LOCAL EMPLOYMENT DYNAMICS: Connecting Workers and Jobs

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Outline

• Introduction to LED Data and Partnership

• What is the LODES Data?
  – Sources
  – Processing
  – Confidentiality Protection

• Releasing LODES Data
  – OnTheMap Application
  – Downloadable Data
Local Employment Dynamics (LED) Partnership

✓ Partnership between 53 states/territories
  ✓ Not yet in producing data = MA, PR, USVI

✓ Data Sharing
  ✓ Local knowledge
  ✓ Comparable data for all states, counties, regions, WIAs

✓ Innovative and Cost-Effective
  ✓ Uses existing data
  ✓ Creates new data products
Overview of LED

- Leverages existing data
- Creates new data products at low cost
- Makes detailed data available for local areas while protecting confidentiality
- Adds no respondent burden
www.census.gov
Local Employment Dynamics @
http://lehd.ces.census.gov

WHAT’S NEW?

01/08/10: Invitation to 2010 LED Partnership Workshop
12/17/09: OnTheMap Version 4.0.1 Released
12/14/09: OnTheMap Version 4 Released
12/10/09: Deadline Extended for Call for Presentations
10/28/09: Call for Proposals for 2010 LED Workshop

Click here for the 2010 LED Partnership Workshop Preliminary Agenda
2010 LED Partnership Workshop Concurrent Sessions
Click here to send an email to join the OnTheMap listserv.

OnTheMap Version 4 Released

Start using OnTheMap now!
The new version adds:
- Data for 2007 and 2008
- Data for Ohio (2002-2008)
- Import/Export shapefiles and KML/KMZ
- Better selection tools
- Other new features and usability improvements
- See examples and tutorials...

Q&A

- What is LEHD?
- What is LED?
- What is the difference between LEHD and LED?
- What are the QWI?

DID YOU KNOW?

Private Sector Total Employment in South Carolina

<table>
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<tr>
<th></th>
<th>2008Q1</th>
<th>2009Q1</th>
<th>Change</th>
</tr>
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<tbody>
<tr>
<td>All</td>
<td>735,594</td>
<td>700,278</td>
<td>-4.8%</td>
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<tr>
<td>Female</td>
<td>793,094</td>
<td>735,717</td>
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<tr>
<td>Male</td>
<td>8,255</td>
<td>8,070</td>
<td>-2.2%</td>
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</table>

Management of Companies...

<table>
<thead>
<tr>
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<th>2008Q1</th>
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</thead>
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<tr>
<td>Female</td>
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<td>-2.3%</td>
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<tr>
<td>Male</td>
<td>8,252</td>
<td>8,070</td>
<td>-2.2%</td>
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</table>
Keep in Mind...

- LED not quite national in scope
- LED does not yet include military or self-employed
- Data in OnTheMap refreshed annually
- Data sourced from administrative records provide a unique and powerful view of the workforce, but should be paired with survey data and local knowledge
OnTheMap

Interactive mapping and reporting tool

- Where do workers live?
- Where do residents work?
- Analyze/report by age, earnings, or industry segments
- Data for 50 states (DC, not MA)

- 2002-2010 annual data
- User-selected areas
- Based on Census Blocks
- Disclosure protection
- Flexible Inputs/Outputs
Uses for OnTheMap

✓ Economic Planning & Time Series
  ✓ Where is the labor supply located?
  ✓ Which industries are growing or declining over time?

✓ Transportation Planning & Analysis
  ✓ Between which areas do workers commute?
  ✓ How far and from what direction do workers commute?
  ✓ What are the worker flows in, out, and within an area?

✓ Emergency Management & Assessment
  ✓ What jobs are impacted by a disaster event?
Creating LODES Data: Sources

- Confidential Data Sources:
  - UI Wage Records
  - QCEW
  - Other Censuses and Surveys
  - StARS

- Public Use Data Sources
  - 2000 Decennial (SF1, CTPP)
  - TIGER/Line Shapefiles
  - Previous year of OnTheMap
Creating LODES Data: Processing

• Unlike QWI, much of the processing is performed at the national level, starting with the definition of Primary/Dominant Job.
• Also unlike QWI, data for previous years are not reproduced with every production cycle – LODES is constrained by a “confidentiality budget”
• One year is processed at a time because of the requirement of a previous year of data for the synthetic method.
Creating LODES Data: Confidentiality Protection

• Two main processes are taking place to protect OnTheMap data:
  – **Noise Infusion** – Applied to workplace totals.
  – **Synthetic Data Methods** – Applied to residential locations.

For more information, see:
http://lehd.ces.census.gov/led/datatools/doc/OTMSyntheticData%2005262009-JMA.pdf
http://lehd.ces.census.gov/led/datatools/doc/SyntheticDataDiagram%2006082009_JMA.pdf
Releasing LODES Data

• Once residential locations have been synthesized, the data are tabulated for public release.
• The basic structure of released data are the following file types:
  – Origin-Destination (OD)
  – Residence Area Characteristics (RAC)
  – Workplace Area Characteristics (WAC)
Releasing LODES Data

- **OD**
  - Connects a home block with a work block.
  - Gives one count of jobs for each home-work block pair and for each combination of year, job type, and segment variables.

- **RAC/WAC**
  - Provides totals on residence/workplace side only.
  - Gives one total for each worker/job characteristic for each combination of year, job type, and segment variables.
Releasing LODES Data

Jobs are classified by:

- Whether the job is a worker’s primary/dominant job.
- Whether the job is in the private sector.
- Whether the job is sourced from OPM*.

The six Job Types are:

- All Jobs, Primary Jobs, All Private Jobs, Private Primary Jobs, All Federal Jobs*, and Federal Primary Jobs.*

* The Federal Job Types are only broken out in the raw LODES data. Only four Job Types are available in OnTheMap.

Note: A job in LODES are defined as Beginning of Quarter Employment, which means the worker was employed by the same employer in both the current (2nd) and previous (1st) quarter.
Releasing LODES Data

• Labor Market Segment
  – Jobs are aggregated by 10 “segments” determined by a worker’s/firm’s characteristics.
  – The 10 segments are:
    • All Workers
    • Workers by Age (29 or younger; 30-54; 55 or older)
    • Workers by Earnings ($1,250/mo or less; $1,251/mo to $3,333/mo; greater than $3,333/mo)
    • Workers by Firm’s Industry (Goods Producing; Trade, Transportation, and Utilities; All Other Services)
  – OD Data is reported for each segment.
  – Segments are similar to but not the same as characteristics.
Releasing LODES Data:
A note about the Industry segments

• Industry Segments are build from NAICS Industry Sectors* ("2-digit")
  – Goods Producing:
    • NAICS 11, 21, 23, 33-33
  – Trade, Transportation, and Utilities:
    • NAICS 22, 42, 44-45, 48-49
  – All Other Services
    • NAICS 51, 52, 53, 54, 55, 56, 61, 62, 71, 72, 81, 92

* See http://www.census.gov/eos/www/naics/ for more info.
Releasing LODES Data

- **Characteristics** (available only in RAC/WAC data)
  - 3 Age Characteristics – Comparable to Age Segments
  - 3 Earnings Characteristics – Comparable to Earnings Segments
  - 20 Industry Characteristics (NAICS Sectors)
  - 6 Race Characteristics
  - 2 Ethnicity Characteristics
  - 4 Educational Attainment Characteristics
  - 2 Sex Characteristics
Releasing LODES Data

• OD vs. RAC/WAC: What’s Available?
  – OD
    • Count for Year × Job Type × Segment
    • Residence Area and Workplace Area Specified
  – RAC/WAC
    • Count for Year × Job Type × Segment × Characteristic
    • Only one of Residence Area or Workplace Area Specified

• Example
  – OD: Count for 2010, All Jobs, 29 or younger, with home and work block specified.
  – RAC: Count for 2004, Primary Jobs, Goods Producing Industries, $1250/mo or less, with only home block specified.
Releasing LODES Data: Downloadable Data

- Previously, LODES data could only be downloaded from Cornell University’s Virtual RDC (VRDC).
- LODES data is now available through regular http download on the LED website: http://lehd.ces.census.gov/led/onthemeap/
- Data can be downloaded for individual states based upon state of employment.
Releasing LODES Data: Downloadable Data

• Main vs. Aux
  – To make it easier for users to limit the amount of data they need to download, the files have been split by state of employment and state of residence.
  – **Main**: Jobs of workers who are employed in the state and reside in the state.
  – **Aux**: Jobs of workers who are employed in the state and reside out of state.
Releasing LODES Data: Downloadable Data

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<td>Residence Census Block Code</td>
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<td>8</td>
<td>Total number of jobs</td>
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<tr>
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<td>SA01</td>
<td>Num</td>
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<td>Number of jobs of workers age 29 or younger</td>
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<td>5</td>
<td>SA02</td>
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<td>Number of jobs for workers age 30 to 54</td>
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<tr>
<td>6</td>
<td>SA03</td>
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<td>Number of jobs for workers age 55 or older</td>
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<tr>
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<td>SE01</td>
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<td>Number of jobs with earnings $1250/month or less</td>
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Other Notes

✓ Recently added…
  ✓ Data for District of Columbia in OnTheMap
  ✓ Federal Employment in OnTheMap

✓ In the next couple of years…
  ✓ Job-to-Job Flows (2014)
  ✓ Updated QWI Online application
Contact Us

Local Employment Dynamics
http://lehd.ces.census.gov

Please send your comments to:
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