Higher Education and the Future of Oregon

Presented to the

House Education Committee
Salem, Oregon

February 13, 2008
Premise: Oregon Needs a More Highly-Educated Citizenry

- To Meet Global Economic Challenges
- To Meet Future Workforce Needs
- To Improve Economic Circumstances and Quality of Life of the State’s Citizens
Relationship Between Educational Attainment and High Tech Employment

Source: State New Economy Index, U.S. Census Bureau

Correlation = 0.76
Relationship Between Educational Attainment, Personal Income, and Economic Strength

State New Economy Index (2002)
- Top Tier
- Middle Tier
- Low Tier

Personal Income Per Capita, 2000
- $15,000
- $20,000
- $25,000
- $30,000

Percent of Adults Age 25-64 with a Bachelor’s Degree or Higher
- 15%
- 20%
- 25%
- 30%
- 35%
- 40%

High Income, Low Educational Attainment
High Income, High Educational Attainment
Low Income, Low Educational Attainment
Low Income, High Educational Attainment
Per Capita Personal Income as a Percent of U.S. Average—Oregon, 1960-2005

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Dept. of Commerce
Oregon Per Capita Personal Income, 2004

Oregon = $32,289

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce
State Workforce and Economy

Who’s Entering the State’s Workforce?
- Characteristics of In-Migrants
- Entrants into the Workforce

The State Workforce and Economy
- Characteristics of the Workforce
- Economic Conditions

Who’s Leaving the State Workforce?
- Characteristics of Out-Migrants
- Retirees Leaving the Workforce

Net Gain/Loss
- Net Gains/Losses
  - Retirement
  - Migration
Factors to Consider

- Changing Nature of the Economy
- Characteristics of the Workforce
  - Current
  - Those Retiring/Leaving
  - Those Entering
- The Education Pipeline
- Migration Patterns
Critical Question

Is Your State Most in Need of:

► Workforce Development

OR

► Workplace Development?
Projected Change in Oregon Population by Age and Race/Ethnicity, 2006-25 (in Thousands)

- White
- African American
- Hispanic
- Native American
- Asian

<table>
<thead>
<tr>
<th>Age</th>
<th>White</th>
<th>African American</th>
<th>Hispanic</th>
<th>Native American</th>
<th>Asian</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-17</td>
<td>15,089</td>
<td>3,072</td>
<td>672</td>
<td>2,273</td>
<td>5,452</td>
</tr>
<tr>
<td>18-24</td>
<td>15,404</td>
<td>672</td>
<td>877</td>
<td>4,065</td>
<td>2,375</td>
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<tr>
<td>25-44</td>
<td>18,814</td>
<td>877</td>
<td>5,698</td>
<td>2,739</td>
<td>3,277</td>
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<tr>
<td>45-64</td>
<td>15,677</td>
<td>5,698</td>
<td>18,814</td>
<td>39,669</td>
<td>3,072</td>
</tr>
<tr>
<td>65 and Older</td>
<td>46,409</td>
<td>20,208</td>
<td>38,959</td>
<td>460,437</td>
<td>19,347</td>
</tr>
</tbody>
</table>

Total Population: 460,437
Percent of Civilian Population Age 25-64 Participating in the Workforce, 2005

Source: U.S. Bureau of Labor Statistics
Percent of Civilians Age 25-64 Not Participating in the Workforce—By Education Attainment, 2005

<table>
<thead>
<tr>
<th>Education Attainment</th>
<th>U.S.</th>
<th>Oregon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School</td>
<td>37.0</td>
<td>29.5</td>
</tr>
<tr>
<td>High School</td>
<td>24.7</td>
<td>19.2</td>
</tr>
<tr>
<td>Some College</td>
<td>21.0</td>
<td>17.0</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>17.4</td>
<td>11.1</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>16.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Graduate/Prof. Degree</td>
<td>13.9</td>
<td>13.3</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2005 ACS Public Use Microdata Sample (PUMS) File
Educational Attainment and Rank Among States—Oregon, 2005 (Percent)

- Age 18-24 with HS Diploma: 80.8% (28th)
- Age 25-64 with HS Diploma: 88.9% (25th)
- Age 25-64 with Associate Degree: 8.1% (29th)
- Age 25-64 with Bachelor’s or Higher: 29.2% (20th)
- Age 25-64 with Graduate/Prof. Degree: 10.3% (18th)

Source: U.S. Census Bureau, 2005 ACS
Differences in College Attainment (Associate and Higher) Between Younger and Older Adults—U.S. and OECD Countries, 2005

Differences in College Attainment (Associate and Higher) Between Younger and Older Adults—U.S., 2005

Source: U.S. Census Bureau, 2005 ACS
Percent of Adults with an Associate Degree or Higher by Age Group—Oregon, U.S. and Leading OECD Countries

![Bar chart showing the percentage of adults with an associate degree or higher by age group for Oregon, U.S., and leading OECD countries.](chart)

Percentage Differences Between Younger Adults (Age 25-34) and Older Adults (Age 45-54) with College Degrees—Associate and Higher, 2005

Source: U.S. Census Bureau, 2005 ACS
Percent of Population Age 25-64 with an Associate Degree or Higher, 2006

Source: U.S. Census Bureau, 2006 ACS
Percent of Oregon Population Age 25-64 with an Associate Degree or Higher, 2000

Oregon = 34.5%
Source: U.S. Census Bureau, 2000 Census
Percent Educational Attainment of Population Age 25-64
By Race/Ethnicity—Oregon, 2005

Source: U.S. Census Bureau, 2005 ACS PUMS File
The Student Pipeline
Student Pipeline, 2004

Of 100 9th Graders, How Many…

- Graduate from High School
- Directly Enter College
- Enroll in Second Year
- Graduate Within 150% of Program Time
- Are Age 25-44 with a Bachelor's Degree

Best Performing State
United States
Oregon

Source: NCES Common Core Data 2004; Tom Mortenson, Postsecondary Education Opportunity; NCES, IPEDS Fall 2004 Retention Rate File and Fall 2003 Enrollments, 2004 Graduation Rates; U.S. Census Bureau, 2005 ACS

Source: Western Interstate Higher Education Commission (WICHE)
College-Going Rates—First-Time Freshmen Directly Out of High School as a Percent of Recent High School Graduates, 2004

Source: Tom Mortenson, Postsecondary Opportunity (2004 data update 02-06-07)
Percent of 2005-06 High School Graduates Enrolling Full-Time by County of Origin, Fall 2006

Source: Oregon Department of Community Colleges and Workforce Development, Oregon Dept. of Education
Associate Degrees Awarded per 100 High School Graduates Three Years Earlier, 2004

Source: NCES-IPEDS Completions Survey, WICHE
Three-Year Graduation Rates at Two-Year Colleges, 2005 (Percent)

Source: NCES, IPEDS Graduation Rate Survey
Bachelor’s Degrees Awarded per 100 High School Graduates
Six Years Earlier, 2004

Source: NCES-IPEDS Completions Survey, WICHE
Six-Year Graduation Rates at Four-Year Colleges, 2005 (Percent)

Source: NCES, IPEDS Graduation Rate Survey
Net Migration by Degree Level and Age Group—Oregon

22- to 29-Year-Olds

- Less than High School: 11,109
- High School: 7,024
- Some College: 7,962
- Associate: 2,928
- Bachelor’s: 10,467
- Graduate/Professional: 4,090
- Total: 43,580

30- to 64-Year-Olds

- Less than High School: 71,890
- High School: 13,238
- Some College: 13,774
- Associate: 6,126
- Bachelor’s: 11,904
- Graduate/Professional: 13,774
- Total: 71,890

Source: U.S. Census Bureau, 2000 Census; 5% PUMS Files
Migration Rate* of College-Educated Residents Age 22-64—Associate and Higher, 1995-2000

* Per 1,000 residents age 22-64 with college degrees.

Source: U.S. Census Bureau, PUMS (based on 2000 Census)
Oregon Net Migration of College Degree Holders
Age 22-29 by Occupation, 1995 to 2000

Source: U.S. Census Bureau, 2000 Census 5% PUMS File
Oregon Net Migration of College Degree Holders
Age 30-64 by Occupation, 1995 to 2000

Source: U.S. Census Bureau, 2000 Census 5% PUMS File
Migration Rate* of Residents Age 22-64 with Less than a High School Diploma, 1995-2000

* Per 1,000 residents age 22-64 with less than a high school diploma.

Source: State Higher Education Officers (SHEEO)
States’ Ability to Produce Graduates vs. Ability to Keep and Attract Graduates

Migration Rate of Residents Age 22-29 with a College Degree

New Economy Index (2002)
- Top Tier
- Middle Tier
- Low Tier

Production of College Graduates (Undergraduate Credentials and Degrees Awarded Per 1,000 Residents Age 18-44 with High School Diploma or Some College but No College Degree)
Economy and Innovation Assets
Percent of Total Gross State Product by Industry and Comparison to U.S.

Agriculture, Forestry, Fishing  
Mining  
Construction  
Manufacturing  
Transp. & Utilities  
Wholesale Trade  
Retail Trade  
Finance, Insurance, Real Estate  
Services  
Government

Oregon 1997  
Oregon 2004  
U.S. 2004

Source: Bureau of Labor Statistics
Employment in High-Technology Establishments as Share of Total Employment by State, 2004

## Oregon Employment Forecast by Broad Industry, 2006-16

<table>
<thead>
<tr>
<th>Broad Industry</th>
<th>2006</th>
<th>2016</th>
<th>Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nonfarm Employment</td>
<td>1,702,500</td>
<td>1,943,600</td>
<td>241,100</td>
<td>14</td>
</tr>
<tr>
<td>Educational and Health Services</td>
<td>205,200</td>
<td>262,700</td>
<td>57,500</td>
<td>28</td>
</tr>
<tr>
<td>Professional and Business Services</td>
<td>193,100</td>
<td>232,800</td>
<td>39,700</td>
<td>21</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>165,300</td>
<td>197,500</td>
<td>32,200</td>
<td>19</td>
</tr>
<tr>
<td>Construction</td>
<td>100,300</td>
<td>115,000</td>
<td>14,700</td>
<td>15</td>
</tr>
<tr>
<td>Trade, Transportation, and Utilities</td>
<td>336,200</td>
<td>379,800</td>
<td>43,600</td>
<td>13</td>
</tr>
<tr>
<td>Other Services</td>
<td>59,000</td>
<td>66,500</td>
<td>7,500</td>
<td>13</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>105,800</td>
<td>117,900</td>
<td>12,100</td>
<td>11</td>
</tr>
<tr>
<td>Information</td>
<td>35,000</td>
<td>38,800</td>
<td>3,800</td>
<td>11</td>
</tr>
<tr>
<td>Government</td>
<td>286,500</td>
<td>314,200</td>
<td>27,700</td>
<td>10</td>
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<tr>
<td>Manufacturing</td>
<td>206,800</td>
<td>209,100</td>
<td>2,300</td>
<td>1</td>
</tr>
<tr>
<td>Natural Resources and Mining</td>
<td>9,200</td>
<td>9,300</td>
<td>100</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Oregon Employment Department, Workforce and Economic Research
Forecast Employment Growth—Oregon
Industries Adding Most Jobs, 2006-16

Note: Industries are published NAIUCS sub-sectors.
Source: Oregon Employment Department, Workforce and Economic Research
Forecast Employment Growth—Oregon
Industries Losing Jobs, 2006-16

-2,000 -1,500 -1,000 -500 0

Wood Product Manufacturing
Computer & Electronic Product Manufacturing
Federal Government
Paper Manufacturing
Logging
Primary Metal Manufacturing

Source: Oregon Employment Department, Workforce and Economic Research
Projected Percent Change in Occupations Requiring Some Postsecondary Training, 2002-2012

Note: Some college, Associate, Bachelor’s and higher.

Source: ACINet, Career InfoNet
Median Earnings by Degree Level, 2005

Note: Data represent persons age 18-64 with positive earnings working 35+ hours per week.
Source: U.S. Census Bureau, 2005 ACS PUMS File
## Development Report Card for the States, 2006—Oregon

### STRENGTHS (Top 10 Rank)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rate of Recycled Waste</td>
</tr>
<tr>
<td>2</td>
<td>Use of Alternative Energy</td>
</tr>
<tr>
<td>5</td>
<td>Highway Performance</td>
</tr>
<tr>
<td>5</td>
<td>Voting Rate</td>
</tr>
<tr>
<td>5</td>
<td>Patents Issued</td>
</tr>
<tr>
<td>6</td>
<td>Average Teacher Salary</td>
</tr>
<tr>
<td>6</td>
<td>Change in Toxic Release Inventory</td>
</tr>
<tr>
<td>6</td>
<td>Heart Disease</td>
</tr>
<tr>
<td>6</td>
<td>Greenhouse Gas Emissions</td>
</tr>
<tr>
<td>6</td>
<td>Change in Business Closings</td>
</tr>
<tr>
<td>10</td>
<td>Infant Mortality</td>
</tr>
<tr>
<td>10</td>
<td>Health Professional Shortage Areas</td>
</tr>
<tr>
<td>10</td>
<td>Change in Unemployment Rate</td>
</tr>
<tr>
<td>10</td>
<td>New Companies</td>
</tr>
</tbody>
</table>

### WEAKNESSES (Bottom 10 Rank)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>Business Closings</td>
</tr>
<tr>
<td>42</td>
<td>Average Annual Pay Growth</td>
</tr>
<tr>
<td>42</td>
<td>Change in Energy Costs</td>
</tr>
<tr>
<td>43</td>
<td>Crime Rate</td>
</tr>
<tr>
<td>44</td>
<td>Unemployment Rate</td>
</tr>
<tr>
<td>46</td>
<td>Change in Average Annual Pay</td>
</tr>
<tr>
<td>46</td>
<td>Manufacturing Investment</td>
</tr>
<tr>
<td>49</td>
<td>Involuntary Part-Time Employment</td>
</tr>
<tr>
<td>49</td>
<td>Job Creation by Start-Up Businesses</td>
</tr>
</tbody>
</table>

Source: Development Report Card for the States, CFED
Approaches to Achieving Greater Productivity
Tackling the Productivity Gap

► No Single Solution—Need for:
  > Sustained Investment and More Effective Resource Use (Reinvestment)
  > Change in Institutional Practice and Public Policy

► Solutions Must Focus on Quality, Cost, and Access—Cannot Sacrifice One to Make Progress on Others
Approaches to Achieving Greater Productivity

- Build Cost-Effective Systems
- Change the Academic Production Function
- Reduce Demand Each Student Places on the System
- Reduce Leaks in the Pipeline
The Policy Tools

- Clear Direction—A “Public Agenda”
- Funding/Resource Allocation
- Accountability
- Regulation
- Policy Leadership/Allocation of Decision Authority
The Management Cycle in a Public Institution
The Flow of Funds

Economy

Available State and Local Govt. Funds

Higher Education

• K-12
• Corrections
• Health Care
• Other Govt.

Student Aid

Tuition

Scholarships & Waivers

Student Aid (Restricted)

Federal Government

Institutions

Donors Foundations Corporations

Gifts

Appropriations/Grants

Available State and Local Govt. Funds

Income

Tax Policy
The Flow of Funds

Economy

Available State and Local Govt. Funds

Higher Education

Student Aid

Appropriations/Grants

Tuition

Scholarships & Waivers

Student Aid (Restricted)

Federal Government

Students

Institutions

Tax Policy

Income
Finance Policy—The Options

Institution Focused
- Base-Plus
- Formulas
- Investment Funds

Student Focused
- Tuition and Aid Policy
  - Focused on Revenue Generation
- Tuition and Aid Policy
  - Focused on Attainment of Specified Outcomes

Core Capacity
- Capacity Utilization/Public Agenda
- Performance Funding
Alignment of Policies

The Policy “Audit”—Determining:

- The Extent to Which Policies Are
  - Mutually-Reinforcing, or
  - In Conflict with Each Other

- Policies Other than Those Specific to Higher Education that Affect Ability of Institutions to Respond to Public Agenda