Census Training: Introduction and Updates on Local Employment Dynamics Data Products

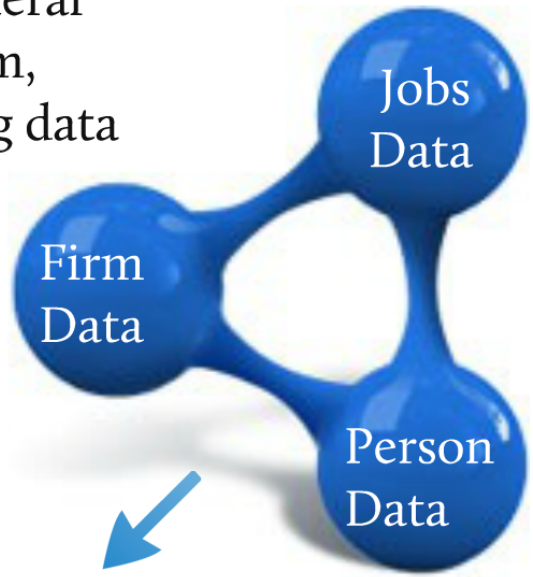
June 19, 2019

Presenter: Earlene Dowell
Longitudinal Employer-Household Dynamics Program
U.S. Census Bureau

What is Local Employment Dynamics (LED) data?

It is the set of public use statistics derived from the LEHD jobs microdata

An innovative federal statistical program, collecting existing data and ...

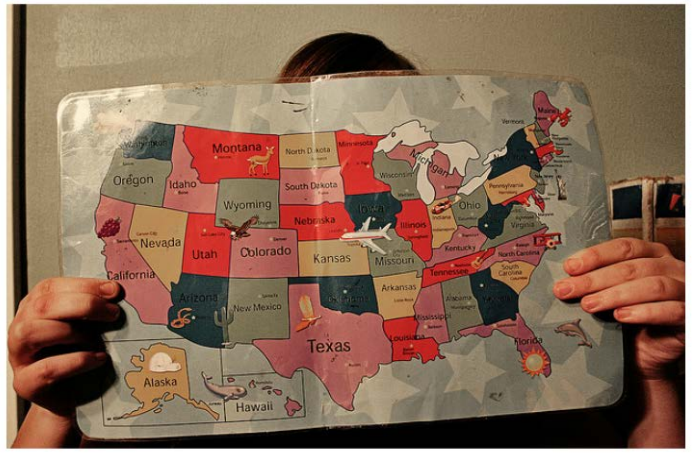


The LEHD Program at Census

..linking it together to provide new information sources at low cost

New linked national jobs data for the U.S.

Local Employment Dynamics: Public Use Data Products



The Quarterly Workforce Indicators (QWI)

- Employment
- Job Creation, Job Destruction, Hires, Separations, Turnover
- By industry, county, CBSA, state, Workforce Investment Area (WIA) and worker characteristics

Job-to-Job Flows (J2J)

- Traces worker movement through industries, geographic labor markets, and to/from employment

OnTheMap/LEHD Origin-Destination Employment Statistics (LODES)

- Employment at the Census block level by where workers live and work
- Popular uses - local economic development, business site selection, and emergency planning

Post-Secondary Employment Outcomes (PSEO)

- New set of statistics on the earnings and employment outcomes of graduates of post-secondary institutions in the United States,

America Counts:

Impact of Tech Boom on Housing

Combining Census Bureau and Zillow Housing Data Show Rise in Rental Prices and Home Values in Tech-Rich Areas

EARLENE K.P. DOWELL | APRIL 30, 2019

You've heard of the "Amazon Effect." Now you can see it.

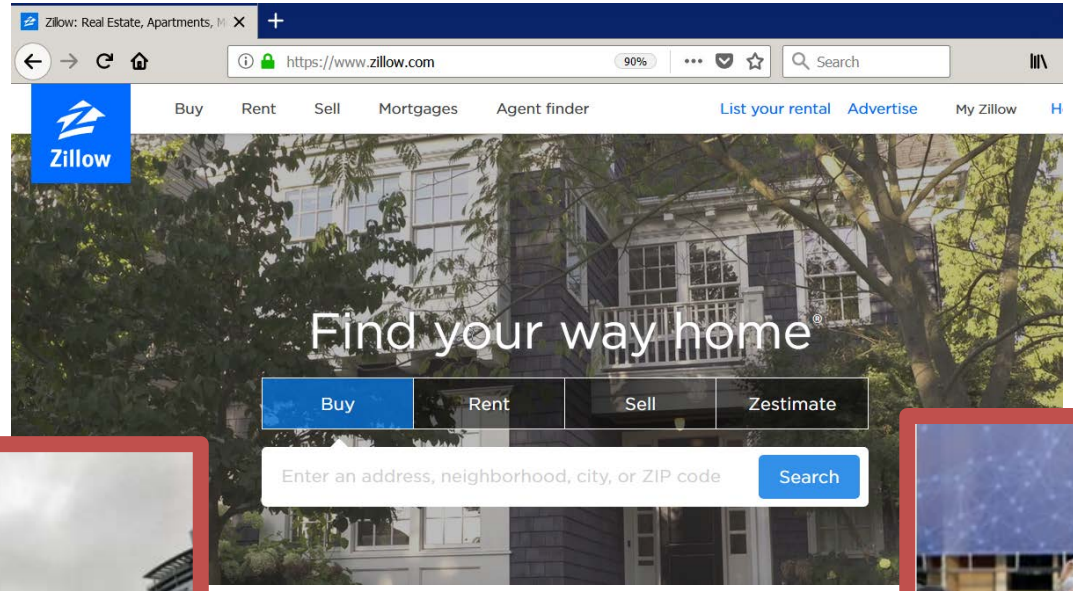
By combining U.S. Census Bureau data and their own housing listings, economists from Zillow, an online real estate search engine, have been able to show just how much rental prices and home values have skyrocketed in areas across the country that are experiencing a tech boom.

Zillow combines housing data and Census Bureau data to help understand the link between housing prices and the tech boom.

How Census Bureau Data Can Help Older Americans Afford Housing

King County, Wash., increased enrollment in a housing affordability program for older Americans using the Census Bureau's American Community Survey.

How Zillow Is Connecting the Dots with LEHD



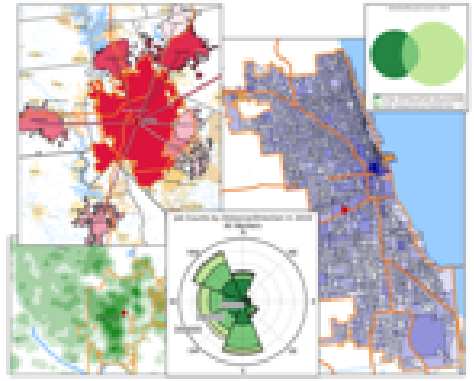
OnTheMap, LODES, and Labor Demand Shock

OnTheMap.CES.Census.Gov

OnTheMap

Recognized by United Nations as a major U.S. statistical innovation

- ✓ Where do workers live?
- ✓ Where do residents work?
- ✓ What are the commuter flows of a particular area?
- ✓ Analyze/report by worker demographics: age, earnings, race, ethnicity, educational attainment, and sex
- ✓ Analyze/report by firm characteristics: NAICS Sector, firm age, and firm size

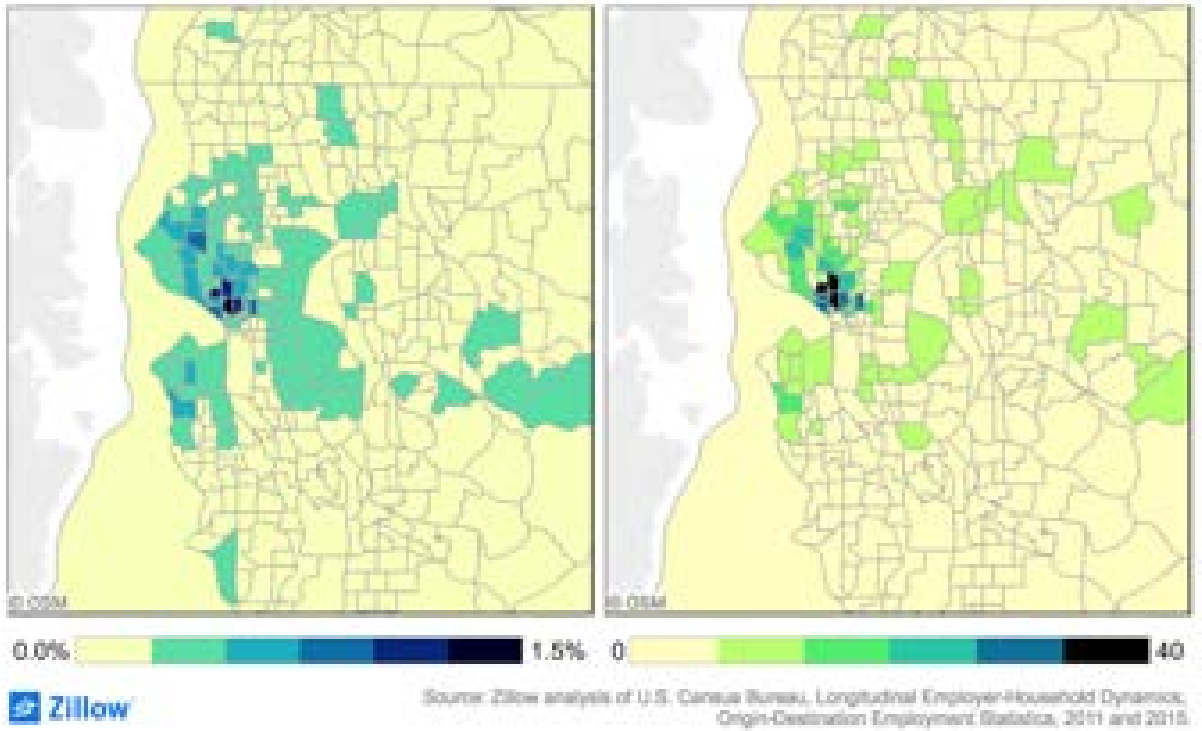


- ✓ 2002-2015 annual data
- ✓ 50 states available (plus DC)
- ✓ User-selected areas
- ✓ Based on Census Blocks
- ✓ Disclosure protection
- ✓ Flexible Inputs/Outputs

South Lake Union and nearby areas have both the greatest density and the largest growth in residents who work in South Lake Union.

Distribution of SLU workers across census tract of residence, 2015

Average annual change in number of SLU workers by residence census tract, 2011-2015

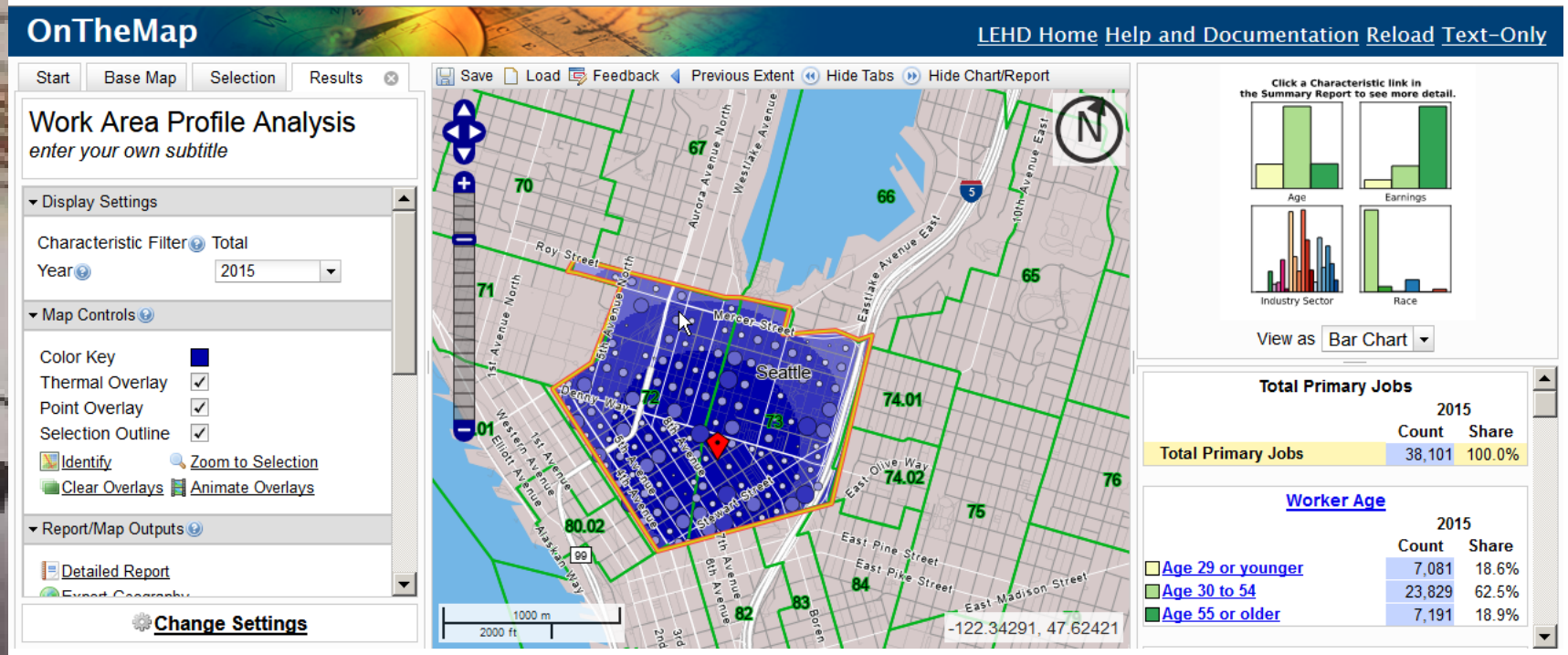


Source: Zillow analysis of U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Origin-Destination Employment Statistics, 2011 and 2015

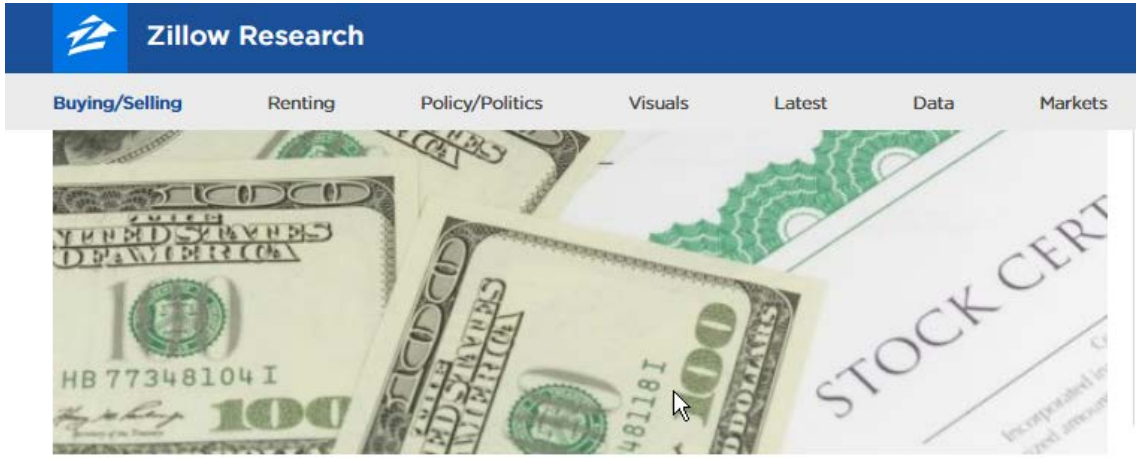
Amazon Effect

RISING RENT? THE 'AMAZON EFFECT ISN'T ONLY REASON

Gene Balk / Fit Guy



Facebook Headquarters - Menlo Park



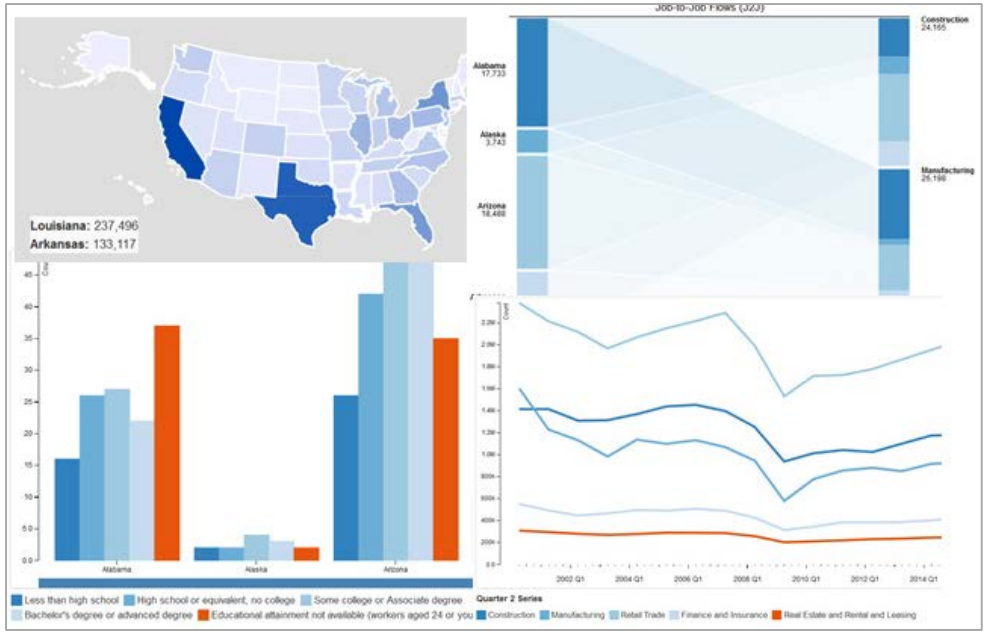
Post-IPO, Home Values Grew Faster in Areas Home to Lots of Facebook Employees

By Jeff Tucker on Feb. 4, 2019

- Every 10 Facebook employees living in a given census tract at the time of Facebook's IPO in May 2012 were associated with an additional 1.6 percentage points of home value increase over that year.
- Between March 2012 and March 2013, home values around likely Facebook employees climbed 21 percent, compared to 17 percent in all other Bay Area census tracts.
- This faster growth translated into an extra $29,800 in appreciation for the typical home in these Facebook-employee-heavy areas compared to homes in the rest of the Bay Area.

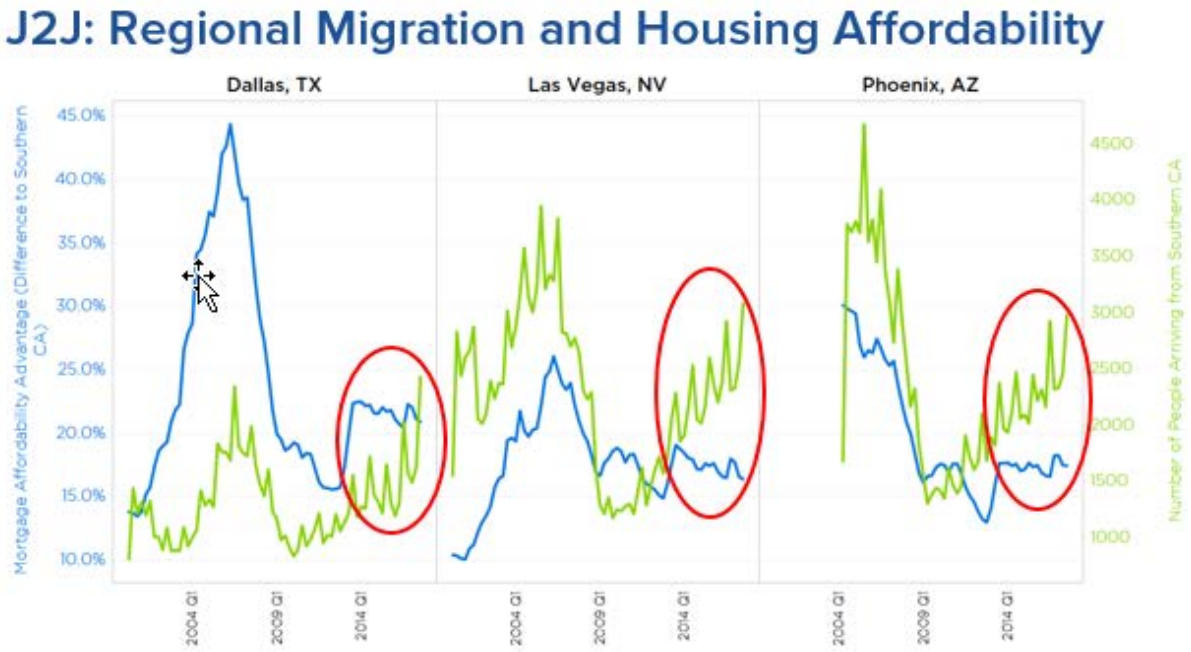
J2J Explorer

- ✓ 40 Measures of Worker Reallocation
- ✓ Six Visualization Modules with a flexible dashboard interface
- ✓ Export reports to Excel or CSV
- ✓ Trace worker movements through industries, geographic labor markets, and to/from employment
- ✓ Analyze/report by origin and destination geographies: national and state-level tabulations

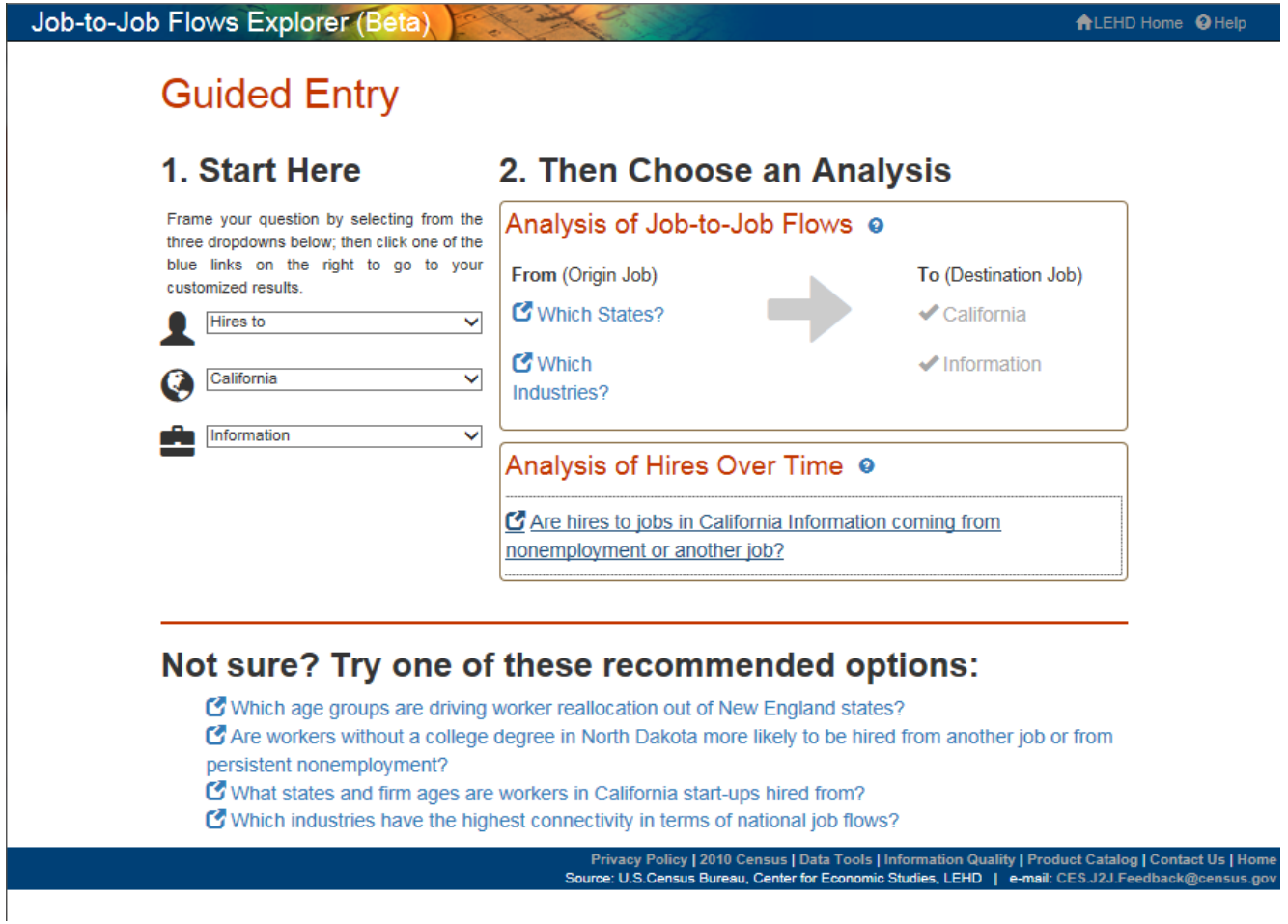


- ✓ Analyze/report by origin and destination firm characteristics: NAICS Sector, firm age, and firm size
- ✓ Analyze/report by worker demographics: age, earnings, race, ethnicity, educational attainment, and sex
- ✓ Data updated every quarter

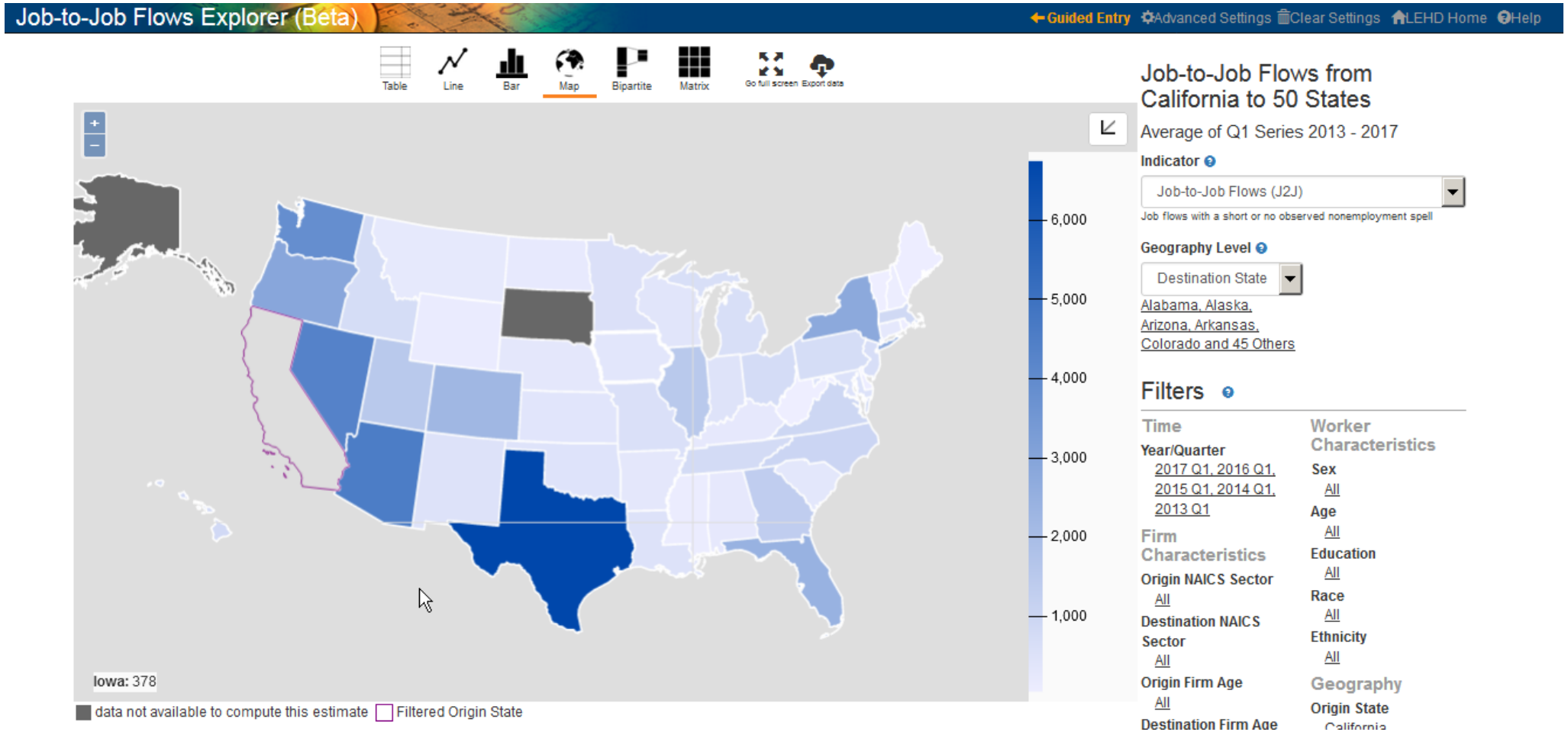
California Exodus



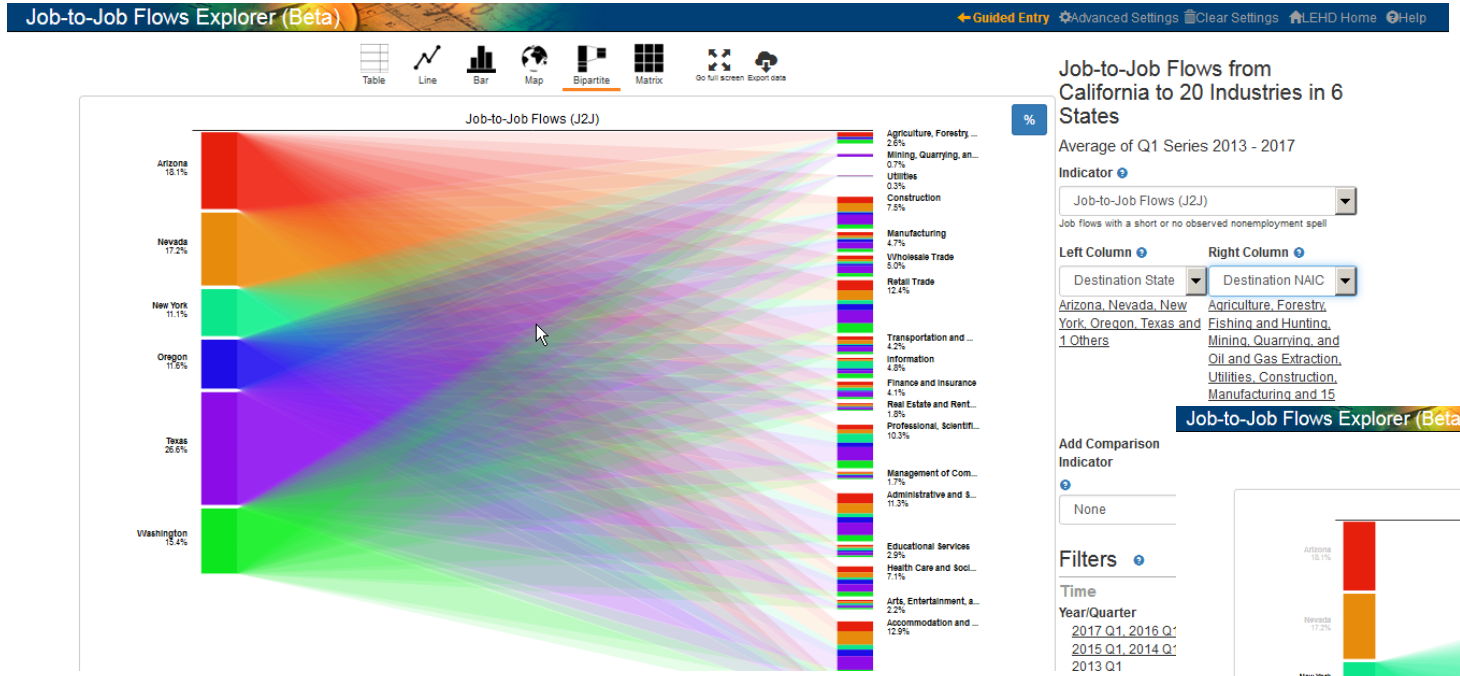
Start with the Guided Entry

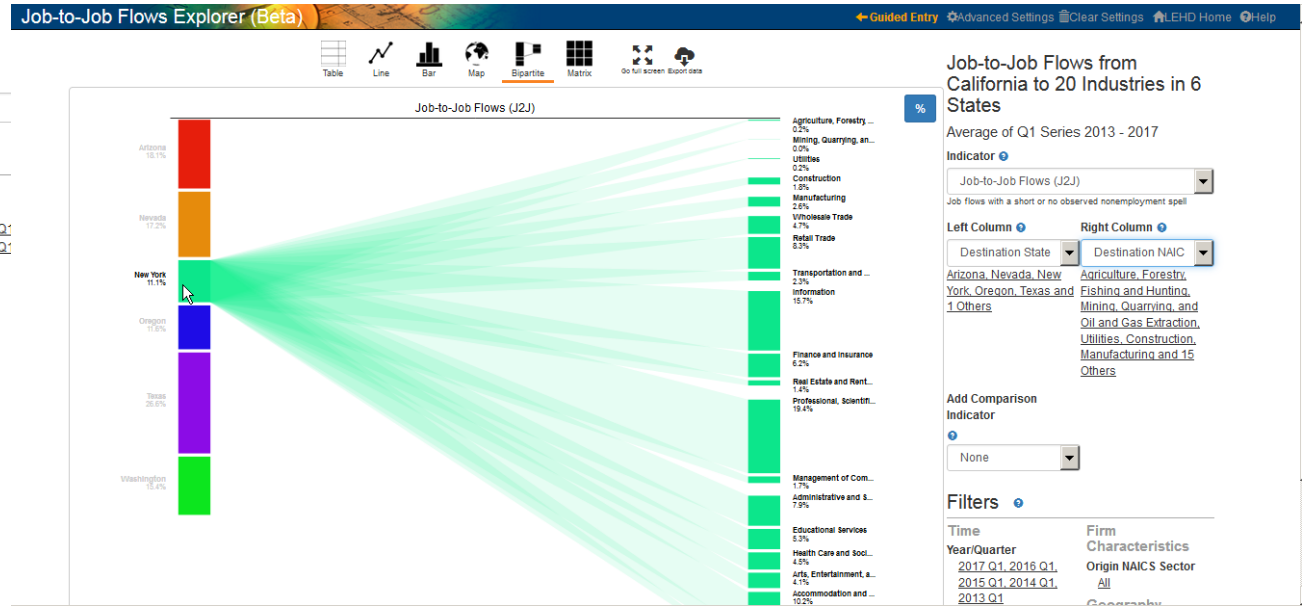


J2J Explorer



Bipartite


Job-to-Job Flows Explorer (Beta)
Guided Entry
Advanced Settings
Clear Settings
LEHD Home
Help
Table
Line
Bar
Map
Bipartite
Matrix
Go full screen
Export data
Job-to-Job Flows (J2J)
%
Arizona 18.1%
Nevada 17.2%
New York 11.1%
Oregon 11.6%
Texas 26.6%
Washington 15.4%
Agriculture, Forestry, ... 2.6%
Mining, Quarrying, an... 0.7%
Utilities 0.3%
Construction 7.5%
Manufacturing 4.7%
Wholesale Trade 5.0%
Retail Trade 12.4%
Transportation and ... 4.2%
Information 4.8%
Finance and Insurance 4.1%
Real Estate and Rent... 1.8%
Professional, Scientifi... 10.3%
Management of Com... 1.7%
Administrative and S... 11.3%
Educational Services 2.9%
Health Care and Soci... 7.1%
Arts, Entertainment, a... 2.2%
Accommodation and ... 12.9%
Job-to-Job Flows from California to 20 Industries in 6 States
Average of Q1 Series 2013 - 2017
Indicator
Job-to-Job Flows (J2J)
Job flows with a short or no observed nonemployment spell
Left Column
Destination State
Arizona, Nevada, New York, Oregon, Texas and 1 Others
Right Column
Destination NAIC
Agriculture, Forestry, Fishing and Hunting, Mining, Quarrying, and Oil and Gas Extraction, Utilities, Construction, Manufacturing and 15
Add Comparison Indicator
None
Filters
Time
Year/Quarter
2017 Q1, 2016 Q1
2015 Q1, 2014 Q1
2013 Q1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Add Comparison Indicator
None
Filters
Time
Year/Quarter
2017 Q1, 2016 Q1, 2015 Q1, 2014 Q1, 2013 Q1
Firm Characteristics
Origin NAICS Sector
All

// Census.gov / America Counts: Stories Behind the Numbers / **What Is Ahead for the Nation's Aging Workforce?**

- 17 percent for workers aged 14-24, a $245 increase from $1,431 to $1,676.
- 20 percent for workers aged 25-34, a $600 increase from $3,049 to $3,649.
- 32 percent for workers aged 35-44, a $1,254 increase from $3,939 to $5,193.
- 32 percent for workers aged 45-54, a $1,390 increase from $4,363 to $5,753.
- 41 percent for workers aged 55-64, a $1,629 increase from $3,928 to $5,557.
- 80 percent for workers aged 65-99, a $1,816 increase from $2,276 to $4,092.

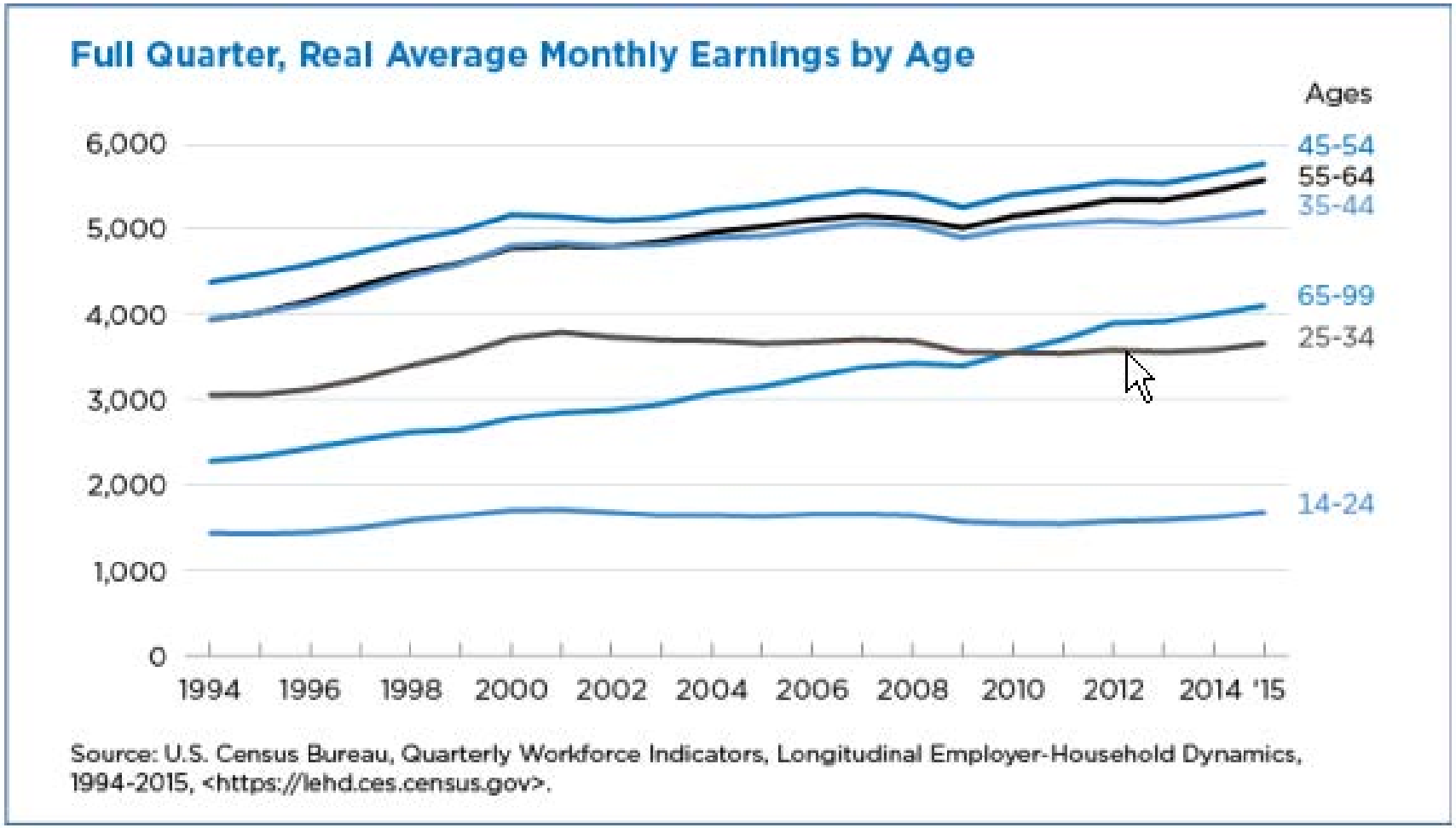
QWI Explorer

- ✓ 32 Quarterly Workforce Indicators
- ✓ Flexible Pivot Table and Map/Chart interface
- ✓ Data on detailed interactions between firms and workers include employment, employment change (individual and firm), and earnings
- ✓ Analyze/report by worker demographics: age, earnings, race, ethnicity, educational attainment, and sex

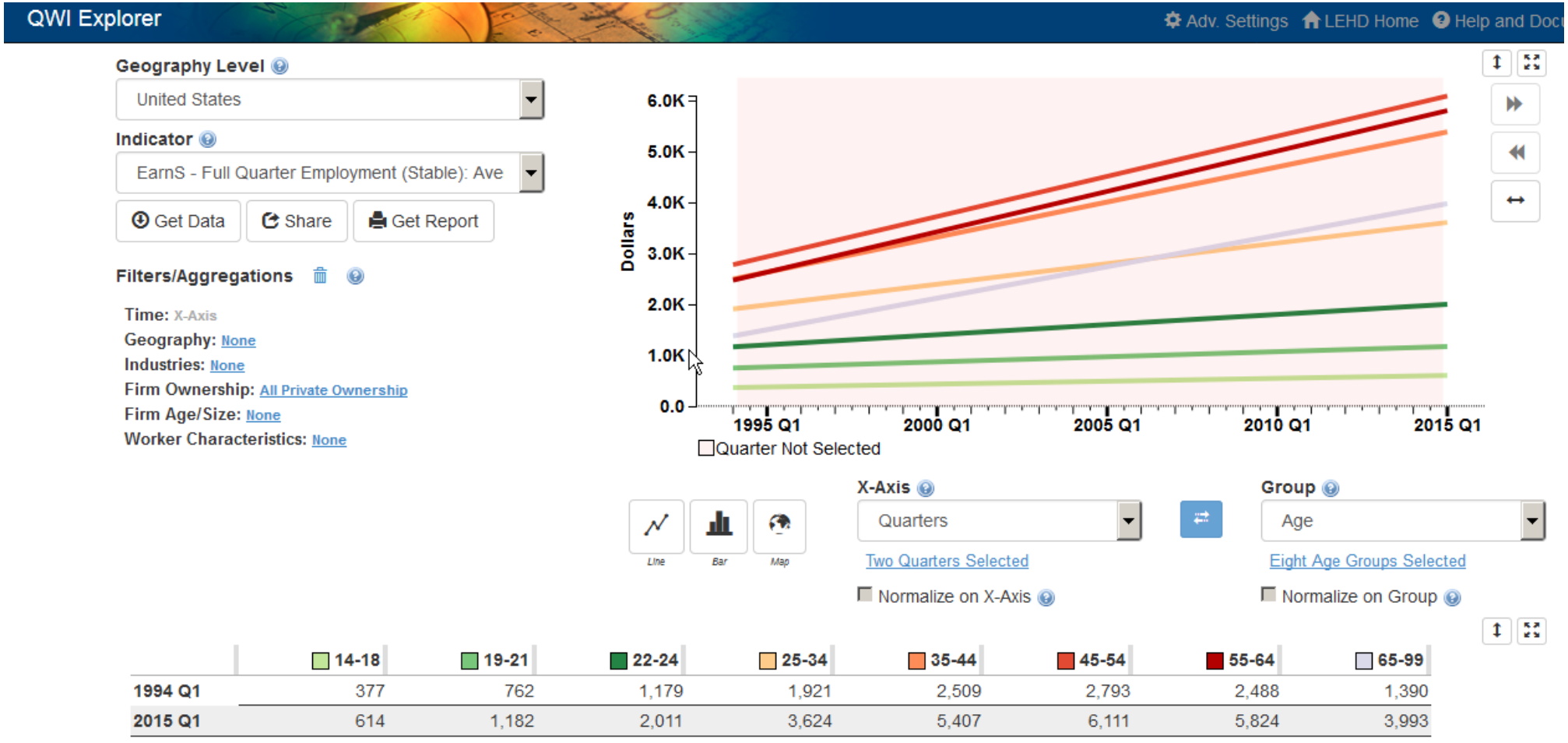
	14-18	19-21	22-24	25-34	35-44	45-54	55-64	▲ 65-99
2016 Q1	49,071	98,015	142,210	533,445	487,029	537,062	410,748	147,737
2016 Q3	64,488	120,668	146,682	544,748	492,282	540,630	421,537	155,207
2016 Q2	50,009	99,416	144,099	549,200	502,020	553,981	428,274	156,271
2017 Q1	51,867	97,543	140,174	543,025	493,905	538,394	426,367	157,687
2016 Q4	54,241	101,967	146,366	554,623	503,659	551,963	434,131	160,702
2017 Q2	52,549	100,015	140,960	552,667	505,526	548,742	437,978	164,754

- ✓ Analyze/report by firm characteristics: NAICS classification (sector, 3, 4), firm age, and firm size
- ✓ Quarterly data very current (9-12 months old)
- ✓ National and 50 states available (plus DC)

Average Monthly Earnings by Age



QWI Explorer

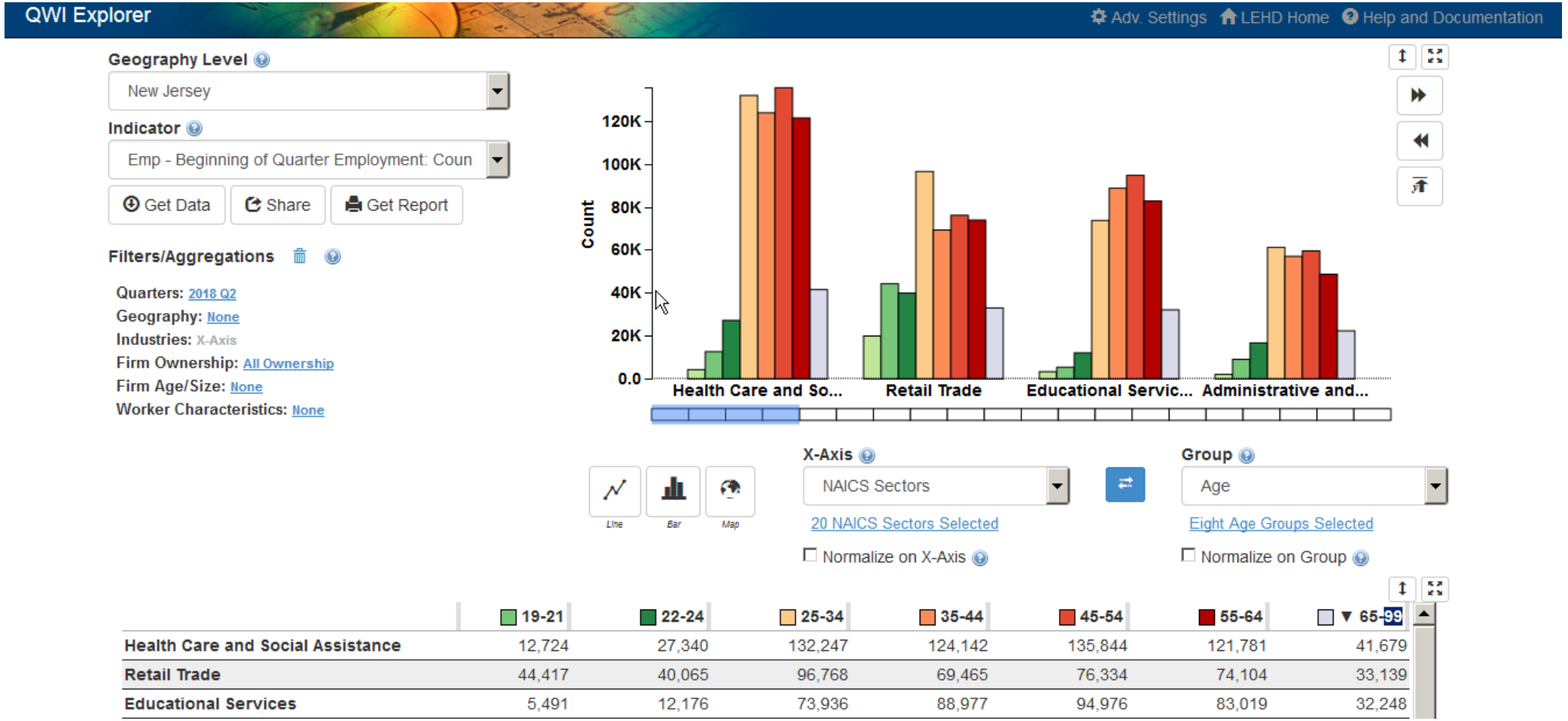


	14-18	19-21	22-24	25-34	35-44	45-54	55-64	65-99
1994 Q1	377	762	1,179	1,921	2,509	2,793	2,488	1,390
2015 Q1	614	1,182	2,011	3,624	5,407	6,111	5,824	3,993

Earnings in New Jersey

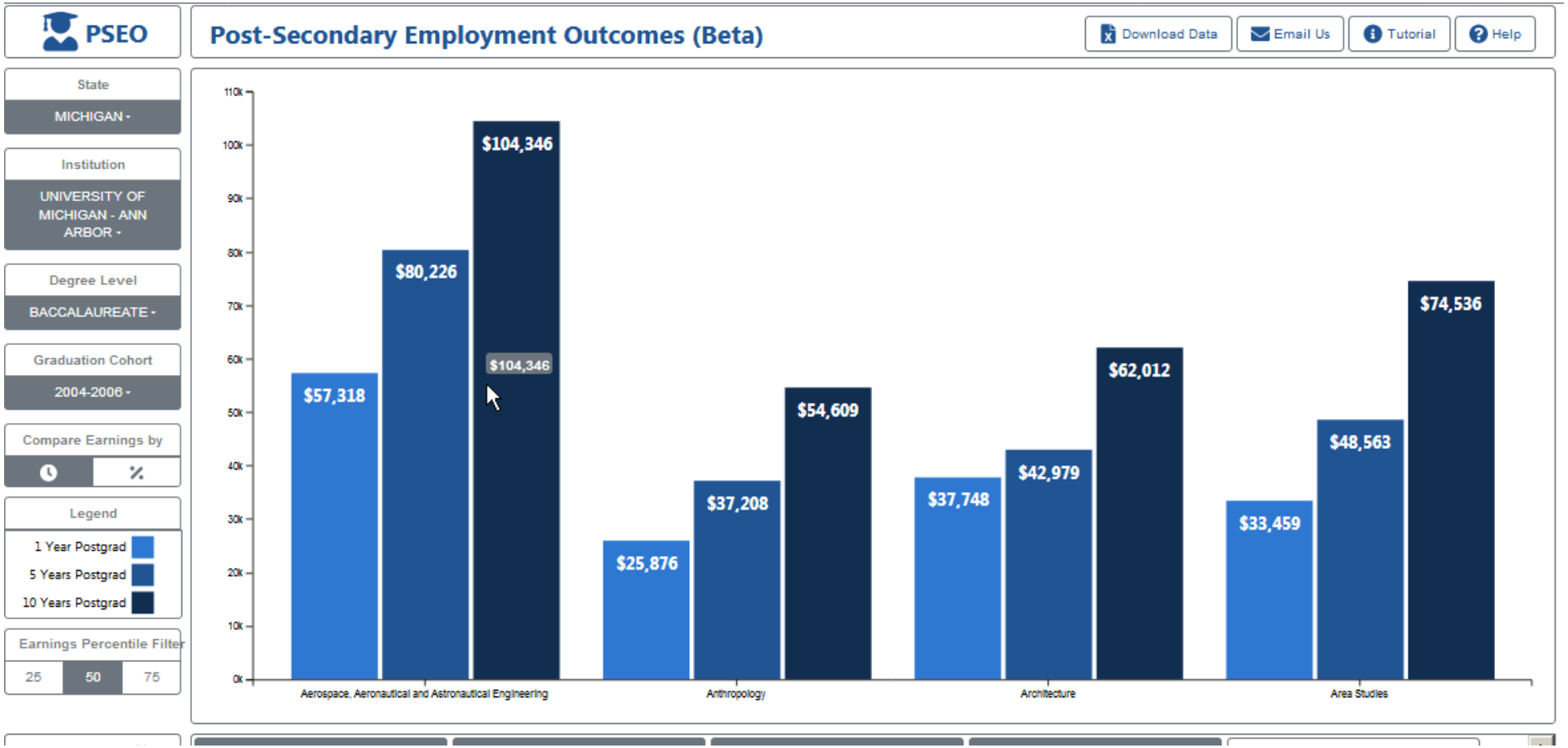
	14-18	19-21	22-24	25-34	35-44	45-54	55-64	65-99
2004 Q1	582	1,091	1,965	3,508	4,738	5,077	4,698	2,760
2014 Q1	543	1,031	1,975	3,964	6,277	7,121	6,561	4,320

Industries of Older Workers



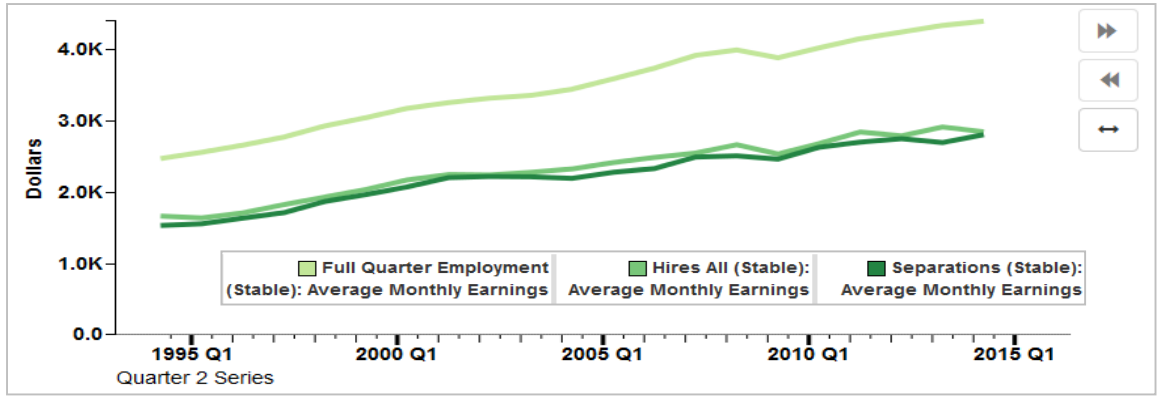
	19-21	22-24	25-34	35-44	45-54	55-64	▼ 65-99
Health Care and Social Assistance	12,724	27,340	132,247	124,142	135,844	121,781	41,679
Retail Trade	44,417	40,065	96,768	69,465	76,334	74,104	33,139
Educational Services	5,491	12,176	73,936	88,977	94,976	83,019	32,248

How Much are University of Michigan – Ann Arbor Graduates Earning?



Takeaways: Why Are LED Data Tools Important?

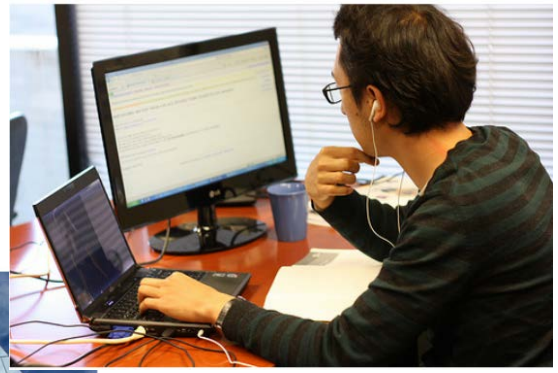
- Accessibility
- “Explorability”
- Provide context
- Visualizations lead to insight
- Promote/market the data
- Provide “value-add” for our state partners



To sum up:

The Longitudinal Employer-Household Dynamics Program links existing business and jobs data to create new sources of local, detailed, labor market information using the following data tools:

-- QWI
-- OnTheMap
-- J2J Explorer



Resources

- America Counts
  - https://www.census.gov/library/stories/2019/04/impact-of-tech-boom-on-housing.html
  - https://www.census.gov/library/stories/2018/04/aging-workforce.html
- LED Webinars
  - https://lehd.ces.census.gov/doc/webinar/2019-02-20%20-%20Using%20LEHD%20and%20Zillow%20Data%20to%20Understand%20Housing%20Market%20Impacts.mp4
  - https://www.youtube.com/watch?v=AhFi59Fbzlw
  - https://lehd.ces.census.gov/doc/webinar/2018-10-17_-_LED_Webinar--_New_National_Earnings_Data_for_Graduates_by_Institution_and_Major.mp4
- Other
  - https://www.seattletimes.com/seattle-news/data/is-the-amazon-effect-on-rising-rents-real/

Q & A and Thank You!

Contact Me:

Earlene.KP.Dowell@census.gov

301-763-9628