The Value of Early Childhood Education: Some Perspective from Higher Education

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The views and opinions expressed are those of the presenter. They do not represent an official position of the Federal Reserve Bank of Richmond or the Federal Reserve System.
Skills: The Payoff
Skills have long inoculated against unemployment...

Unemployment rate, workers 25 years and over

- Less than high school
- High school
- Some college or associate's degree
- Bachelor's degree or higher

Source: Bureau of Labor Statistics
...and payoffs to skills have steadily increased

Median weekly earnings, workers 25 years and over (2014 constant dollars)

Source: Bureau of Labor Statistics
Recent Breakdown of Unemployment and Labor Force Participation

<table>
<thead>
<tr>
<th>Unemployment Rate (Percent)</th>
<th>Labor Force Participation Rate (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's Degree or Higher</td>
<td></td>
</tr>
<tr>
<td>2.6</td>
<td>85.2</td>
</tr>
<tr>
<td>2.9</td>
<td>86.1</td>
</tr>
<tr>
<td>Some College or Associate's Degree</td>
<td></td>
</tr>
<tr>
<td>5.6</td>
<td>77.9</td>
</tr>
<tr>
<td>5.2</td>
<td>78.9</td>
</tr>
<tr>
<td>High School Graduate or Equivalent</td>
<td></td>
</tr>
<tr>
<td>7.3</td>
<td>70.3</td>
</tr>
<tr>
<td>6.8</td>
<td>71.9</td>
</tr>
<tr>
<td>Less than High School Graduate</td>
<td></td>
</tr>
<tr>
<td>10.1</td>
<td>58.5</td>
</tr>
<tr>
<td>9.6</td>
<td>60.1</td>
</tr>
</tbody>
</table>

## Finer Recent Breakdown of Earnings

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Median Earnings in North Carolina</th>
<th>Median Earnings in United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate or Professional Degree</td>
<td>$59,243</td>
<td>$67,286</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>$46,171</td>
<td>$50,930</td>
</tr>
<tr>
<td>Some College or Associate's Degree</td>
<td>$31,060</td>
<td>$34,377</td>
</tr>
<tr>
<td>High School or Equivalent</td>
<td>$26,632</td>
<td>$29,004</td>
</tr>
<tr>
<td>Less than High School</td>
<td>$20,359</td>
<td>$21,320</td>
</tr>
</tbody>
</table>

Skills: The Response
We have been getting more educated...

...but are we hitting a barrier?

Source: Current Population Survey

Percent of People 25 Years and Over Who Have Completed High School or College

- 25 to 29 years old, high school or more
- 25 years old and over, high school or more
- 25 to 29 years old, college or more
- 25 years old and over, college or more
Since the 1970s, supply response to skill-biased technological change has been weak. Unprecedented.
"An Unfinished Transformation"

- College graduation rates for young men born in the mid-1970s are similar to those for men born in the late 1940s.
- The educational attainment of 30-year-olds increased by only 0.8 years between 1980 and 2005.
- Many who enroll do not complete any degree within six years of completing high school.
- “Some college, no degree” is the fastest growing educational category in past 30 years: roughly 15% in 1980 to 29% in 2015.

Why hasn’t skill acquisition responded?

- Proximate answer appears to be that U.S. students lack adequate information and preparedness for higher education.
- Under current collegiate preparedness, college earnings premium no longer an effective spur to educational attainment.
- Preparedness is determined early in life: “learning begets learning.”
What about information?

<table>
<thead>
<tr>
<th>Expected Attainment</th>
<th>No Degree</th>
<th>% of No Degree with Loans</th>
<th>Student Loan Debt (borrowers with no degree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>52%</td>
<td>37%</td>
<td>$11,160</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>62%</td>
<td>39%</td>
<td>$10,758</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>38%</td>
<td>51%</td>
<td>$14,457</td>
</tr>
</tbody>
</table>

Note: Data reflect survey results from 2004-2009.

- Students appear to both:
  - Overstate their own preparedness and ...
  - ...understate its importance—relative to study effort—in college completion

Source: Avery and Turner (2012) and Stinebrickner and Stinebrickner (2012)
What about preparedness?

Source: Bound, Lovenheim and Turner (2010)
So why isn’t the college earnings premium enough?

- Modestly prepared students already enroll and will continue to do so at higher college premia
- Those not already enrolled in college face both substantial failure risk and earnings risk after graduation
  - Risks attenuate the benefit of the college premium, so at-risk students rationally ignore it
  - For low-wealth households, student loans are scary
- Punchlines
  - Under the status quo, aggregate college attainment will likely remain stagnant
  - Skill-biased technical change will primarily increase economic inequality, not college attainment

Source: Athreya and Eberly (2016)
Enter early childhood...

- Preschool programs have been shown to positively impact education, employment, and earnings later in life.
- They have also been shown to boost achievement test scores.
  - A substantial portion of this boost is explained by improvements in personality skills.
- Early childhood education appears to matter for hard and soft skills.

*Source: Heckman et al (2013)*
Conclusion

- Skills are being rewarded at historically high rates
- People are responding by enrolling in college, but many are not completing
- Targeting people early in life appears to be key to overcoming this challenge
Resources

Special Reports

These occasional reports provide a platform for Regional Economics to publish specialized research on a variety of topics, including the Fifth District's residential real estate markets.

Educational Attainment in the Fifth District

The Census Bureau's annual American Community Survey includes information on educational attainment by a variety of economic and demographic factors. These reports provide graphs, maps, and tables that visualize select variables using the most recent data available.

- District of Columbia
- Maryland
- North Carolina
- South Carolina
- Virginia
- West Virginia

Working Papers

Email Notification

March 2013, No. 13-02R
Risk, the College Premium, and Aggregate Human Capital Investment (Revised November 2016)
Kartik B. Athreya and Janice Eberly

Source: www.richmondfed.org