The Census Bureau’s Local Employment Dynamics Program

C2ER Webinar
January 19, 2011

Tom Tveidt
Research Economist
• What is Local Employment Dynamics (LED)?

• How do you access LED data?

• How can you use LED?

• Future of LED?
Disclaimer:

I am not an expert.

I am a user.
LED is an Incredible New Tool

You can’t build a house with one new tool…

….but you can change the way a house is built
New Answers to New Questions

- Workforce board
- discover who lost jobs in manufacturing
- Commercial site owner
- identify a passing workforce
- Restaurant developer
- separate out residents from commuters
- Housing agency
- locate new housing sites near workers
What is LED?

- A voluntary partnership between the states and the Census Bureau
- Use existing data to link multiple sources
- Creates new information & products
- Uses synthetic data
- Run by innovative group
Before LED
LED Adds New Dimensions

Workers

Employers

Jobs: wage records

Identifying Information

Sex, Age

Residence

Industry, Ownership, Geography, Establishment structure
**LED Adds New Dimensions**

### Current
- Jobs
- Payroll
- Industry

### LED
- Jobs
- Total payroll
- Gross job gain
- Gross job loss
- Net jobs
- New hires
- Recalls
- Layoffs/quits
- Individual earnings

### Geography
- **Current**
  - National
  - State
  - County
  - Metro
  - County
  - Sub-county
  - Sub-county
  - User Defined

### Demography
- **Current**
  - None

### LED
- Male
- Female
- Age categories
  - 14-18
  - 19-21
  - 22-24
  - 25-34
  - 35-44
  - 45-54
  - 55-64
  - 65+

### LED
- Workplace
- Residence

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**SYNEVA ECONOMICS LLC**
# QWI versus OTM

<table>
<thead>
<tr>
<th></th>
<th><strong>QWI</strong></th>
<th><strong>OTM</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variables (categories)</strong></td>
<td>Age (8), Sex (2), Owner (2), Industry (4 digit), 8 Employment variables (Total, Net flows, New hires, Turnover, Income ... )</td>
<td>Age (3), Owner (2), Industry (2 digit), Total employment, Income (3)</td>
</tr>
<tr>
<td><strong>Geographic detail</strong></td>
<td>County, MSA, Workforce Investment Area (WIA)</td>
<td>Census Block, Residence / Work, User defined areas</td>
</tr>
<tr>
<td><strong>Updates</strong></td>
<td>Quarterly</td>
<td>Annual</td>
</tr>
</tbody>
</table>
Analysis Settings

Area Profile Analysis in 2008, 2007 and 2006 by Primary Jobs

Home/Work Area
Determines whether the selected area is analyzed as the location where workers are employed ("Work") or where workers live ("Home").

- Home
- Work

Analysis Type
Determines the type of results that will be generated for the selected area.

- Area Profile
  Labor Market Segment:
  - All Workers

- Area Comparison
  Areas to Compare:
  - Places (Cities, CDPs, etc.)
  Labor Market Segment:
  - All Workers

- Distance/Direction
- Destination
  Destination Type:
  - Places (Cities, CDPs, etc.)

- Inflow/Outflow
  Note: Home/Work choice does not affect results

Year
Determines the year(s) of data that will be processed in the analysis.

- 2008
- 2007
- 2006

Job Type
Determines the scope of jobs that will be processed in the analysis.

- All Jobs
- Primary Jobs
- All Private Jobs
- Private Primary Jobs

Cancel
Goto
Location & characteristics of workers living or employed in the selection area.
Area Comparison Analysis

Compare area profile results for geographic areas contained by the selection area.
Distance/Direction Analysis

Job counts are displayed grouped by eight cardinal directions and four distance breaks of the commute to/from the selection area.
Destination Analysis

Analyze the commute destinations from the selection area.
Inflow/Outflow Analysis

Compare the count and characteristics of worker flows in to, out of, and within the selected study area.
On The Map - Worker Flows

Work in Washington County
- In-Commute: 5,613
- Live & Work: 10,287
- Out-Commute: 8,877

Work in Bartlesville City
- In-Commute: 6,316
- Live & Work: 6,986
- Out-Commute: 7,167
Workers By Residence
Terrebonne Parish
2002-2004 Average

- Terrebonne 55%
- Lafourche, LA, 14%
- Jefferson, LA, 3%
- Lafayette, LA, 2%
- St. Mary, LA, 2%
- Orleans, LA, 2%
- East Baton Rouge, LA, 1%
- St. Tammany, LA, 1%
- Assumption, LA, 1%
- Iberia, LA, 1%
- All Other Locations, 18%

Source: U.S. Census Bureau
OTM-Worker Flows Over Time

- Residents Employed in Wilkes: 13,829
- Residents work outside Wilkes (out-commute): 10,409
- Non Residents work inside Wilkes (in-commute): 10,025

Years: 2002 to 2007
OTM-Worker Flows By Industry & Time

Manufacturing

Educational Services

Health Services & Social Assistance

Retail

In-Commute

Out-Commute

SYNEVA ECONOMICS llc
Where Residents Work

Where Workers Live
QWI Online
## QWI versus OTM

<table>
<thead>
<tr>
<th></th>
<th><strong>QWI</strong></th>
<th><strong>OTM</strong></th>
</tr>
</thead>
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<tr>
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<td>Age (8), Sex (2), Owner (2), Industry (4 digit), 8 Employment variables (Total, Net flows, New hires, Turnover, Income ... )</td>
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<tr>
<td><strong>Updates</strong></td>
<td>Quarterly</td>
<td>Annual</td>
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</table>
### QWI Online [NAICS]

**LEHD State of Ohio Metro Reports - Quarterly Workforce Indicators**

Select Criteria below. A new report will be created below as selections change.

- **Year**: 2006
- **Geographic Grouping**: Metro
- **Quarter**: Q3
- **Sex**: Male and Female
- **Age Group**: 14-65
- **Industry**: All NAICS Sectors
- **Ownership**: All (1.0)

<table>
<thead>
<tr>
<th>QWI Quick Facts</th>
<th>Columbus, OH (Q3)</th>
<th>Columbus, OH (Avg/Selected + 3 Prior qtrs)</th>
<th>Ohio (Q3)</th>
<th>Ohio (Avg/Selected + 3 Prior qtrs)</th>
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<tbody>
<tr>
<td>Total Employment</td>
<td>856,119</td>
<td>874,279</td>
<td>5,817,794</td>
<td>5,309,951</td>
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<td>Non-Job Flows</td>
<td>-2,500</td>
<td>-7,052</td>
<td>-25,860</td>
<td>46,567</td>
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<td>Job Creation</td>
<td>44,529</td>
<td>43,036</td>
<td>256,008</td>
<td>243,530</td>
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<tr>
<td>Non Hires</td>
<td>118,570</td>
<td>111,645</td>
<td>500,357</td>
<td>562,491</td>
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<tr>
<td>Businesses</td>
<td>143,041</td>
<td>164,550</td>
<td>793,024</td>
<td>786,734</td>
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<tr>
<td>Turnover</td>
<td>8.5%</td>
<td>9.1%</td>
<td>8.2%</td>
<td>8.5%</td>
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<tr>
<td>Avg Monthly Earnings</td>
<td>$3,085.00</td>
<td>$3,770.75</td>
<td>$3,341.00</td>
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<td>Avg Weekly Hours</td>
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<td>$2,167.25</td>
<td>$1,957.00</td>
<td>$2,031.50</td>
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</table>

[View Detailed Comparison Reports]
# QWI-Quarterly Workforce Indicators

**QWI Ohio Metro Pivot Reports**

*Columbus, OH - Quarterly Workforce Indicators*

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<tr>
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<td>Avg Monthly Earnings</td>
<td>$2565.00</td>
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<td>$1,706.00</td>
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<td>$5,847.00</td>
<td>$6,987.00</td>
<td>$4,613.00</td>
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<td>Avg New Hire Earnings</td>
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<td>Job Creation</td>
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<td>4,911.00</td>
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<td>Net Job Flows</td>
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<td>New Hires</td>
<td>5,064.00</td>
<td>11,093.00</td>
<td>10,599.00</td>
<td>22,931.00</td>
<td>16,599.00</td>
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<td>5,670.00</td>
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<td>Separations</td>
<td>6,195.00</td>
<td>14,512.00</td>
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<td>197,662.00</td>
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<td>19.1%</td>
<td>14.5%</td>
<td>9.1%</td>
<td>6.9%</td>
<td>5.8%</td>
<td>6.8%</td>
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<td>2009</td>
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<td>$1,044.00</td>
<td>$1,772.00</td>
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<td>Avg New Hire Earnings</td>
<td>$1,065.00</td>
<td>$1,590.00</td>
<td>$2,321.00</td>
<td>$3,020.00</td>
<td>$3,153.00</td>
<td>$3,295.00</td>
<td>$1,630.00</td>
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<tr>
<td></td>
<td>Job Creation</td>
<td>7,581.00</td>
<td>9,051.00</td>
<td>6,533.00</td>
<td>11,877.00</td>
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<td>1,430.00</td>
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<tr>
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<td>18,903.00</td>
<td>13,850.00</td>
<td>26,527.00</td>
<td>18,291.00</td>
<td>19,986.00</td>
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<td></td>
<td>Separations</td>
<td>6,967.00</td>
<td>15,031.00</td>
<td>14,881.00</td>
<td>35,328.00</td>
<td>37,988.00</td>
<td>23,456.00</td>
<td>13,787.00</td>
</tr>
<tr>
<td></td>
<td>Total Employment</td>
<td>20,634.00</td>
<td>41,900.00</td>
<td>35,958.00</td>
<td>190,728.00</td>
<td>203,947.00</td>
<td>203,146.00</td>
<td>118,606.00</td>
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<tr>
<td></td>
<td>Turnover</td>
<td>16.0%</td>
<td>17.9%</td>
<td>14.5%</td>
<td>9.7%</td>
<td>6.3%</td>
<td>5.4%</td>
<td>6.4%</td>
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<tr>
<td>2009</td>
<td>Avg Monthly Earnings</td>
<td>$665.00</td>
<td>$1,105.00</td>
<td>$1,790.00</td>
<td>$3,105.00</td>
<td>$4,311.00</td>
<td>$4,543.00</td>
<td>$4,207.00</td>
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<tr>
<td></td>
<td>Avg New Hire Earnings</td>
<td>$1,025.00</td>
<td>$1,662.00</td>
<td>$2,233.00</td>
<td>$2,807.00</td>
<td>$2,937.00</td>
<td>$2,937.00</td>
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<td>Job Creation</td>
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<td>6,229.00</td>
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<td>Net Job Flows</td>
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<td>-2,641.00</td>
<td>530.00</td>
<td>1,284.00</td>
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<td>New Hires</td>
<td>10,373.00</td>
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<td>7,166.00</td>
<td>23,186.00</td>
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<td>22,210.00</td>
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<td>10,141.00</td>
</tr>
</tbody>
</table>
QWI-Employment By Age

[Graph showing employment by age for two years: 1999 and 2009. Peaks at age 35-44 with 27% in 1999 and 26% in 2009.]
## QWI-Industry Employment By Gender

<table>
<thead>
<tr>
<th>Industry</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation &amp; Food Services</td>
<td>57</td>
<td>141</td>
</tr>
<tr>
<td>Administrative &amp; Support</td>
<td>40</td>
<td>52</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing &amp; Hunting</td>
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<td>154</td>
</tr>
<tr>
<td>Arts, Entertainment, &amp; Recreation</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Construction</td>
<td>12</td>
<td>75</td>
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<tr>
<td>Educational Services</td>
<td></td>
<td>74</td>
</tr>
<tr>
<td>Finance &amp; Insurance</td>
<td>40</td>
<td>96</td>
</tr>
<tr>
<td>Health Care &amp; Social Assistance</td>
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<td>116</td>
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<tr>
<td>Information</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td>113</td>
</tr>
<tr>
<td>Professional, Scientific, &amp; Technical Services</td>
<td>27</td>
<td>24</td>
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<tr>
<td>Public Administration</td>
<td></td>
<td>158</td>
</tr>
<tr>
<td>Real Estate, Rental &amp; Leasing</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>Retail Trade</td>
<td></td>
<td>194</td>
</tr>
<tr>
<td>Transportation &amp; Warehousing</td>
<td></td>
<td>162</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td></td>
<td>225</td>
</tr>
</tbody>
</table>
QWI-Industry Employment By Age & Time

5-Year Retail Employment Change

- 14-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-99

Legend:
- Green: Gain
- Red: Loss

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QWI-Turnover Rates, New Hire Earnings

SYNEVA ECONOMICS llc
**VirtualRDC**

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**U.S. Census Bureau**

**Longitudinal Employer-Household Dynamics**

**Quick Links**
- Reference Sources
- Tools
  - OnTheMap Data
  - EMNISSESS
  - EMR Online Training
  - EMR Online Assessment
  - Emergency Management Information System (EMIS)
- Industry Focus
- Learning
  - 2010 Workshop
  - e-Learning
  - Webinars
  - Workshops
  - In Action
  - Reading
  - Classes
- Partnership
  - State Partners
  - Community Partners
  - Only Government Partners
  - Data Download
    - OnTheMap Data
    - EMR
    - EMR Online Training
    - EMR Online Assessment
  - Data Visualization
    - OnTheMap
    - Many Eyes
    - Google Public Data Explorer

**What's New?**
- 01/13/11: Google Public Data Explorer Released
- 01/11/11: OnTheMap Version 5.0.1 Released
- 12/19/10: OnTheMap Version 5 Released
- 12/13/10: New Hampshire Joins LED
- 12/13/10: Call for Proposals for 2011 LED Partnership Workshop

2011 LED Partnership Workshop Call for Proposals
Click here to send an email to join the OnTheMap Interest Group.
Mark Your Calendar for Annual Workshop: March 9-10, 2011.

**O&A**
- What is LEHD?
- What is LED?
- What is the difference between LEHD and LED?
- What are the QWI?

**DID YOU KNOW?**

<table>
<thead>
<tr>
<th>Private Sector</th>
<th>Total Employment in Hawaii</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>Administrative</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Male</td>
</tr>
</tbody>
</table>

For more details or local results, visit QWI Online.
U.S. Census Bureau, Local Employment Dynamics.
01/17/2011, 15:43:59 pm

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*Note: PDF or .pdf denotes a file in Adobe's Portable Document Format. To view the file, you will need the Adobe Acrobat Reader available free from Adobe.*
http://www.vrdc.cornell.edu/qwipu/

VRDC Data @ Cornell

QWI Public Use files

These are public-use data files as published by the U.S. Census Bureau, LEHD Program. These files are provided as a convenience for the community. No support or guarantees are offered, but feedback is appreciated. Consult the columns_definitions.txt for the names of the columns of the CSV files.

csv_description.txt breaks it out by data file. A SAS readin file is provided (sas_import.sas). If you have been here before, consult version.txt to check if these data have been updated.

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<thead>
<tr>
<th>Name</th>
<th>Last modified</th>
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Data Enhancements

- Include Federal Government & Self-Employed
- Add worker earnings & job flows by Race & Ethnicity
- Add information on Worker Education
- Add Firm Age & Size
LED-The Future

Data Visualizations

Many Eyes on Local Employment Dynamics: Beginning of Quarter Employment

The LED Many Eyes service uses the Quarterly Workforce Indicators (QWI) data. The data can be viewed in accessible tables in conformance with Section 508 regulations by clicking the view data link in the lower right hand corner of the graph. It can be directly downloaded from the Census Virtual Sandbox.
Data Visualizations
Data Visualizations