Higher Education and Economic Development in the Commonwealth of Virginia: Strengthening the Promise

Stephen Moret
Virginia Economic Development Partnership
TOPICS FOR OUR DISCUSSION TODAY

• Higher education’s roles in economic development
• Higher education in Virginia: a tremendous economic asset
• Purposes of undergraduate education
• Malemployment of college grads in America (and Virginia)
• Higher education and the U.S. labor market: myth vs. reality
• Interstate migration of college (BA+) graduates
• Policy implications for states, the U.S., Virginia, and SCHEV
• Q&A
TOPICS FOR OUR DISCUSSION TODAY

- Higher education’s roles in economic development
- Higher education in Virginia: a tremendous economic asset
- Purposes of undergraduate education
- Malemployment of college grads in America (and Va.)
- Higher education and the U.S. labor market: myth vs. reality
- Interstate migration of college (BA+) graduates
- Policy implications for states, the U.S., Virginia, and SCHEV
- Q&A
HIGHER EDUCATION PLAYS A CENTRAL ROLE IN STATE ECONOMIC DEVELOPMENT EFFORTS . . .

- Developing talented citizens to meet current and future workforce demands in the private and public sectors
- Providing scientific, technical, and professional education, as well as upward mobility opportunities, for our citizens
- Attracting federal and corporate research grants
- Conducting research and catalyzing innovation of importance to Virginia, its people, and its industries
- Improving our state’s image as an attractive location for business investment and highly mobile professionals
- Enhancing quality of life
AND IT DIRECTLY IMPACTS THE MOST IMPORTANT SITE-SELECTION FACTOR FOR BUSINESS DEVELOPMENT PROSPECTS: TALENT

**Primary selection factors***
- Quality, availability, and cost of target workforce
- Tax and regulatory climate
- Proximity to key customers and suppliers
- Transportation infrastructure and logistics
- Operating costs (electricity, insurance, workers comp, etc.)
- Quality-of-life factors (public education options, crime, etc.)
- Availability of target real-estate solution (size, cost, control, water/sewer/rail connectivity, etc.)

**Secondary selection factors**
- Level of state-and-community support (fast-track permitting, etc.)
- Availability and quality of customized recruitment and training solutions
- Statutory financial incentives
- Customized incentives

* Priority of selection factors varies from project to project; however, quality and availability of workforce almost always is one of the top three considerations

** Typically these factors come into play when multiple locations offer relatively comparable characteristics relative to primary site-selection criteria

Source: Author experience with hundreds of site-selection projects
TOPICS FOR OUR DISCUSSION TODAY

• Higher education’s roles in economic development

• Higher education in Virginia: a tremendous economic asset

• Purposes of undergraduate education

• Malemployment of college grads in America (and Va.)

• Higher education and the U.S. labor market: myth vs. reality

• Interstate migration of college (BA+) graduates

• Policy implications for states, the U.S., Virginia, and SCHEV

• Q&A
HIGHER EDUCATION IN VIRGINIA: A FOUNDATIONAL PILLAR OF THE COMMONWEALTH’S ECONOMIC COMPETITIVENESS

• One of the most highly respected public higher ed systems in the U.S. (e.g., ranked no. 1 by SmartAsset, no. 10 by USN&WR/McKinsey), higher ed in Virginia is a perennial state selling point for VEDP

• USN&WR: Rates 40 public and private Virginia institutions strongly overall, with UVa and William & Mary ranking in the top 40 for colleges and universities in the U.S.

• Bachelor’s degree attainment among the highest in America

• Decentralized higher education governance model, like that of the U.S. overall, is a defining aspect of the VA system

• The Workforce Credential Grant Program through VCCS is helping address demand for sub-baccalaureate credentials

• Virginia’s University-Based Economic Development (UBED) group provides a POC for every public institution so businesses have easy access to public college/university resources
ONE PLACE VIRGINIA DOESN’T RANK PARTICULARLY WELL AMONG SITE CONSULTANTS IS WORKFORCE DEVELOPMENT PROGRAMS

*Area Development*: Leading Workforce Development Programs (2016)

1. Georgia
2. Louisiana
3. South Carolina
4. Tennessee
5. Alabama
6. Florida
7. North Carolina
8. Indiana
9. Michigan
10. California

Top-ranked state workforce development programs (e.g., Ga., La.) typically feature customized, turnkey workforce recruitment and training programs for new or expanding traded-sector firms that provide a system-wide “halo” effect.
TOPICS FOR OUR DISCUSSION TODAY

• Higher education’s roles in economic development
• Higher education in Virginia: a tremendous economic asset

• Purposes of undergraduate education

• Malemployment of college grads in America (and Va.)
• Higher education and the U.S. labor market: myth vs. reality
• Interstate migration of college (BA+) graduates
• Policy implications for states, the U.S., Virginia, and SCHEV
• Q&A
PURPOSES OF A COLLEGE EDUCATION (NOT COMPREHENSIVE)

- Critical thinking
- Ability to communicate
- Moral reasoning
- Preparation for citizenship
- Knowledge and appreciation of diversity
- Global understanding
- Cultivation of a breadth of interests
- Career preparation

Source: Bok (2006)
A GOOGLE SEARCH FOR “WHY GO TO COLLEGE” REVEALS A LOT ABOUT THE CASE BEING MADE FOR HIGHER EDUCATION TODAY

“Every bit of education you get after high school increases the chances you’ll earn good pay” (ACT)

“Statistics show that a college diploma can help you: Get a job; Keep a job; [and] Make more money” (College Board)

“Over the course of a lifetime, someone with a college degree will earn $1 million more than someone with a high school diploma” (Common Application)
Purposes of a College Education (Not Comprehensive)

- Critical thinking
- Ability to communicate
- Moral reasoning
- Preparation for citizenship
- Knowledge and appreciation of diversity
- Global understanding
- Cultivation of a breadth of interests
- Career preparation

Source: Bok (2006); Higher Education Research Institute at UCLA (2015, 2016); author analysis
TOPICS FOR OUR DISCUSSION TODAY

• Higher education’s roles in economic development
• Higher education in Virginia: a tremendous economic asset
• Purposes of undergraduate education

• Malemployment of college (BA+) grads in America (and Va.)

• Higher education and the U.S. labor market: myth vs. reality
• Interstate migration of college (BA+) graduates
• Policy implications for states, the U.S., Virginia, and SCHEV
• Q&A
POST-RECESSION, ABOUT 45% OF ALL INDIVIDUALS IN THE U.S. LABOR FORCE WITH ONLY A BACHELOR’S DEGREE WERE MALEMPLOYED OR UNEMPLOYED

100% = 26.7 million

- Malemployed: 40.5
- Employed in a college-level occupation: 54.5
- Unemployed: 5.1

Source: U.S. Census ACS Public Use Microdata Sample (3-yr., 2010-2012); U.S. Bureau of Labor Statistics; author analysis
MALEMPLOYMENT RATES OF FULL-TIME, FULL-YEAR (FTFY) EMPLOYED INDIVIDUALS IN THE U.S. ARE LOWER FOR THOSE WITH GRAD DEGREES

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Employed</th>
<th>Unemployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced degree(s) only</td>
<td>86</td>
<td>14</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>Bachelor’s degree only</td>
<td>60</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: U.S. Census ACS Public Use Microdata Sample (3-yr., 2010-2012); U.S. Bureau of Labor Statistics; author analysis
FTFY EMPLOYED COLLEGE GRADS IN THE U.S. EXPERIENCE HIGH MALE EMPLOYMENT LEVELS EVEN DURING THE MID-CAREER STAGE

Source: U.S. Census ACS Public Use Microdata Sample (3-yr., 2010-2012); U.S. Bureau of Labor Statistics; author analysis
### MALEMPLOYMENT RATES OF FTFY EMPLOYED INDIVIDUALS IN THE U.S. WITH ONLY A BACHELOR’S DEGREE VARY GREATLY BY FIELD OF DEGREE

<table>
<thead>
<tr>
<th>Field of Degree</th>
<th>College-level employed</th>
<th>Malemployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science- and Engineering-Related</td>
<td>76</td>
<td>24</td>
</tr>
<tr>
<td>Engineering</td>
<td>76</td>
<td>25</td>
</tr>
<tr>
<td>Computers, Math, and Statistics</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td>Business: Acct., Finance, and MIS</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>Education</td>
<td>67</td>
<td>33</td>
</tr>
<tr>
<td><strong>All</strong></td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Communications</td>
<td>56</td>
<td>44</td>
</tr>
<tr>
<td>Physical and Life Sciences</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>Psychology</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>54</td>
<td>46</td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td>Business: Other</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>Other Fields</td>
<td>44</td>
<td>56</td>
</tr>
</tbody>
</table>

Source: U.S. Census ACS Public Use Microdata Sample (3-yr., 2010-2012); U.S. Bureau of Labor Statistics; author analysis
FTFY EMPLOYED INDIVIDUALS IN THE U.S. WITH ONLY A BACHELOR’s DEGREE HAVE NEARLY TRIPLE THE COLLEGE EARNINGS PREMIUM (%) OF THAT EXPERIENCED BY THOSE WHO ARE MALEMPLOYED

- Employed in a college-level occupation: 96%
- All with only a bachelor’s degree: 69%
- Malemployed: 34%

Source: U.S. Census ACS Public Use Microdata Sample (3-yr., 2010-2012); U.S. Bureau of Labor Statistics; author analysis
The college earnings premium (%) of FTFY employed, mid-career individuals in the U.S. with only a bachelor’s degree varies greatly by field of study

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>College-level employed</th>
<th>All employed</th>
<th>Malemployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>167%</td>
<td>150%</td>
<td>77%</td>
</tr>
<tr>
<td>Computers, Math, and Statistics</td>
<td>148</td>
<td>124</td>
<td>50</td>
</tr>
<tr>
<td>Business: Acct., Finance, MIS</td>
<td>135</td>
<td>110</td>
<td>53</td>
</tr>
<tr>
<td>Business: Other</td>
<td>116</td>
<td>83</td>
<td>53</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>112</td>
<td>86</td>
<td>55</td>
</tr>
<tr>
<td><strong>All</strong></td>
<td><strong>104</strong></td>
<td><strong>80</strong></td>
<td><strong>47</strong></td>
</tr>
<tr>
<td>Science- and Engr.-Related</td>
<td>101</td>
<td>86</td>
<td>47</td>
</tr>
<tr>
<td>Physical and Life Sciences</td>
<td>97</td>
<td>76</td>
<td>47</td>
</tr>
<tr>
<td>Communications</td>
<td>95</td>
<td>76</td>
<td>47</td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>77</td>
<td>55</td>
<td>28</td>
</tr>
<tr>
<td>Psychology</td>
<td>61</td>
<td>49</td>
<td>32</td>
</tr>
<tr>
<td>Other Fields</td>
<td>56</td>
<td>55</td>
<td>53</td>
</tr>
<tr>
<td>Education</td>
<td>32</td>
<td>26</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: U.S. Census ACS Public Use Microdata Sample (3-yr., 2010-2012); U.S. Bureau of Labor Statistics; author analysis
RECAP OF EMPLOYMENT OUTCOMES IN THE U.S. FOR FTFY EMPLOYED GRADUATES WITH ONLY A BACHELOR’S DEGREE

Earnings Premium: Mid-Career, College-Level Employed

College-Level Employment Rate

Source: U.S. Census ACS Public Use Microdata Sample (3-yr., 2010-2012); U.S. Bureau of Labor Statistics; author analysis
## America’s Male Employment Problem May Be Worsening

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Proportion of Total Employment with 4+ Years of College in 1980</th>
<th>Proportion of Total Employment with a Bachelor’s Degree or Higher in 2010-2012 (Avg.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail salespersons*</td>
<td>13%</td>
<td>26%</td>
</tr>
<tr>
<td>Office clerks, general</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>Secretaries and admin. assistants</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Bartenders</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>Tellers</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Receptionists and information clerks</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Waiters and waitresses</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Postal service mail carriers</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Cashiers</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Bus drivers</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Janitors and building cleaners</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

* The 2010-2012 ACS PUMS includes “retail salespersons,” whereas this specific occupational code is not present in the 1980 ACS PUMS. For this figure, the following 1980 occupation codes have been combined to approximate the “retail salespersons” occupation: sales workers, apparel; sales workers, shoes; sales workers, furniture and home furnishings; and sales workers, radio, TV, hi-fi, and appliances.

Source: U.S. Census ACS Public Use Microdata Sample (1980 and 3-yr., 2010-2012); author analysis
POSSIBLE EXPLANATIONS FOR DISAPPOINTING EMPLOYMENT OUTCOMES OF COLLEGE GRADUATES IN THE U.S. (1 OF 2)

NOT COMPREHENSIVE

• The supply of graduates with degrees in some fields is substantially greater than market demand

• College students are not doing enough to prepare for a successful post-graduation transition to the workforce (e.g., internships, networking, career discovery)

• Colleges are not doing enough to help their students prepare for a successful transition to the workforce

• With an abundant supply of college graduates, employers often hire bachelor’s graduates for positions that do not leverage college-level skills (i.e., credentialism)

• College graduates are not consistently attaining college-level skills…
College graduates are not consistently attaining college-level skills…

- Bok (2006): “[C]olleges and universities, for all the benefits they bring, accomplish far less for their students than they should. Many seniors graduate without being able to write well enough to satisfy their employers. Many cannot reason clearly or perform competently in analyzing complex, nontechnical problems, even though faculties rank critical thinking as the primary goal of a college education. Few undergraduates receiving a degree are able to speak or read a foreign language. Most have never taken a course in quantitative reasoning or acquired the knowledge needed to be a reasonably informed citizen in a democracy. And those are only some of the problems.”

- The 2003 National Assessment of Adult Literacy found that unimpressive proportions of adults with only a bachelor’s degree exhibit proficiency across multiple measures of literacy, as just 31% of them were proficient in prose literacy, 25% were proficient in document literacy, and 31% are proficient in quantitative literacy (Kutner et al., 2007)

- Employers of college graduates indicate that colleges should place greater emphasis on development of certain skills; the most commonly cited areas for additional emphasis include cultivating critical thinking and analytical reasoning skills (82%), complex problem solving capabilities (81%), and written and oral communications skills (80%) (Hart, 2013).
TOPICS FOR OUR DISCUSSION TODAY

• Higher education’s roles in economic development
• Higher education in Virginia: a tremendous economic asset
• Purposes of undergraduate education
• Malemployment of college (BA+) grads in America (and Va.)
  • Higher education and the U.S. labor market: myth vs. reality
• Interstate migration of college (BA+) graduates
• Policy implications for states, the U.S., Virginia, and SCHEV
• Q&A
### MYTHS ABOUT HIGHER EDUCATION AND THE LABOR MARKET

<table>
<thead>
<tr>
<th>MYTH</th>
<th>REALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malemployment is temporary</td>
<td>Malemployment is common at all ages</td>
</tr>
<tr>
<td>Degree fields with no occupational focus have better long-term outcomes</td>
<td>Such fields have above-average malemployment at all ages</td>
</tr>
<tr>
<td>Business degrees generally provide a reliable pathway to college-level jobs</td>
<td>This observation applies only to math-intensive business fields</td>
</tr>
<tr>
<td>There generally is an insufficient supply of STEM graduates in the U.S.</td>
<td>Only engineering and CS have low malemployment at the bachelor’s level</td>
</tr>
</tbody>
</table>
TOPICS FOR OUR DISCUSSION TODAY

• Higher education’s roles in economic development
• Higher education in Virginia: a tremendous economic asset
• Purposes of undergraduate education
• Malemployment of college (BA+) grads in America (and Va.)
• Higher education and the U.S. labor market: myth vs. reality

• Interstate migration of college (BA+) graduates

• Policy implications for states, the U.S., Virginia, and SCHEV
• Q&A
IN 2002, UVA’S SARAH TURNER Authored A Provocative Article That Emphasized The Interstate Mobility Of Bachelor’s Degree Graduates

Excerpt (emphasis added):

“One rationale for state investment in college and university education is that states enjoy the returns of such investments in the form of a more skilled workforce. According to conventional arguments, the more highly educated a given workforce is, the more productive it should be. But given the mobility of the labor force in general, and of college-educated labor in particular, there actually may be little connection between the number of baccalaureate degrees produced by a given state and the number of college graduates living there. … Overall, we found that the effect of degree-granting on the relative concentration of a given state’s university-educated workers is modest.”
College graduates in the U.S. are far more likely to move across state lines than others—typically for job reasons.

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Employed Individuals Annually Completing an Interstate Move (Percent)</th>
<th>Interstate Movers Citing a New Job or Job Transfer as the Main Reason for Moving (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral degree</td>
<td>4.1%</td>
<td>69%</td>
</tr>
<tr>
<td>Professional degree</td>
<td>3.2</td>
<td>69</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>2.7</td>
<td>53</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>2.8</td>
<td>46</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>1.6</td>
<td>34</td>
</tr>
<tr>
<td>High school diploma</td>
<td>1.4</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: U.S. Census ACS Public Use Microdata Sample (3-yr., 2010-2012) for proportions that made interstate moves; U.S. Census CPS ASEC Microdata (2010-2012) for main reasons associated with interstate moves; author analysis.
Ages 22 and 23 excluded due to small number of cases

Source: U.S. Census ACS Public Use Microdata Sample (3-yr., 2010-2012); author analysis
HALF OF PEOPLE LEAVING VIRGINIA ARE WELL-EDUCATED

<table>
<thead>
<tr>
<th>State</th>
<th>Share of out-migrants with a Bachelor’s or greater, 2015, %</th>
<th>Share of out-migrants age 22-30, 2015, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgia</td>
<td>42</td>
<td>27</td>
</tr>
<tr>
<td>Maryland</td>
<td>53</td>
<td>26</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>57</td>
<td>26</td>
</tr>
<tr>
<td>North Carolina</td>
<td>40</td>
<td>27</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>South Carolina</td>
<td>36</td>
<td>27</td>
</tr>
<tr>
<td>Virginia</td>
<td>51</td>
<td>28</td>
</tr>
</tbody>
</table>

**Peer average:**
- Share of out-migrants with a Bachelor’s or greater, 2015, %: 47
- Share of out-migrants age 22-30, 2015, %: 27

Source: American Community Survey; McKinsey analysis
TOPICS FOR OUR DISCUSSION TODAY

• Higher education’s roles in economic development
• Higher education in Virginia: a tremendous economic asset
• Purposes of undergraduate education
• Malemployment of college (BA+) grads in America (and Va.)
• Higher education and the U.S. labor market: myth vs. reality
• Interstate migration of college (BA+) graduates

• Policy implications for states, the U.S., Virginia, and SCHEV

• Q&A
NATIONAL AND STATE POLICY IMPLICATIONS (EXAMPLES – NOT COMPREHENSIVE)

- Leverage data to better illustrate linkages between high school academic preparation, college degree program completion by field of study, and occupation/earnings over time by degree field.

- Expand and enhance career development and counseling services in high schools and colleges.

- Synchronize state-level college attainment goals with state economic development strategies.

- Recognizing there is little connection between degree production and educational attainment in states, recast the bachelor’s degree attainment agenda as a state/federal partnership.

- Focus greater attention on increasing state and national economic competitiveness in order to increase demand for college graduates in the labor market.

* SCHEV and others in VA already have made meaningful progress on these, but more can be done.


POTENTIAL POLICY DIRECTIONS FOR THE COMMONWEALTH OF VIRGINIA (AND SCHEV)

- See points in previous slide, plus...

- Commission a survey of college (BA+) grads in Virginia to better understand the underemployment problem here, including the top predictors of underemployment (e.g., lack of internships in college, field of study, college grades), as well as to estimate the portion of our college grad workforce from out-of-state institutions.

- Explore opportunities to add occupation, hours worked, and self-employment data to VLDS to develop a more nuanced understanding of employment outcomes of college graduates in Virginia; such info also would be invaluable for college students and counselors.

- Launch a world-class, customized workforce recruitment and training program to match (or better) top-10-ranked workforce development programs in other states (e.g., Georgia Quick Start) – VEDP and VCCS are collaborating on a solution.

- Explore opportunities to leverage supplemental funding to incentivize the production of additional BA-level programs with unmet demand (e.g., CS, engineering), as is being done currently with sub-baccalaureate credentials; likewise, build on the new initiative to expand high-demand sub-BA credentials.

- Encourage higher education institutions to leverage insights from the literature and promising national initiatives to ensure that college graduates consistently attain college-level skills during their undergraduate studies.
“The current—and future—state of affairs can be summarized as follows: A college education was once sufficient for the attainment of a good job. It is clearly no longer sufficient, but at the same time, it is all the more necessary.”
TOPICS FOR OUR DISCUSSION TODAY

• Higher education’s roles in economic development
• Higher education in Virginia: a tremendous economic asset
• Purposes of undergraduate education
• Malemployment of college (BA+) grads in America (and Va.)
• Higher education and the U.S. labor market: myth vs. reality
• Interstate migration of college (BA+) graduates
• Policy implications for states, the U.S., Virginia, and SCHEV

• Q&A