What Do the Data Tell Us?
Policy Implications from Data Efforts in the West

WICHE’s Legislative Advisory Committee
Las Vegas, NV ~ September 4, 2013

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KNOCKING AT THE COLLEGE DOOR

PROJECTIONS OF HIGH SCHOOL GRADUATES
The Principal Themes

1. Changes in overall production

2. Continuing rapid diversification along racial/ethnic lines

Both with substantial geographic variation
Peaked in 2010-11 at 3.4 million following 17 straight years of growth averaging 2.3% annually.
Percent Change Between 2008-09 and 2019-20 in Total High School Graduates, by State
Total Production vs. Diversification of Projected Public High School Graduates by 2020

- **Slowing production, Rapid diversification**
- **Increasing production, Rapid diversification**
- **Slowing production, Incremental diversification**
- **Increasing production, Incremental diversification**
Projections of Postsecondary Enrollment of Adults 25 and Older

- Adult enrollment is projected to grow by 22 percent between Fall 2010 and Fall 2021.

Education Requirements for Workforce Participation

Note: In 1973, some college and associate degrees were in the same category.
Source: Georgetown University Center on Education and the Workforce.
## Public Institutions’ Growing Dependence on Net Tuition Revenue

### Share of Institutions’ Discretionary Revenue

![Graph showing the percentage of share in various states between 1986 and 2012.]

### Net Tuition Revenue Share, FY2012

<table>
<thead>
<tr>
<th>State</th>
<th>Net Tuition Revenue Share, FY2012</th>
<th>Change in % Points Since 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>70.8%</td>
<td>30.7</td>
</tr>
<tr>
<td>Oregon</td>
<td>61.4%</td>
<td>35.0</td>
</tr>
<tr>
<td>South Dakota</td>
<td>60.8%</td>
<td>25.8</td>
</tr>
<tr>
<td>Montana</td>
<td>54.7%</td>
<td>37.8</td>
</tr>
<tr>
<td>Arizona</td>
<td>51.3%</td>
<td>27.5</td>
</tr>
<tr>
<td>North Dakota</td>
<td>48.9%</td>
<td>21.9</td>
</tr>
<tr>
<td>Utah</td>
<td>47.3%</td>
<td>27.0</td>
</tr>
<tr>
<td>Washington</td>
<td>41.7%</td>
<td>20.1</td>
</tr>
<tr>
<td>Idaho</td>
<td>37.0%</td>
<td>23.2</td>
</tr>
<tr>
<td>Nevada</td>
<td>36.0%</td>
<td>13.8</td>
</tr>
<tr>
<td>Hawaii</td>
<td>34.0%</td>
<td>25.1</td>
</tr>
<tr>
<td>Alaska</td>
<td>27.6%</td>
<td>17.3</td>
</tr>
<tr>
<td>California</td>
<td>25.6%</td>
<td>14.8</td>
</tr>
<tr>
<td>New Mexico</td>
<td>22.8%</td>
<td>9.2</td>
</tr>
<tr>
<td>Wyoming</td>
<td>13.8%</td>
<td>4.4</td>
</tr>
</tbody>
</table>

**Source:** SHEEO SHEF

**Diagram Notes:**
- The graph shows the percentage of net tuition revenue share for different states from 1986 to 2012.
- States are listed in descending order of their net tuition revenue share in FY2012.
Percent Meeting ACT College Readiness Benchmarks by Race/Ethnicity, 2012

Average Annual Wage/Salary Income Distribution by Race/Ethnicity, 2006-2010

Percentiles
- 25th
- 50th
- 75th

Source: U.S. Census Bureau, American Community Survey (via NCHEMS)
Percent of Dependent Students Receiving Grants and Average Amount Received by Source of Grant and Income, 2011-12

Source: NPSAS
Percent of Dependent Students at Public 4-Year Institutions Receiving Grants and Average Amount Received by Source of Grant and Income, 2011-12

Source: NPSAS

- Federal
- State
- Institution
Differences in College Attainment (Associate & Higher) Between Younger and Older Adults by Race/Ethnicity – U.S., 2008-2010

Note: All differences between age groups of the same racial/ethnic group and between racial/ethnic groups are statistically beyond the 90% margins of error except for American Indians/Alaska Natives. 90% margins of error range from +/- 1% for American Indians/Alaska Natives aged 25-34 to +/- 0.1% for White non-Hispanics aged 45-54.

Source: U.S. Census Bureau, 2008-10 American Community Survey (ACS) Public Use Microdata Sample (PUMS). Via NCHEMS.
Understanding Human Capital Development and Mobility and Their Contributions to the State Workforce

WICHE’S MULTISTATE LONGITUDINAL DATA EXCHANGE
A Statewide Longitudinal Data System

My State’s K-12

My State’s Postsecondary

My State’s Credential

My State’s Labor Force
Economic Success Measures - Colorado

School Profile

University of Colorado Boulder

School Information

<table>
<thead>
<tr>
<th>Carnegie Classification</th>
<th>Research Universities (Very High Research Activity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Regent Drive at Broadway</td>
</tr>
<tr>
<td></td>
<td>Boulder CO, 80309-0017</td>
</tr>
<tr>
<td>Sector</td>
<td>Public, 4-year or above</td>
</tr>
</tbody>
</table>

Three Most Popular Disclosable Programs

<table>
<thead>
<tr>
<th>First-Year Earnings - Median</th>
<th>First-Year Earnings - Q1</th>
<th>First-Year Earnings - Q3</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>Statewide</td>
<td>School</td>
</tr>
</tbody>
</table>

Detailed Breakdown (5 Year Data)

<table>
<thead>
<tr>
<th>Degree Level</th>
<th>Disclosable Programs</th>
<th># of Completers</th>
<th>% of Completers with Earnings Data</th>
<th>First-Year Earnings - Median</th>
<th>First-Year Earnings - Q1</th>
<th>First-Year Earnings - Q3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's Degree</td>
<td>53</td>
<td>28,569</td>
<td>17%</td>
<td>$37,735</td>
<td>$29,853</td>
<td>$48,100</td>
</tr>
<tr>
<td>Master's Degree</td>
<td>48</td>
<td>5,291</td>
<td>30%</td>
<td>$56,132</td>
<td>$44,218</td>
<td>$75,558</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>43</td>
<td>2,573</td>
<td>26%</td>
<td>$57,541</td>
<td>$46,821</td>
<td>$82,570</td>
</tr>
</tbody>
</table>

*Data have been suppressed due to there being fewer than 5 Completers with Earnings data or fewer than 15% of Completers with Earnings Data.
Integrating Other States’ Data

- Other States’ Education Institutions
- My State’s Postsecondary
- My State’s Secondary
- Other States’ Labor Force
- My State’s Labor Force
- Credential
Research Questions Embedded in MOA

1. What are the patterns of postsecondary enrollment and employment of high school graduates from each participating state?

2. What are the patterns of postsecondary enrollment and employment of students in public postsecondary institutions in participating states?

   – Each with appropriate disaggregations –

3. By more fully accounting for individual mobility across state lines, to what extent does sharing data among states supplement existing state data resources available for conducting evaluations leading to policy and program improvements?
Data Elements

• Identity and Demographics
  • Randomly-generated Exchange ID#

• Education (Term)
  • High School Diploma
  • Postsecondary Institution
  • Credits Attempted, Passed
  • Postsecondary Awards
  • Field of Study

• Employment: Unemployment Insurance Wage Records (Quarterly)
  • Social Security Number
  • Gross Wages (usually just over a quarter)
  • Employer’s Industry Classification
Unpacking the “Not Found” Category

100% of completers from Washington institutions by December 2010

- No employment record found in WA
- Employed in another state
- Not in the workforce
- No SSN available
- Unemployed
- Employed in WA
- Military or federal government employment and self-employed
100% of completers from Washington institutions by December 2010

Unpacking the “Not Found” Category

- Employed in WA
- Not in the workforce
- Employed in another state
- No SSN available
- Unemployed
- Military or federal government employment and self-employed

Employed in HI, ID, or OR
Reducing Uncertainty in Employment Outcomes

<table>
<thead>
<tr>
<th>State Where Associate’s or Higher Was Conferred</th>
<th>Hawaii</th>
<th>Idaho</th>
<th>Oregon</th>
<th>Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Completers With a Valid SSN</td>
<td>2,403</td>
<td>3,014</td>
<td>10,762</td>
<td>20,815</td>
</tr>
<tr>
<td>Number of Completers Without an Employment Record in State</td>
<td>1,197</td>
<td>1,342</td>
<td>4,366</td>
<td>9,368</td>
</tr>
<tr>
<td>Number of Completers with an Employment Record in 1 of the Other 3 States</td>
<td>232</td>
<td>287</td>
<td>617</td>
<td>863</td>
</tr>
<tr>
<td>Percent With an Employment Record in At Least 1 of the Other 3 States, Among Completers Without an Employment Record Within State Where Degree Was Conferred</td>
<td>19.4%</td>
<td>21.3%</td>
<td>14.1%</td>
<td>9.2%</td>
</tr>
</tbody>
</table>

Notes: Data apply to all students who graduated from a public high school in 2004-05 or entered a public postsecondary institution in 2005-06 in any of the four states, and who obtained at least an associate’s degree from any institution in one of the four states, public or private, by December 2010. Employment is measured for the quarter that is closest to one year after the date of completion of the highest award.
How Far Does the Exchange Extend Coverage of Employment Outcomes?

Among Completers, Whether or Not an Employment Record Exists
## Importation of Recent College Graduates

<table>
<thead>
<tr>
<th>State of Employment</th>
<th>Hawaii</th>
<th>Idaho</th>
<th>Oregon</th>
<th>Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Completers Retained in State</td>
<td>1,206</td>
<td>1,669</td>
<td>6,396</td>
<td>11,447</td>
</tr>
<tr>
<td>Number of Completers Recruited to State</td>
<td>200</td>
<td>505</td>
<td>1,083</td>
<td>1,170</td>
</tr>
<tr>
<td>Percent of Completers Recruited Among All Found to Be Employed in State</td>
<td>14.2%</td>
<td>23.2%</td>
<td>14.5%</td>
<td>9.3%</td>
</tr>
</tbody>
</table>

Notes: Data apply to all students who graduated from a public high school in 2004-05 or entered a public postsecondary institution in 2005-06 in any of the four states, and who obtained at least an associate’s degree from any institution anywhere in the nation, public or private, by December 2010. Employment is measured for the quarter that is closest to one year after the date of completion of the highest award.
Mobility of Washington Bachelor’s and Higher Graduates by Field of Study

- Business: 62.0% (Washington), 33.6% (Other), 4.4% (Not Found)
- Health: 61.0% (Washington), 35.8% (Other), 3.3% (Not Found)
- Other: 55.9% (Washington), 3.6% (Other), 4.4% (Not Found)
- STEM: 50.1% (Washington), 45.4% (Other), 4.4% (Not Found)
Lessons So Far

• Limitations/challenges
  • Wedded to the original cohort definition
  • Ambiguity in the UI wage records data
  • Time-consuming analysis
  • Be prepared to ask technical questions

• States at the helm
  • Complementing federal and state SLDS investments
  • Greater flexibility to inform state policymaking
  • Voluntary, built-up system means better buy-in from states, quicker roll-out, and possibly better data than top-down federal program

• Implications for use in accountability and policymaking and planning
Where To From Here?

- Additional analyses
  - Subsequent enrollment
  - Wages
  - Industry classifications
  - Employment concurrent with enrollment
  - Employment outcomes based on student enrollment patterns
  - Disaggregations for race/ethnicity, gender, age, Pell

- Moving beyond the pilot phase
  - Secure additional funding
  - Develop a process for adding states
  - Improve architecture and enhance governance