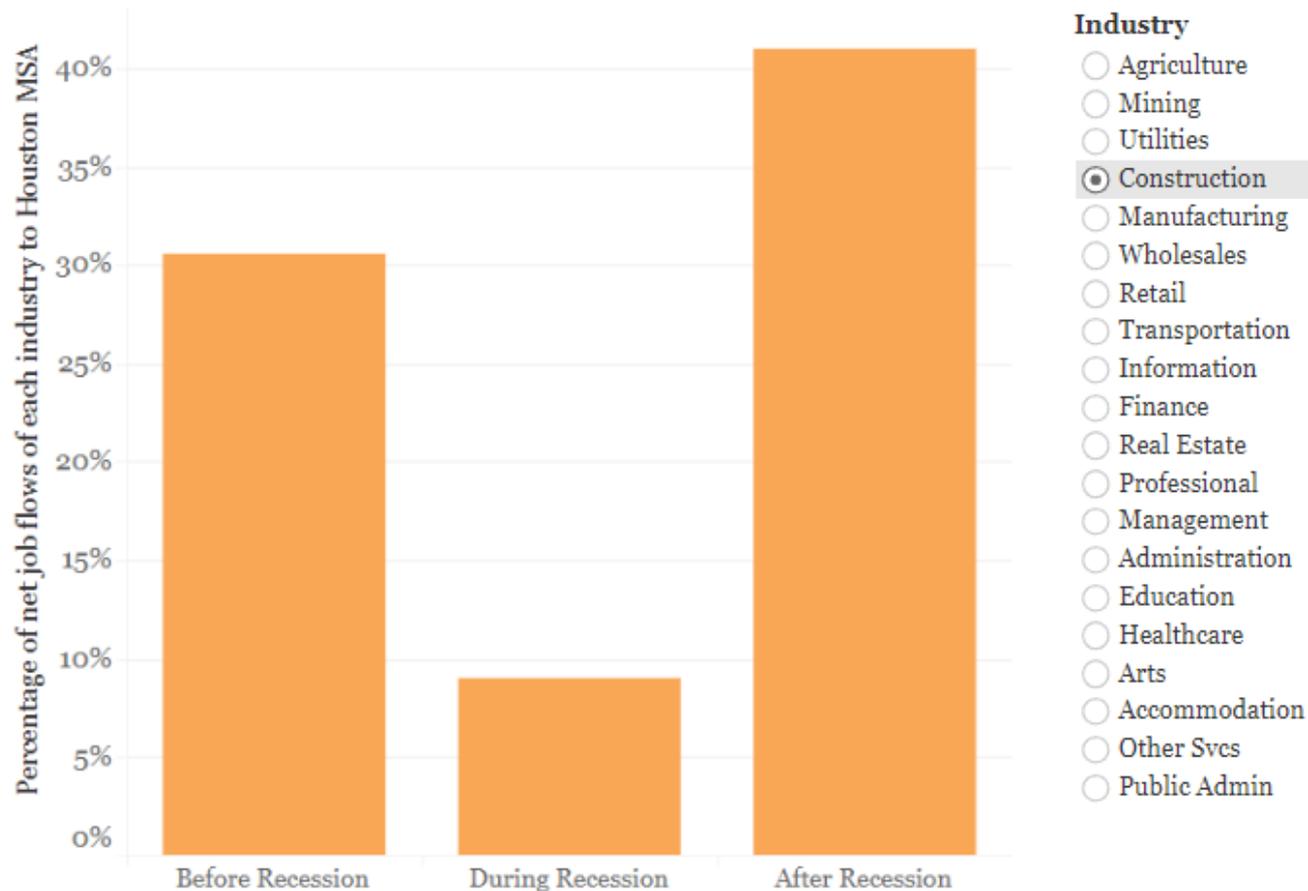
Job Inflow-Education

Demographic characteristics of job inflows to the Houston MSA from different geographic levels



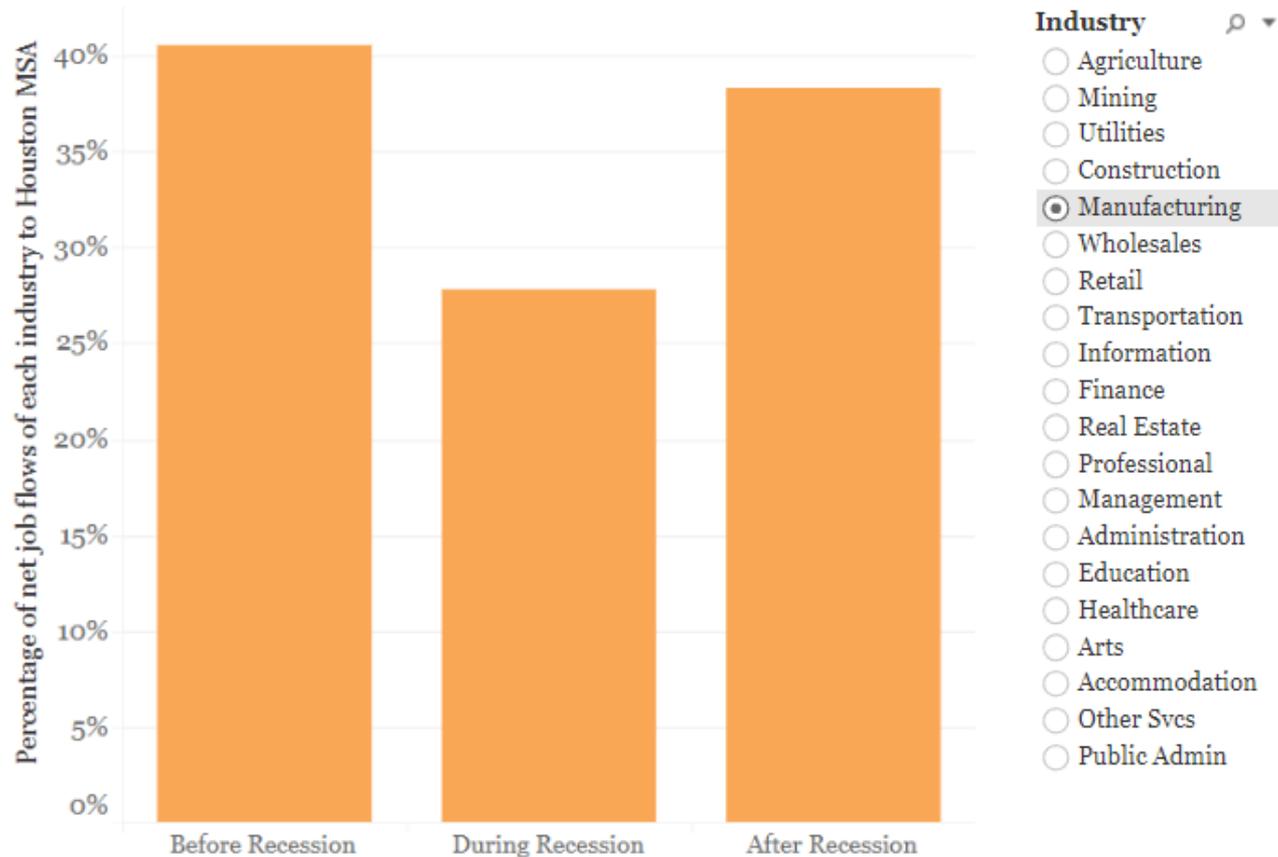
Resilience During Crisis-Construction Industry

Net job inflows to the Houston MSA by industry and Recession period



Resilience During Crisis- Manufacturing Industry

Net job inflows to the Houston MSA by industry and Recession period



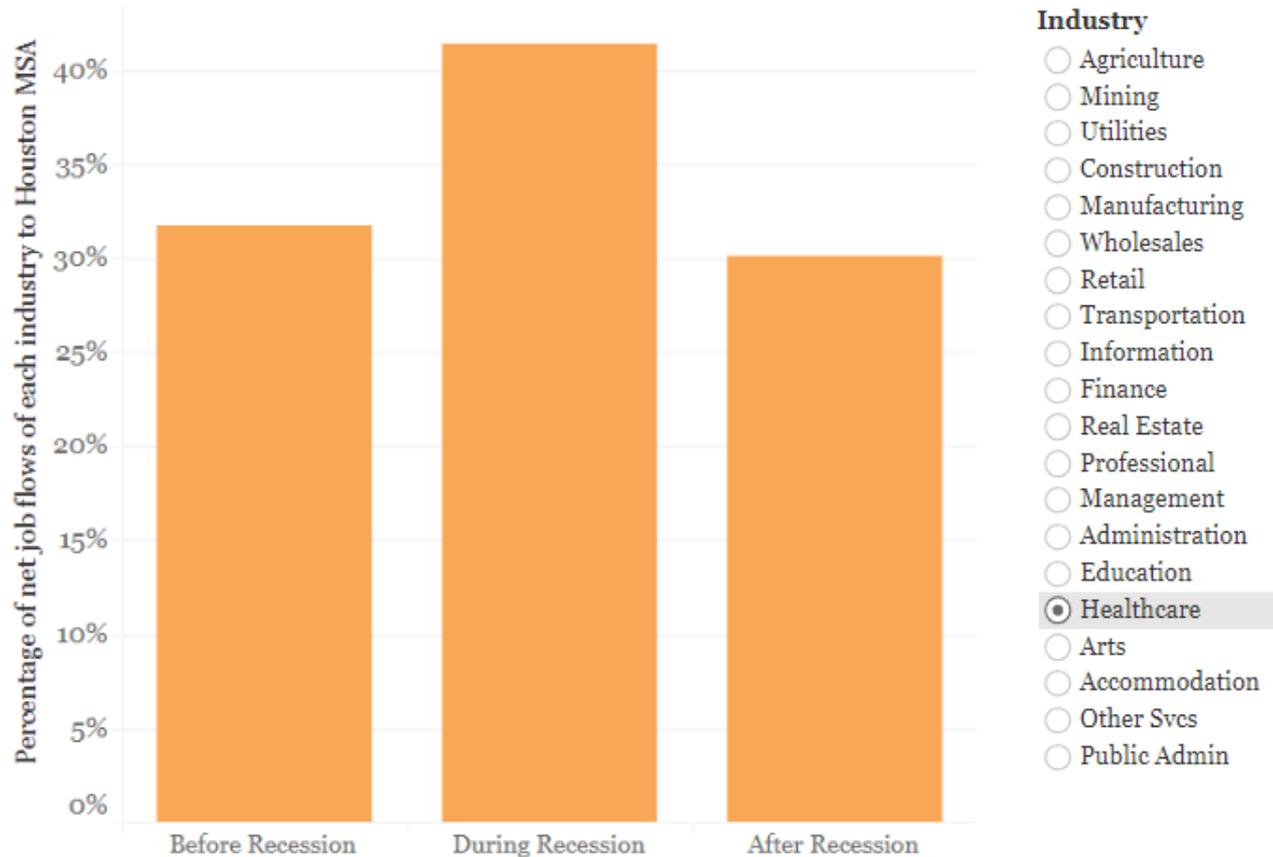
Resilience During Crisis- Retail Industry

Net job inflows to the Houston MSA by industry and Recession period



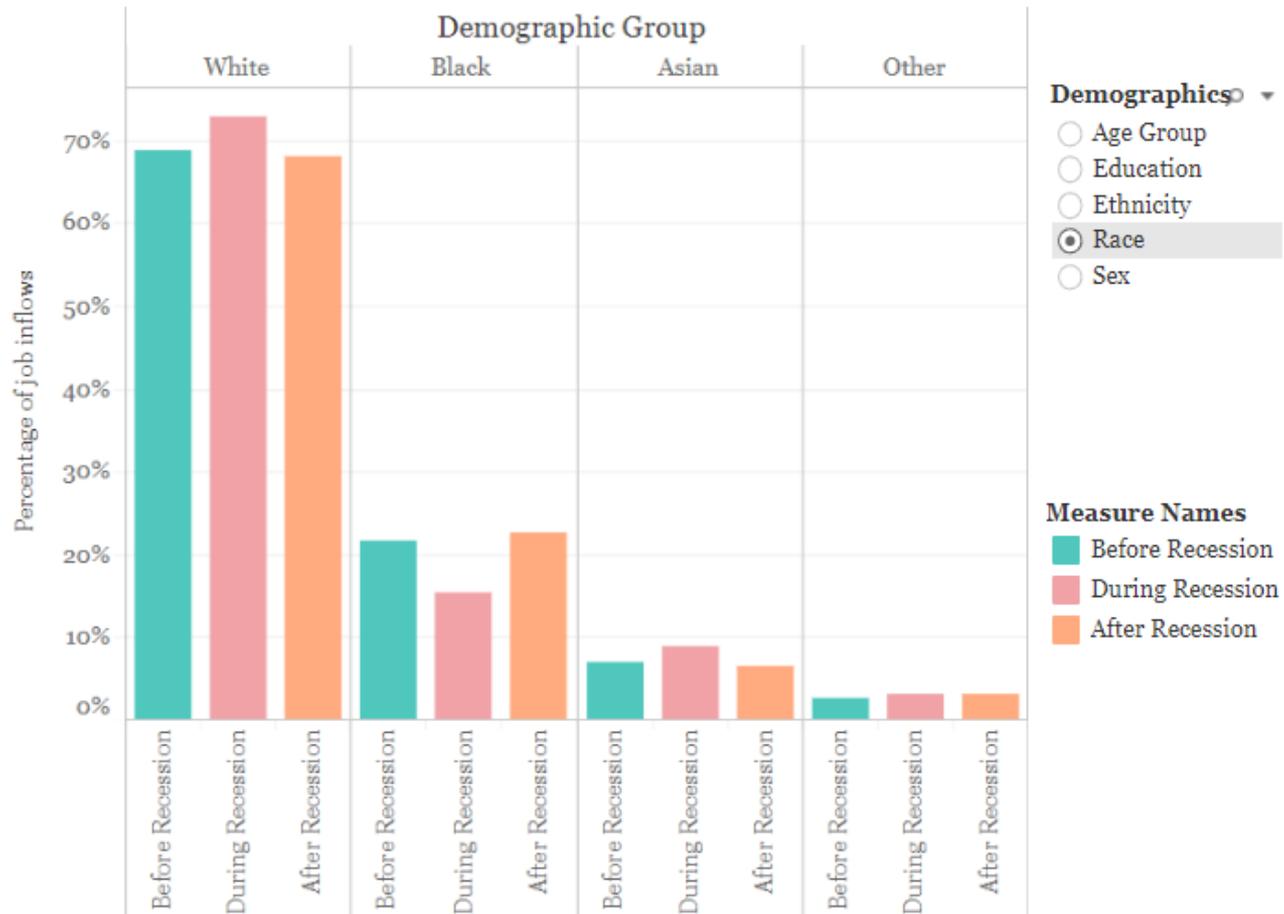
Resilience During Crisis- Health Care Industry

Net job inflows to the Houston MSA by industry and Recession period



Resilience During Crisis

Percentage of job inflows by demographic group and Recession period



Conclusions

- Most of the job changes in the Houston MSA are workers changing jobs within the region, however, share of out-of-region job inflows is on the rise
- Jobs flows to Houston area reflect a young and racially diverse workforce
- Demographic characteristics of workers moving into and out of the region are very similar
- Administration and Construction industries have the highest job mobilities, whereas Education and Public Administration have the least
- Workers from outside of Texas have higher education and receive higher salary increment
- Job inflows to the Mining (Energy), Utility and Manufacturing industries are almost always associated with rises in earnings.
- Energy industry is the core of Houston MSA's attractiveness

Website and Contact Information

- Houston MSA Job-to-Job Flows Interactive Report
<https://datalab.h-gac.com/j2jflow/index.html>
- Houston MSA Job-to-Job Flows Explorer
<https://datalab.h-gac.com/j2jdata/>
- Interactive web mapping applications
www.h-gac.com/go/apps
- E-mail: forecast@h-gac.com
- Acknowledgements to The Socioeconomic Modeling Team at H-GAC