
Local Employment Dynamics Partnership Conference
September 11, 2017

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Longitudinal Employer-Household Dynamics (LEHD) Program
Center for Economic Studies, U.S. Census Bureau
The Local Employment Dynamics (LED) state-federal partnership

An innovative partnership to combine already collected administrative and survey data, linking it together to provide new information about the U.S. economy at very low cost.

Public use statistics:
- Quarterly Workforce Indicators
- LODES/OnTheMap
- Job-to-Job Flows

The LEHD microdata
New Data and Tools Released in 2017:

- New LODES data release
  - 2015 data
- Job-to-Job Flows v2.0
  - Will be released later this week
  - New metro-area tabulations
  - New earnings variables
  - More detailed cross-tabulations
- J2J Explorer
  - New tool to analyze Job-to-Job Flows data
- Will focus talk on last two
LODES/OnTheMap Update

- LODES 2015 data will be released in OnTheMap in the next two weeks.
- This release of LODES accounts for some changes in Federal/OPM data:
  - New occupation-level suppressions (mostly focused on enforcement occupations).
  - This includes the suppression of about 175,000 Federal jobs in 2015.
  - A data notice summarizing these changes will accompany the 2015 release.
In 2015, Census began first release of new Job-to-Job Flows data

Want a Raise? Quit Your Job
Ben Casselman

Why care about job-to-job flows?

They are enormous:
- In 2016, most job separations (and hires!) were workers moving from one job to another.

Job change is strongly procyclical:
- Most job moves are moves ‘up the job ladder’ to better paying industries and employers
Rate of job change in the U.S.: 2000-2016

Job-to-Job Flows: what data is available

**Count and rate data**

**Job-to-job flows**
- Hires
- Separations

**Employment flows**
- Hires
- Separations

Available by:
- National, state, and metro
- By worker demographics
- By industry sector, firm age and size
- Seasonally adjusted (higher aggregations only) and not seasonally adjusted (all aggregations)

**Origin-destination data**

**Job-to-job flows: origin job to destination job**

Available by:
- State and metro area (not available nationally, except 2010-2014)
- Industry and demographics
- Information available both for origin job and destination job
J2J Origin-Destination data provides more context to hires and separations statistics:

2.3 million construction jobs disappeared between 2006 and 2011. Where did these workers go?

40% returned to construction, finding jobs at different employers

60% of workers left the labor market or moved to different industries after the housing boom.
Net worker inflows to Connecticut, controlling for size of state, 2010-2014

Connecticut loses the most workers to other New England states and the Sunbelt

Note: Calculated from Census Job-to-Job Flows data, 2016Q1 release
Net worker inflows to Connecticut, by education and region, 2010-2014

Note: Calculated from Census Job-to-Job Flows data, 2016Q1 release
What’s new in the newly released J2J:

- **New metro-area tabulations**
  - Count and origin-destination data
- **New earnings variables**
  - Earnings by origin and destination job in OD data
  - Earnings for hires and separations as well as job stayers in count data
- **More detailed cross-tabulations**
  - Industry by demographics
New Hires in Houston in 2015 Q3, by where employed at start of quarter

Only 64% of employed workers hired by Houston area firms were previously employed in Houston.

Another 15% were employed by establishments in Dallas, Austin, San Antonio, and Beaumont.
Zooming out: new hires in Houston in 2015 Q3, by where employed at start of the quarter (top 25 metros only)

Source: Census Job-to-Job Flows data, 2017Q2 release, only top 25 metro areas are shown (this slide and previous)
New earnings data: Houston job-to-job moves into Mining and Oil Extraction sector, by industry of job at start of quarter

<table>
<thead>
<tr>
<th>Industry of Previous Job</th>
<th>Number of Transitions in 2015 Q3 (EES)</th>
<th>Average Earnings in Previous Job (annualized)</th>
<th>Average Earnings in New Mining Job (annualized)</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>682</td>
<td>143,612</td>
<td>165,724</td>
<td>14.3%</td>
</tr>
<tr>
<td>Utilities</td>
<td>15</td>
<td>110,804</td>
<td>117,624</td>
<td>6.0%</td>
</tr>
<tr>
<td>Construction</td>
<td>212</td>
<td>71,820</td>
<td>79,488</td>
<td>10.1%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>145</td>
<td>107,636</td>
<td>105,656</td>
<td>-1.9%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>122</td>
<td>119,464</td>
<td>114,036</td>
<td>-4.6%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>28</td>
<td>66,616</td>
<td>55,504</td>
<td>-18.2%</td>
</tr>
<tr>
<td>Transporation and Warehousing</td>
<td>160</td>
<td>94,132</td>
<td>94,184</td>
<td>0.1%</td>
</tr>
<tr>
<td>Information</td>
<td>17</td>
<td>68,972</td>
<td>83,120</td>
<td>18.6%</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>26</td>
<td>134,616</td>
<td>151,416</td>
<td>11.7%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>30</td>
<td>82,940</td>
<td>89,580</td>
<td>7.7%</td>
</tr>
<tr>
<td>Professional and Technical Services</td>
<td>156</td>
<td>114,664</td>
<td>172,460</td>
<td>40.3%</td>
</tr>
<tr>
<td>Management of Companies</td>
<td>56</td>
<td>170,728</td>
<td>167,708</td>
<td>-1.8%</td>
</tr>
<tr>
<td>Admin Support and Waste Management</td>
<td>114</td>
<td>100,832</td>
<td>103,008</td>
<td>2.1%</td>
</tr>
<tr>
<td>Educational Services</td>
<td>21</td>
<td>55,456</td>
<td>44,956</td>
<td>-20.9%</td>
</tr>
<tr>
<td>Health Care</td>
<td>31</td>
<td>63,092</td>
<td>68,740</td>
<td>8.6%</td>
</tr>
<tr>
<td>Arts and Entertainment</td>
<td>4</td>
<td>66,448</td>
<td>55,104</td>
<td>-18.7%</td>
</tr>
<tr>
<td>Accomodation and Food Service</td>
<td>15</td>
<td>39,668</td>
<td>35,588</td>
<td>-10.8%</td>
</tr>
<tr>
<td>Other Services</td>
<td>22</td>
<td>76,612</td>
<td>81,016</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Note: Calculated from Census Job-to-Job Flows data, 2017Q2 release. Earnings are nominal, 2015 Q2 for origin job, 2015 Q4 for destination job. Only earnings for full-quarter to full-quarter job transitions are tabulated.
Update on LED Data Tools

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Heath Hayward, Geographer
Longitudinal Employer-Household Dynamics (LEHD) Program
Center for Economic Studies, U.S. Census Bureau
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
Data Dissemination Strategy

Provide a wide variety of access points to the data to accommodate as many user needs as possible:

- **Analysis/Viz Tools**: Create your own table, chart, and map with a flexible dashboard interface in [QWI Explorer](https://beta.dataweb.rm.census.gov/data/timeseries/qwi.html), [J2J Explorer](https://beta.dataweb.rm.census.gov/data/timeseries/j2j.html), and [OnTheMap](https://beta.dataweb.rm.census.gov/data/timeseries/qwi.html).

- **Intermediate data users**: Extract the exact indicators and characteristics needed using the [LED Extraction Tool](https://beta.dataweb.rm.census.gov/data/timeseries/qwi.html) (currently QWI Only).

- **Advanced data users**: Access single raw files from [https://lehd.ces.census.gov/data](https://lehd.ces.census.gov/data) and [https://lehd.ces.census.gov/data/j2j_beta.html](https://lehd.ces.census.gov/data/j2j_beta.html).

- **Advanced data users**: Bulk download of raw from [https://lehd.ces.census.gov/pub/](https://lehd.ces.census.gov/pub/), [https://lehd.ces.census.gov/data/lodes](https://lehd.ces.census.gov/data/lodes) and [https://lehd.ces.census.gov/data/j2j](https://lehd.ces.census.gov/data/j2j).

- **Integration into the Census API** (currently QWI Only): [http://beta.dataweb.rm.census.gov/data/timeseries/qwi.html](http://beta.dataweb.rm.census.gov/data/timeseries/qwi.html)
What’s New in LEHD’s Applications

- National QWI and cross-state queries in QWI Explorer and LED Extraction Tool
- Local Storage in QWI Explorer
  - Customize your preferences – choose to remove conflict popups, set default settings, etc.
- 2015 data in OnTheMap (with 2016 TIGER geographies)
- Many bug fixes
J2J Explorer

- 32 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
- Guided Entry enables easy access for new users
Quick Demo of J2J Explorer

- In which states did newly-hired employees in South Carolina previously work?
- Do employees leaving jobs in Construction generally enter nonemployment or start another job?
- Which age groups are driving worker reallocation out of New England states?
Priorities Moving Forward

- Applications updates driven by:
  - Newly available public-use data (new data product or expanded data product)
  - Functionality requests via customer feedback
  - Necessary technology updates (back-end and UI)
- J2J Explorer 1.0
- OnTheMap refresh
- Add LODES and J2J to LED Extraction Tool and Census API (longer term projects)
Specific Updates

- **J2J Explorer 1.0:**
  - Metro Area tabulations
  - Firm Characteristics crossed with Worker characteristics
  - Earnings measures
  - Improved transitions between visualizations
  - Ranking/Normalization functionality
  - Expanded exports

- **OnTheMap 7:**
  - Update backend technology
  - Improve user interface and visualizations
Thank You!

Link to Applications
- Lehd.ces.census.gov/applications

Link to Raw Data
- Lehd.ces.census.gov/data

Questions or Feedback?
- Erika.McEntarfer@census.gov
- Patrick.Hayward@census.gov
- CES.OnTheMap.Feedback@census.gov
- CES.QWI.Feedback@census.gov
- CES.J2J.Feedback@census.gov
Extra slides
How job transitions in are identified in the admin data:

**Fictional Job History**

<table>
<thead>
<tr>
<th>PIK</th>
<th>SEIN</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person1</td>
<td>Firm A</td>
<td>7000</td>
<td>2500</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Person1</td>
<td>Firm B</td>
<td>0</td>
<td>0</td>
<td>3000</td>
<td>6000</td>
<td>7500</td>
</tr>
</tbody>
</table>

- Job on April 1
- Leaves Firm A during Q2
- July 1: no earnings at any job
- Employed on Oct 1 at Firm B, hired sometime during Q3
Comparison to JOLTS: Layoffs

Separations to Non-employment (J2J)

Layoffs (JOLTS)

J2J separations to persistent nonemp  JOLTS Layoffs
Comparison to JOLTS: Quits
J2J separations-to-employment vs. CPS employer-to-employer flows

Separations to a New Job (J2J)

CPS job-to-job flows (Fallick & Fleischman)