Employment and Workforce Data Systems at the Federal Level: New Developments, Challenges, and Opportunities for Community Colleges

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Real Time LMI Innovators Network

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Employment and Workforce Data Systems at the Federal Level

- Trends
  - Economic
  - Institutional
  - Technological

- Opportunities

- Challenges
Trends: Economic

- **1940s-1970s**
  - Stable regional economic structures, with little competition
  - Economic expansion into less developed areas

- **1980s-2010s**
  - Ongoing regional restructuring—of economies, industries, and labor markets—in the face of global competition and technological change
  - Each U.S. region is vulnerable to restructuring
  - Increase need for postsecondary credential
  - Challenge for labor markets—provide signals that allow labor supply and demand to align in volatile circumstances
Trends: Institutional (Historical)

- Federal-state cooperative labor statistics system organized to serve federal needs
  - Macroeconomic policy (from the 1940s)
  - Allocating funds to distressed regions and disadvantaged workers (from 1960s)
- Production-oriented, supply-driven
- Silo world – disconnection from education statistics
Wagner-Peyser Act Section 14

There are authorized to be appropriated such sums as may be necessary to enable the Secretary to provide funds through reimbursable agreements with the States to operate statistical programs which are essential for development of estimates of the gross national product and other national statistical series, including those related to employment and unemployment.

- Paradigm: improve labor market functioning in light of change
- Serve labor market participants—workers, students, educators, employers—and state/local policymakers
- Demand-driven
- Collaboration-oriented
National Employment Statistics System [Wagner-Peyser Section 15]

- Mission—address the “needs of Congress, States, localities, employers, jobseekers, and other consumers . . .” as well as local workforce investment boards and students
- Responsibility—Secretary of Labor
- Management—BLS in collaboration with state LMI agencies
- Content—“statistical data ... that ... enumerate, estimate, and project employment opportunities and conditions at national, State, and local levels in a timely manner ....”
National Employment Statistics System [Wagner-Peyser Section 15]

• Identification of user needs – “the State agency shall
  ◦ consult with State and local employers, participants, and local workforce investment boards . . .
  ◦ consult with State educational agencies and local educational agencies concerning the provision of employment statistics in order to meet the needs of secondary school and postsecondary school students who seek such information”

• Data dissemination—wide, user-friendly, reliance on state systems

- Wagner-Peyser 15 intent for collaborative, demand-driven system largely unfulfilled
  - Secretary – not high priority
  - Annual Plan – latest 2001
  - Workforce Information Council – narrow focus on BLS programs, BLS-state LMI tension
  - State consultation with education agencies uneven

- BLS and ETA workforce information budgets slashed
- Substantial increase in labor market participant/policymaker need for information from state LMI agencies
  - Industrial, technological restructuring
  - Increased need for postsecondary credential
LMI Grants to States from BLS and ETA, 2001-2009

Note: BLS totals are for the fiscal year; ETA totals are for program year.
Source: Office of Management and budget
Trends: Institutional

- The Employment Act of 1946 set up organizations and processes to guide macroeconomic (cyclical) policy.
- At present, the federal government lacks a well-organized capacity to assess and address issues of economic competitiveness and restructuring.
- Congress does not understand the high impact, low cost of investing in workforce data.
Trends: Technological

- Historically, federal employment statistics relied on surveys and UI records
  - Data limited to snapshots, net change
- Budget cuts have made reliance on surveys more difficult
  - The case of Occupational Employment Statistics
- Advances in information technology are allowing analysis of massive numbers of administrative records at low cost that allow us to see the labor markets dynamically
Federal Workforce Statistical System: Opportunities

- Local Employment Dynamics (Census)
- Statewide Longitudinal Data Systems (NCES, ETA)
- Skills-based Projections and Transferability (ETA)
- Real-time LMI (ETA)
Local Employment Dynamics

- Tools
  - Quarterly Workforce Indicators
  - OnTheMap
  - Job-to-Job Flows
- $14 million program
LED Quarterly Workforce Indicators

- QWI allows analysts to see two important dimensions of local labor markets
  - Workforce characteristics (age, sex, education, race, ethnicity, wages), by industry
  - The dynamics of select groups of workers
LEHD State of Illinois Metro Reports - Quarterly Workforce Indicators

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Geographic Grouping</th>
<th>Metro</th>
<th>or Information by Detailed Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Q3</td>
<td>Chicago-Naperville-Joliet, IL-IN-WI (IL part)</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Male and Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AgeGroup</td>
<td>14-99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ownership</td>
<td>All (1-5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**QWI Quick Facts**

<table>
<thead>
<tr>
<th>QWI Quick Facts</th>
<th>Chicago-Naperville-Joliet, IL-IN-WI (IL part) (Q3)</th>
<th>Chicago-Naperville-Joliet, IL-IN-WI (IL part) (Avg:Selected + 3 Prior qtrs)</th>
<th>Illinois (Q3)</th>
<th>Illinois (Avg:Selected + 3 Prior qtrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employment</td>
<td>3,814,204</td>
<td>3,795,838</td>
<td>5,420,927</td>
<td>5,398,919</td>
</tr>
<tr>
<td>Net Job Flows</td>
<td>-11,473</td>
<td>18,053</td>
<td>-22,723</td>
<td>23,096</td>
</tr>
<tr>
<td>Job Creation</td>
<td>170,397</td>
<td>179,772</td>
<td>238,425</td>
<td>254,051</td>
</tr>
<tr>
<td>New Hires</td>
<td>528,801</td>
<td>447,769</td>
<td>757,514</td>
<td>641,127</td>
</tr>
<tr>
<td>Separations</td>
<td>627,633</td>
<td>539,656</td>
<td>909,052</td>
<td>780,898</td>
</tr>
<tr>
<td>Turnover</td>
<td>8.3%</td>
<td>7.4%</td>
<td>8.3%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Avg Monthly Earnings</td>
<td>$4,333.00</td>
<td>$4,503.50</td>
<td>$4,042.00</td>
<td>$4,152.25</td>
</tr>
<tr>
<td>Avg New Hire Earnings</td>
<td>$2,647.00</td>
<td>$2,706.00</td>
<td>$2,463.00</td>
<td>$2,480.00</td>
</tr>
</tbody>
</table>
### QWI Illinois Metro Pivot Reports

**Chicago-Naperville-Joliet, IL-IN-WI (IL part) - Quarterly Workforce Indicators**

<table>
<thead>
<tr>
<th>Year</th>
<th>QWI Quickfacts</th>
<th>Less than high school</th>
<th>High school or equivalent</th>
<th>Some college or associate degree</th>
<th>Bachelor degree or above</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010Q1</td>
<td>Avg Monthly Earnings</td>
<td>$2,533.00</td>
<td>$3,306.00</td>
<td>$4,207.00</td>
<td>$7,387.00</td>
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<tr>
<td></td>
<td>Avg New Hire Earnings</td>
<td>$1,805.00</td>
<td>$2,194.00</td>
<td>$2,597.00</td>
<td>$4,259.00</td>
</tr>
<tr>
<td></td>
<td>Job Creation</td>
<td>16,483</td>
<td>26,991</td>
<td>32,260</td>
<td>36,146</td>
</tr>
<tr>
<td></td>
<td>Net Job Flows</td>
<td>-1,295</td>
<td>-2,613</td>
<td>-2,324</td>
<td>1,837</td>
</tr>
<tr>
<td></td>
<td>New Hires</td>
<td>37,944</td>
<td>62,787</td>
<td>72,670</td>
<td>71,430</td>
</tr>
<tr>
<td></td>
<td>Separations</td>
<td>46,777</td>
<td>78,722</td>
<td>91,499</td>
<td>88,088</td>
</tr>
<tr>
<td></td>
<td>Total Employment</td>
<td>387,606</td>
<td>755,024</td>
<td>988,945</td>
<td>1,140,319</td>
</tr>
<tr>
<td></td>
<td>Turnover</td>
<td>6.8%</td>
<td>6.1%</td>
<td>5.6%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>
LED OnTheMap

- OnTheMap allows analysts to map, for custom-drawn regions,
  - the workplace and home locations of the workforce, by select characteristics
  - generate a detailed profile of that workforce
Work Area Profile Analysis
Workers in the "Goods Producing" Industry Class

Characteristic Filter:
- Education: High school or equivalent, no college

Year: 2009

Job Counts by Worker Educational Attainment in 2009

<table>
<thead>
<tr>
<th>Education Attainment</th>
<th>Count</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>17,088</td>
<td>19.0%</td>
</tr>
<tr>
<td>High school or equivalent, no college</td>
<td>20,147</td>
<td>22.4%</td>
</tr>
<tr>
<td>Some college or Associate degree</td>
<td>22,284</td>
<td>24.7%</td>
</tr>
<tr>
<td>Bachelor's degree or advanced degree</td>
<td>17,338</td>
<td>19.2%</td>
</tr>
<tr>
<td>Educational attainment not available</td>
<td>13,214</td>
<td>14.7%</td>
</tr>
</tbody>
</table>

Note: Educational attainment not available for 13,214 jobs. These jobs are not represented in the chart.
LED Job-to-Job Flows

- Job-to-Job Flows will provide the ability to track the labor market experience of select groups of workers
  - defined by geography, industry, and demographics characteristics at a particular moment in time
  - regarding if and where they work, the industry, how much they earn
Top 10 Destination NAICS for Motor Vehicle Manufacturing (NAICS 3361),
Four Quarters After Job Loss

Other (52.3%)
Distribution of Earnings Changes for Stayers vs. Separators that Changed Firms in Motor Vehicle Manufacturing (NAICS 3361) (4-quarters after separation)
Statewide Longitudinal Data Systems

- Will provide ability to track movement of students from P→K→12→20→Workforce

- Including identify
  - the experiences and characteristics of students coming to community colleges
  - the relationship between individuals and the community college over time,
  - the workforce outcomes of groups of individuals once they leave those colleges, by select characteristics (e.g., program, degree, age)

- Grant program managed by National Center for Education Statistics, $500 million over time
Statewide Longitudinal Data Systems

- SLDS efforts are in the early stages of development
- SEAs are receiving assistance from NCES contractors—conference, webinars, handbooks, TA
- Common data standards are being developed, including for postsecondary
- ETA Workforce Data Quality Initiative grants to state LMI agencies facilitate the integration of workforce data
- Prototype tool—Career Bridge, WA State
<table>
<thead>
<tr>
<th>Program Name</th>
<th>Training Provider Name</th>
<th>Locations</th>
<th>Length</th>
<th>ETP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioengineering (BS)</td>
<td>University of Washington</td>
<td>Seattle</td>
<td></td>
<td>ETP</td>
</tr>
<tr>
<td>Biology Technician (Certificate of Proficiency)</td>
<td>Lower Columbia College</td>
<td>Longview</td>
<td>1 year to 18 months</td>
<td>ETP</td>
</tr>
<tr>
<td>Biomanufacturing (Certificate)</td>
<td>Bates Technical College</td>
<td>South Campus</td>
<td>3 months</td>
<td>ETP</td>
</tr>
<tr>
<td>Biomedical Regulatory Affairs (Certificate)</td>
<td>University of Washington Professional and Continuing Education</td>
<td>Seattle</td>
<td>9 Months</td>
<td>ETP</td>
</tr>
<tr>
<td>Biotechnology Lab Specialist (AAAS)</td>
<td>Shoreline Community College</td>
<td>Shoreline</td>
<td>8 quarters; 2 quarters; 1-2 quarters</td>
<td>ETP</td>
</tr>
<tr>
<td>Biotechnology Lab Specialist (AAS-T)</td>
<td>Shoreline Community College</td>
<td>Shoreline</td>
<td>8 quarters; 2 quarters; 1-2 quarters</td>
<td>ETP</td>
</tr>
<tr>
<td>Biotechnology Lab Specialist (Certificate)</td>
<td>Shoreline Community College</td>
<td>Shoreline</td>
<td>8 quarters; 2 quarters; 1-2 quarters</td>
<td>ETP</td>
</tr>
</tbody>
</table>
### Employment, wages and completion for all programs related to Biotechnology Lab Specialist at Shoreline Community College

**Program Type:** Biological Lab Technology  
**For academic years:** 2005-2006, 2006-2007, 2007-2008  

<table>
<thead>
<tr>
<th></th>
<th>Students who completed the program(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Graduates</strong></td>
<td>27</td>
</tr>
<tr>
<td><strong>Completion Rate</strong></td>
<td>50%</td>
</tr>
<tr>
<td><strong>Number with Reported Employment</strong></td>
<td>20</td>
</tr>
<tr>
<td><strong>Employment Rate</strong></td>
<td>83%</td>
</tr>
<tr>
<td><strong>Typical (Median) Hourly Earnings</strong></td>
<td>$16.25</td>
</tr>
<tr>
<td><strong>Typical (Median) Annual Earnings</strong></td>
<td>$33,195.55</td>
</tr>
</tbody>
</table>

### Industry of employment for all programs related to Biotechnology Lab Specialist at Shoreline Community College

**Program Type:** Biological Lab Technology  
**For academic years:** 2005-2006, 2006-2007, 2007-2008

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percent of all students who completed the program(s) and are employed</th>
<th>Number of all students who completed the program(s) and are employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional, Scientific, Technical Services</td>
<td>50%</td>
<td>10</td>
</tr>
<tr>
<td>Education</td>
<td>15%</td>
<td>3</td>
</tr>
<tr>
<td>Healthcare and Social Services</td>
<td>10%</td>
<td>2</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>10%</td>
<td>2</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>5%</td>
<td>1</td>
</tr>
<tr>
<td>Administrative Support</td>
<td>5%</td>
<td>1</td>
</tr>
<tr>
<td>Government</td>
<td>5%</td>
<td>1</td>
</tr>
</tbody>
</table>
Skills-based Projections and Transferability

- Skills-based analyses based on the translation of occupations to skills using O*NET
- State-level skills-based projections
- ETA-funded tool—MySkillsMyFuture—identifies skills gaps in career transitions and local programs providing needed training
Real-Time LMI

- Over half of state LMI agencies subscribe to real-time LMI services
- What activities should BLS and ETA undertake regarding real-time LMI?
  Ideas:
  - Fund experiments, advancing state-of-art
  - Evaluate reliability, value, and impacts
  - Certify reliable vendors
  - Inform ETA Competency Model Clearinghouse
  - Explore ways to support traditional BLS data
Federal Employment and Workforce Data Systems: Challenges

- Build federal capacity to assess competitive challenges and create a meaningful economic strategy (with a workforce component)
- Obtain a federal commitment to increase the efficiency of labor markets through funding improved information and data
- Have ETA, Census, NCES, and SEAs join BLS and state LMI agencies on the Workforce Information Council
Federal Employment and Workforce Data Systems: Challenges

- Transform the approach of state LMI agencies
  - from supply-driven BLS production shops
  - to responding to the information needs of labor market participants, including community colleges
  - through providing an array of data products
  - that reflect creative application and analysis of multiple data sources
Federal Employment and Workforce Data Systems: Challenges

- Build a workable LED Job-to-Job Flows tool
- Develop productive, creative ways to integrate postsecondary and workforce data into SLDS
- Continue the SLDS grant program
- Provide adequate funding to allow O*NET to be as current and detailed as possible
Roles for Community Colleges in Addressing Challenges

- Through AACC, advocate for needed federal actions
- Experiment with and provide feedback on new federal data sources
- Become an articulate, active, demanding customer of the state LMI agency
- Support the creation of a useful SLDS, with workforce outcomes
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