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Returns to Later-Age Degrees

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Returns to Later-Age Degrees

Abstract
The benefits of a college education are well documented. However, the majority of existing research focuses on students who matriculate soon after high school graduation. There is little empirical evidence illustrating whether a college degree is similarly beneficial to those already in the workforce, particularly individuals over 50. Nonetheless, the coming years will see the dramatic growth of older individuals, many of whom will continue to be active in the labor force, and policymakers would benefit from effective strategies to improve the labor market outcomes of older individuals.

This research proposes to evaluate the labor market outcomes of individuals in Georgia who obtain a bachelor’s degree at age 50 or older by merging state-level individual level labor force (Dpt of Labor) with individual level educational data from the University System of Georgia (USG). Specifically, we explore whether these later-age degrees result in employment opportunities with higher wages and increased retention in the labor force beyond the traditional retirement age of 65 than those who do not attain a bachelor’s degree. The results will provide policymakers across the United States with information to make informed decisions regarding higher education incentives and policies for older students.

Comments
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Returns to Later-Age Degrees
Overview

Introduction
Review of the Literature
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Summary of Current Data
Introduction
Project Overview

• How useful is a degree for older individuals?
• Coming years will see dramatic growth of older individuals, many of whom will remain in the labor force
• Policymakers would benefit from effective strategies to improve the labor market outcomes of older individuals
Project Overview (cont.)

- Objective: Returns to later-age degrees in USG
  - Wage premiums
  - Employment stability
  - Retirement Income

- Data from the University System of Georgia and the Georgia Department of Labor

- Funded by the Alfred P. Sloan Foundation
Generalizability of Georgia

• 5\textsuperscript{th} largest public higher education system in the country
  – After California, Ohio, and New York (CUNY & SUNY)

• Georgia more similar to national averages in terms of GDP, GDP per capita, and diversity
  – CA and NY have outlier economies
  – GA is more racially diverse than OH
Review of the Literature
College Attainment for Older Workers

- Literature is sparse for older students
- Focus on barriers to enrollment and degree completion
- No consensus on what constitutes “older” or “mature” college student
- Most research looking at wage premiums or retirement effects from outside of US
Barriers to Enrollment and Completion

• Age, ability, opportunity cost
• Life roles: parent, spouse, employee
• Geography
• Breaking down the barrier
  – Strong social and family ties
  – Clear educational goals
  – Institutional contacts/mentors
Literature Results

• The wage premium ROI for older-age degrees is minimal and often does not offset total costs
  – Likely due to fewer years of work after graduation
  – Break-even point?
  – Bias against older workers

• 65+ workers with some college education almost twice as likely to work compared to similar workers without HS diploma\(^1\)

• In Sweden: Attending between 42 and 55 saw 5% increase in labor market survival rates between 61 and 66\(^2\)

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\(^1\)Butrica, Schaner & Zedlewski 2006

\(^2\)Stenberg & Westerlund 2013
Additions to the Literature

• USG data provides opportunity for larger treatment sizes than prior studies
• Wage premium ROI may be positive for some subgroups
  – Women
  – Ethnic minorities
• Almost no research on U.S. students
  – U.S. inherently different from Sweden
    • Wider dispersion of skills
    • Wider wage gap
    • Less robust safety net
    • Job polarization
  – European markets do not reflect U.S markets, particularly after Great Recession
Research Outline
Data Merger

• USG administrative data for 50+, 2003 to 2017
  – Demographic and school-related information
• Georgia DOL from before 1990 to 2017
  – Quarterly Census of Employment and Wages (QCEW)
• Merge by SSN to get longitudinal view of wages and employment
  – See wages and job type before and after degree
• Comparison groups: more confident with multiple matching approaches telling the same story
Five Identification Strategies

1. **Match USG enrollee with similar non-enrollee using QCEW information**
   - Qs worked, wages, industry, county, etc.
   - QCEW does not have age

2. **Instrumental variables approach**
   - Use geographic data on employment conditions and school programs to model decision to enroll in USG institution

3. **Structural modeling approach**
   - Matched sample of USG enrollees in QCEW for 3-5 years before enrollment to 3-6 years after enrollment
   - Similar to limited information maximum likelihood estimation

4. **Match USG enrollees in QCEW with CPS/ACS individuals**
   - Benefit is detailed demographic data for both treatment and control

5. **Compare USG 50+ attendees who graduate to those who do not**
   - May be best strategy, but sample sizes may be too small
Data Challenges
Initial Data Details

• USG administrative data for students aged 50+ who matriculated as first-time freshmen between 2003 and 2017

• Student, enrollment, and award files include demographic, academic, and graduation information

• Missing data for students aged 50+ who attended USG in this time frame but matriculated before 2003
First-Time Freshmen Definition

• A degree-seeking undergraduate student who enrolls in college for the first time in a summer, fall, or spring term. If a student is a transfer student he/she must have graduated from high school in the calendar year preceding the academic year of enrollment to be classified as FTF SER. Also included are students who attended college prior to the term of enrollment as part of a dual enrollment program while they were still high school students.

• Example 1: A student graduated from high school in May 2015. This same student enrolls at Georgia State University for fall 2015. This student is considered a SER first-time freshman.

• Example 2: A student graduated from high school in May 2015. This same student enrolls at Georgia State University for spring 2016, and has not attended any other institutions. This student is considered a SER first-time freshman.

• Example 3: A student graduated from high school in May 2015 and enrolled at Georgia State University for the Summer 2015 semester. The student then transfers to the University of Georgia for the Fall 2015 semester. This student is considered a SER first-time freshman.
Missing Data

- Current data only contains information on students who matriculated between 2003 and 2017
- Significant total population differential is due to students who started as first-time freshmen before 2003 and transfer students
Current Total vs. USG Total

• Current data represents 20-40% of USG total

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Population Within Current Data Range</th>
<th>Total Population from USG</th>
<th>Total Population in Range as Percent of USG Total</th>
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<tbody>
<tr>
<td>2002</td>
<td>30</td>
<td>-</td>
<td>-</td>
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<tr>
<td>2003</td>
<td>518</td>
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<td>2016</td>
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<tr>
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<td>3,453</td>
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<tr>
<td>2018</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18,996</strong></td>
<td><strong>57,362</strong></td>
<td><strong>33.1%</strong></td>
</tr>
</tbody>
</table>
ACS Figures

Public vs. Private Enrollment, 50+ with HS diploma (but no bachelor's degree or higher), attending school in the last 3 months
New Data

• USG will provide broader data that includes information on all students 50+ who attended between 2003 and 2017, regardless of matriculation date

• Technically involves sorting based on academic term and not matriculation term

• Larger population numbers in each year will be more consistent with additional data provided
Tiered Approach and Cutoffs

• Option to tier incoming credits
  – Example: students with 3 to 9 credits are almost beginning freshmen

• Option to implement cutoffs based on years since last contact with the university system
  – Example: students with no contact with university system for ten years are almost beginning freshmen

• Expand USG matching population
New Data Details

• USG administrative data for students aged 50+ who attended USG institutions between 2003 and 2017

• Enrollment file and student file information now merged and transfer data provided

• The total population figures are comparable to previous estimates from USG, and nearly 2.5x the figures from the first data package
New Credit Hour Cutoff

• Credit hour measure equal to the cumulative number of credits earned at USG institutions and the cumulative number of transfer credits at “first observed” date
• New definition of first-time freshmen, based on credit hour measure, in development
• Initial analysis indicates significantly expanded USG matching population
Summary of Current Data
Institution Breakdown

![Institution Breakdown Chart]

Legend:
- Blue: Research Universities
- Red: Comprehensive Universities & State Universities
- Green: State Colleges & Two-Year State Colleges
Gender Split
Race
Degree Type (at matriculation)
Award Type
Years to Degree Completion
Year to Degree Completion by Degree
Thank you!

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