AccessLex Institute, in partnership with its nearly 200 nonprofit and state-affiliated American Bar Association-approved Member law schools, has been committed to improving access to legal education and to maximizing the affordability and value of a law degree since 1983. The AccessLex Center for Legal Education Excellence advocates for policies that make legal education work better for students and society alike, and conducts research on the most critical issues facing legal education today. The AccessLex Center for Education and Financial Capability offers on-campus and online personal finance programming and resources to help students confidently manage their finances on their way to achieving personal and professional success. AccessLex Institute is a nonprofit organization with offices in West Chester, Pennsylvania, and Washington, D.C., and with accredited financial counselors throughout the U.S.

Research and Dissertation Fellows Program

The Research and Dissertation Fellows Program is a partnership between AccessLex Institute and the Association for Institutional Research. The Program promotes scholarship on issues related to access, affordability and value of legal education specifically, and graduate and professional education more broadly.
Statistical data analyses employed logistic regression to predict bar passage on a battery of predictors, outlined below in the data sources section.

Model performance across various temporal configurations (at admission, semester 1, year 1, graduation) were then compared to explore predictive power throughout law student career.

DATA SOURCES
Research design and data collection efforts were informed by Astin’s (1993) Input-Environment-Output (I-E-O) model, which provides a simple way to conceptualize the role of student inputs (I) and learning environment (E) on student outcomes (O).

Longitudinal data for five cohorts of graduates were collected from College of Law administrative records. The relevant data are displayed in Figure 1, below.

METHOD(S)

PRELIMINARY RESULTS

RQ #1 - What are the key predictors of law student success post-graduation, operationalized as bar exam passage?

Our analyses suggest that bar passage can be predicted by a battery of variables. Despite considerable attention in the existing literature, results suggest that student inputs from the IEO model – including student demographics, LSAT, and UGPA – explain very little of the variation in bar passage: between 6-15%. Student performance in law school, the first year and beyond, is much more predictive. Table 2 presents descriptive data about student characteristics and outcomes, disaggregated by first semester GPA, while Table 3 presents 1st year course grades by bar passage.

RQ #2 - How early in a student’s law program can we predict bar success?

As Figure 3 demonstrates, the most predictive model – which explains 47% of the variation in bar passage – does not accurately predict passage for all students. Future analyses will not only integrate additional data to predict bar passage more accurately, but will also explore the characteristics of those who exceed model estimates. This will paint a much more complete picture of law student success.

RESEARCH QUESTIONS
1. What are key predictors of law student success post-graduation, operationalized as bar exam passage?
   a. At admission?
   b. After the first semester? The first year?
   c. Post-graduation?
2. How early in a student’s law program can we predict bar success?
   a. At admission?
   b. After the first semester? The first year?
   c. Post-graduation?
In 2007, Public Service Loan Forgiveness

By 2011-12, 59% of law students took out PLUS

Grad PLUS covered up to full cost of attendance

Higher Education Reconciliation Act of 2005

Prior to 2006, most grad/professional students

students increase at a faster rate following the

creation of the Grad PLUS program in 2006 and the

graduates increase at a faster rate following the

expansion of income-driven repayment in 2007?

• Did tuition/fees or living expenses for law school students increase at a faster rate following the creation of the Grad PLUS program in 2006 and the expansion of income-driven repayment in 2007?

• Did the student debt burden of law school graduates increase at a faster rate following the creation of the Grad PLUS program in 2006 and the expansion of income-driven repayment in 2007?

RESEARCH QUESTIONS

(1) Did tuition/fees or living expenses for law school students increase at a faster rate following the creation of the Grad PLUS program in 2006 and the expansion of income-driven repayment in 2007?

(2) Did the student debt burden of law school graduates increase at a faster rate following the creation of the Grad PLUS program in 2006 and the expansion of income-driven repayment in 2007?

METHODS

Method 1: Interrupted time series for law schools only

• Key coefficients: Post (post-2006 dummy variable — change in intercept), Time*Post (change in slope — treatment effect over time)

Method 2: Difference-in-differences comparing law schools and undergraduate programs

• Key coefficient: Law*YrsPost (whether law schools followed different post-2006 trend)

Covariates used in all models, with financial values logged and inflation-adjusted

The Bennett Hypothesis (whether colleges raise their tuition prices in response to increased federal student loan availability) has been debated for decades.

Prior literature has taken one of two approaches:

• Analyzing incremental increases in Pell Grant maximum awards

• Analyzing small ($2,000 or less) increases in annual loan limits for undergraduate students

General finding: Modest support for the Bennett Hypothesis, with some variations across types of colleges

Yet no research has examined graduate or professional education

ABOUT GRAD PLUS

• Prior to 2006, most grad/professional students could take out $18,500 per year in federal loans

• Higher Education Reconciliation Act of 2005 created Grad PLUS program as of July 1, 2016

• Grad PLUS covered up to full cost of attendance

• Some students switched from private loans, while others got access to capital

• By 2011-12, 59% of law students took out PLUS loans—average debt of graduates was $55,000 (NPSAS data)

• In 2007, Public Service Loan Forgiveness program took effect, with other income-driven repayment plans to follow

MOTIVATION

• Key takeaway: Relatively little support for the Bennett Hypothesis across any of the outcomes

• Interrupted time series results

• Public law schools had a slower rate of tuition increases (2.5 percentage points) post-2006

• Private law schools had a jump of about 1.7 percentage points in tuition and a 2.5 percentage point increase in living allowances after 2006

• No clear trend regarding student debt

• Difference-in-differences results

• Public law schools increased tuition about 1.5 percentage points per year faster than undergrad tuition post-2006; debt went up slightly faster

• Private law schools saw slight decline in tuition and debt increases (0.3 percentage points) relative to undergrads

IMPLICATIONS AND FUTURE RESEARCH

Why might the relationships between Grad PLUS creation and tuition/living allowance/debt levels be relatively weak?

• Law schools didn’t engage in rent-seeking behavior

• Students were price-sensitive, particularly after the Great Recession

• Few students may have been credit-constrained pre-2006 (and just switched from private to federal loans)

• Need more research on implications of income-driven repayment plans and PSLF

• Future research: Look at medical and business schools to see if same patterns held

SPECIAL THANKS

• Assistance chasing down and entering data: Joe Fresco and Olga Komissarova

• Helpful comments on first draft: Amy Li, Judith Scott-Clayton, Doug Webber
ABSTRACT

Law school tuition prices have been on a steady upwards trajectory over the past decade. At the same time, the last recession was detrimental to the legal job market and many graduates face challenges securing jobs. Students of color, who are already underrepresented in the legal profession, may be particularly price sensitive—less likely to enroll in law school if tuition prices rise. Using data on 194 public and private law schools from 2006 to 2015 and two-way fixed effects models, we find that higher tuition and fee prices are not associated with fewer applications to law school. Additionally, there is no relationship between estimated net costs of attending law school and the number of first-year students who enroll, except for a positive relationship between private schools only. Higher net costs are associated with greater first-year enrollments of Asian American and white students only.

RESEARCH QUESTIONS

1. Are the number of applicants to law school associated with published annual tuition and fee prices?
2. Are first-year enrollments in law school associated with average net costs (tuition and fees plus living expenses minus median grant awards)?
3. Are first-year enrollments of students of color associated with average net costs?

METHOD(S)

Formally, the model is:

\[ Y_{i,t} = \alpha_i + \delta_i + \Delta Y_{i,t} + X_{i,t} \beta + \epsilon_{i,t} \]

- \( Y_{i,t} \) is the outcome variable (applications, first-year enrollments by race) for law school \( i \) in state \( s \) in year \( t \)
- \( \alpha_i \) and \( \delta_i \) are institution- and year-fixed effects
- \( \Delta Y_{i,t} \) is the main predictor variable of interest (tuition and fee prices, net cost)
- \( \beta \) is the parameter of interest and provides an estimate of the effect of the predictor variable on the outcome variable
- \( X_{i,t} \) and \( Y_{i,t} \) are vectors of institution- and state-level control variables (Rabe-Hesketh & Skrondal, 2012; Shadish, Cook, & Campbell, 2001)

DATA SOURCES

Data sources included the American Bar Association Standard 509 Information Reports, the Law School Admission Council, the American Community Survey, the Bureau of Labor Statistics, and the Bureau of Economic Analysis.

METHOD(S)

The final sample consisted of 194 law schools: 79 public schools, 113 private non-profit schools, and 5 for-profit schools. The total sample size across years 2006 to 2015 consisted of \( N = 1893 \) institution-years.

METHOD(S)

Although the literature on undergraduate price sensitivity suggests that students make enrollment decisions based on sticker price as well as net price (Heller, 1997; Hemelt & Marcotte, 2011), results from this study suggest that price sensitivity does not fully translate to law school students.

- First, applications to law schools are not associated with the published prices of tuition and fees.
- Second, first-year enrollments in law schools are not associated with estimated net costs, except at private law schools, where higher net costs are associated with greater numbers of first-year enrollments.
- Third, first-year enrollments of Black/African American and Hispanic students do not change based on changes in net cost. On the contrary, greater numbers of Asian American students and white students enroll as first-year law students when net costs are higher.

One explanation for the lack of support for price sensitivity could be that law school students are more knowledgeable about options to finance their legal education, and an increase in cost does not influence enrollment decisions.

RESULTS (PRELIMINARY)

<table>
<thead>
<tr>
<th>Year</th>
<th>Tuition (low median, avg)</th>
<th>Tuition (high median, avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>50000</td>
<td>80000</td>
</tr>
<tr>
<td>2010</td>
<td>70000</td>
<td>100000</td>
</tr>
<tr>
<td>2016</td>
<td>90000</td>
<td>120000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Living Expenses (avg)</th>
<th>Living Expenses (high median, avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>40000</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>60000</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>80000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Student Debt (avg)</th>
<th>Student Debt (high median, avg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>50000</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>70000</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>90000</td>
<td></td>
</tr>
</tbody>
</table>

IMPLICATIONS (PRELIMINARY)

This project was supported by AIR Grant #RG15516 from the AccessLex Institute and the Association for Institutional Research. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the AccessLex Institute or the Association for Institutional Research.

REFERENCES


To contact author(s):
Amy.Li@unco.edu

This project was supported by AIR Grant #RG15516 from the AccessLex Institute and the Association for Institutional Research. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the AccessLex Institute or the Association for Institutional Research.

Abstract

Dollars and Sense: Student Price Sensitivity to Law School Tuition
Amy Li & Margaret Sebastian
University of Northern Colorado
The economic return of higher education has been broadly discussed for degree recipients, both at undergraduate and graduate levels. However, no empirical study focuses on the economic outcomes of those who received some graduate education but left without earning a formal degree. Guided by the human capital theory, the current study examines labor market outcomes—specifically, labor force participation, employment, earnings, and student loan repayment status—of a cohort of first-time baccalaureate degree recipients four years after earning their degrees. The study found no statistically significant difference in the labor market outcomes between those who pursued but left without earning a graduate/professional degree and those who never pursued it.

**BACKGROUND**

- Since 2011, the number of people over 25 years old with some post-baccalaureate education has exceeded the number of people with only bachelor’s degrees. But 31% of those with post-baccalaureate education do not currently have a graduate or professional degree.

**METHOD & DATA**

- We employed the restricted-use data set of the Baccalaureate & Beyond Longitudinal Study 2008-2012 (B&B:08-12, License Control Number 16020011), a nationally representative, longitudinal survey conducted by the National Center for Education Statistics (NCES) that follows the 2007-08 cohort of baccalaureate degree recipients four years after.

- The study includes 13,575 members, who are U.S. citizens or permanent residents and earned their first bachelor’s degrees in 2007-08. Among them, 11,696 were in the labor force, 10,272 were employed with earnings, and 10,482 have borrowed federal loans as of 2012. The data were weighted by the standardized panel weight.

- We looked at the following outcomes as of 2012:
  - Labor force participation,
  - Employment status of those in the labor,
  - Salary of those employed, and
  - Federal loan repayment status.

Then we considered how post-baccalaureate education attainment, including “some graduate education,” may explain these four variables.

- Logistic regressions analyses were performed to explain probabilities for being in the labor force, employed, and not repaying federal loan, including forbearance, deference, and default statuses.

- We standardized salaries in 2012 in natural logs in order to remove outliers and adjust to normal distribution. Then, multiple regression analyses were performed to explain differences in earnings. Additional interaction analyses were performed to detect if the difference varies by selected demographic characteristics.

**LIMITATIONS**

- The sample size of the reference group (e.g., some graduate/professional education without a degree) was relatively small.

- The data does not indicate the number of graduate course credits taken or alternative credentials (e.g., badges, certificates, etc.) awarded to “some graduate education” respondents.

**REFERENCES**


**AUTHORS**

Hironao Okahana, hokahana@cgs.nche.edu
Ziyian Bai, baiziyan@u.washington.edu
ABSTRACT

Hiring adjunct and non-tenure line faculty represents an increasingly attractive option for law schools wishing to maintain course offerings while keeping instructional expenditures low, yet it is theoretically ambiguous whether they affect student academic and labor-market outcomes differently than their tenured and tenure-track counterparts (Ehrenberg, 2013). While prior research from undergrad study settings shows adjunct instructors perform no worse or slightly better when it comes to influencing subsequent course enrollments and academic performance (Bettinger & Long, 2010; Figlio et al., 2015), to date there is a lack of rigorous evidence documenting the relative efficacy of adjunct and non-tenure track faculty in legal education settings. We fill this gap in the literature by providing credible evidence on the causal impacts of adjunct and non-tenure track faculty on law students’ academic and labor-market outcomes relative to those of their tenured (and tenure-track) counterparts.

RESEARCH QUESTIONS

We aim to address the following three research questions concerning the relative efficacy of adjunct and non-tenure track faculty in first-year required law school courses:

1. Relative to tenured and tenure-track faculty, are adjunct and non-tenure track faculty more, less, or equally effective in promoting law students’ academic and labor-market success?

2. Does the relative efficacy of adjunct and non-tenure track faculty vary by law students’ sociodemographic backgrounds?

METHOD(S)

Student assignments to specific class-sections of required courses are (allegedly) conditionally random. A balance test confirms random assignment, which we leverage to employ an experimental methods approach and estimate the following model specification:

\[ \gamma_{ijst} = \alpha + \delta_{s} + \theta_{t} + \beta_{Adjunct} \text{Univ}_{it} + \beta_{Term} \text{Term}_{it} + \beta_{Other} \text{Other}_{it} + \delta_{ijst} \]

Where \( y \) is the outcome of interest (i.e., grades) at the student-course level; \( X, W, Z \) are vectors of observed student \((i, j, k)\), instructor \((i, j, k)\), and course-section \((c, s)\), characteristics, respectively; \( t \) indexes semesters; and \( \beta_{1-4} \) are parameters of interest (i.e., the effect of adjunct, term, other, and tenured-track instructors on course performance relative to tenured instructors).

If assignments are not truly random, however, our results could be biased for a variety of reasons. To address this concern, we also use a two-way fixed-effects approach similar to Figlio et al. (2015) that conditions on student and course-term FEs.

DATA SOURCES

We utilize rich student-by-course administrative data, including course title and grade earned, that is linked to instructor data from a top-100 Law School in a major urban center. We also incorporate data from student application packets to control for factors measuring prior academic performance and ability (i.e., undergraduate GPA and LSAT score).

The sample includes 10 cohorts of law school students enrolling full-time between AY2000-2011. Each cohort consists of roughly 1,000 students. We focus on first-year required coursework because students are assigned to them randomly.

The following is a list of first-year required courses included in the sample: Civil Procedure, Civil Procedure II, Constitutional Law, Contracts, Criminal Law, Criminal Procedure I, Legal Rhetoric I, Legal Rhetoric II, Property, Property II, Torts, and Legal Ethics.

RESULTS (PRELIMINARY)

<table>
<thead>
<tr>
<th>Balance Test</th>
<th>Adjunct</th>
<th>Term</th>
<th>Tenure-track</th>
<th>Tenured</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>25.56</td>
<td>25.63</td>
<td>25.43</td>
<td>25.47</td>
<td>25.42</td>
</tr>
<tr>
<td>Female</td>
<td>0.386</td>
<td>0.389</td>
<td>0.373</td>
<td>0.363</td>
<td>0.367</td>
</tr>
<tr>
<td>LSAT score</td>
<td>159.5</td>
<td>159.8</td>
<td>159.9</td>
<td>159.8</td>
<td>159.7</td>
</tr>
<tr>
<td>Observations</td>
<td>5960</td>
<td>1815</td>
<td>1825</td>
<td>24821</td>
<td>6804</td>
</tr>
</tbody>
</table>

Selected sample statistics (student-course level) reveal that important student characteristics are mostly evenly distributed across instructor rank.

RO1. Effect of instructor rank on earning a good grade (A-A+)

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjunct</td>
<td>0.052*</td>
<td>0.053***</td>
<td>0.051**</td>
<td>0.047*</td>
<td>0.043*</td>
</tr>
<tr>
<td>Term</td>
<td>0.016</td>
<td>0.017</td>
<td>0.016</td>
<td>0.019</td>
<td>0.024</td>
</tr>
<tr>
<td>Tenure-track</td>
<td>0.017</td>
<td>0.020</td>
<td>0.017</td>
<td>0.043</td>
<td>0.042</td>
</tr>
<tr>
<td>Other</td>
<td>0.021*</td>
<td>0.022</td>
<td>0.021*</td>
<td>0.002</td>
<td>0.011</td>
</tr>
<tr>
<td>Student X</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
</tr>
<tr>
<td>Instructor X</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
</tr>
<tr>
<td>Course FE</td>
<td>0.031</td>
<td>0.031</td>
<td>0.031</td>
<td>0.031</td>
<td>0.031</td>
</tr>
<tr>
<td>Course FE</td>
<td>0.031</td>
<td>0.031</td>
<td>0.031</td>
<td>0.031</td>
<td>0.031</td>
</tr>
<tr>
<td>Observations</td>
<td>40470</td>
<td>40486</td>
<td>40479</td>
<td>40483</td>
<td>40480</td>
</tr>
</tbody>
</table>

Findings show that students in first-year required courses are more likely to receive a good grade when assigned to adjunct and tenure-track instructors compared to tenured instructors. However, those assigned to term instructors perform worse. Results are generally robust to model specification.

RO2. Effect of instructor rank by student characteristics.

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Female</th>
<th>White</th>
<th>Latina</th>
<th>Asian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjunct</td>
<td>0.055***</td>
<td>0.030</td>
<td>0.036*</td>
<td>0.049**</td>
<td></td>
</tr>
<tr>
<td>Term</td>
<td>0.008</td>
<td>0.032</td>
<td>0.022</td>
<td>0.020</td>
<td>0.023</td>
</tr>
<tr>
<td>Tenure-track</td>
<td>0.007</td>
<td>0.023</td>
<td>0.046</td>
<td>0.055</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.018</td>
<td>0.023</td>
<td>0.007</td>
<td>0.007</td>
<td>0.007</td>
</tr>
<tr>
<td>Course X</td>
<td>0.020</td>
<td>0.021</td>
<td>0.019</td>
<td>0.021</td>
<td></td>
</tr>
<tr>
<td>Instructor X</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Course FE</td>
<td>0.036</td>
<td>0.036</td>
<td>0.036</td>
<td>0.036</td>
<td>0.036</td>
</tr>
<tr>
<td>Observations</td>
<td>23816</td>
<td>17077</td>
<td>14525</td>
<td>26368</td>
<td></td>
</tr>
</tbody>
</table>

Findings show that the effect of adjunct and tenure-track instructors relative to tenured instructors in first-year required courses on course performance is somewhat consistent across student background.

IMPLICATIONS (PRELIMINARY)

Our preliminary results show that adjunct and tenure-track instructors are more likely to award good grades to students in first-year required courses than their tenured counterparts teaching the same students and subjects. When examining whether certain types of students are more likely to receive better grades, it is particularly concerning that tenure-track instructors are much more likely to award good grades to white and male students given existing race and gender gaps in legal education and access to professional opportunities.

Additional results (not shown) suggest these differences are not due to true learning gains as students with tenure-track instructors in the first semester for a given subject (e.g., Property) perform worse in second semester courses of the same subject (e.g., Property II). In other words, there is some moderately damning evidence that tenure-track instructors do grade inflate in ways that harm student learning and subsequent achievement. This is not the case for adjunct instructors, however, who neither help nor hurt subsequent performance in the subject.

These findings are troubling given the importance of GPA and class rank in determining access to prestigious internships, clerkships, job interviews, and participation in legal journals. We are currently collecting employment information on graduates of the law school in order to examine labor market outcomes.

REFERENCES


To contact Erdal Tekin (PI): tekin@american.edu
The Role of Community College Attendance in Shaping Baccalaureate Recipients’ Access to Graduate and Professional Education

Xueli Wang and Yen Lee
University of Wisconsin - Madison

ABSTRACT

The community college contribution to postsecondary education extends well beyond the sub-baccalaureate level into the graduate and professional levels (National Science Foundation, 2010, 2015). Nearly half of all science and engineering bachelor’s and master’s degree recipients (Mooney & Foley, 2011; National Science Foundation, 2010) and approximately 13% of engineering bachelor’s and master’s degree recipients (NSF 10-318). Washington, DC: Author. (2010) had approximately 13% of doctoral recipients across all fields of study (National Science Foundation, 2015) had attended a community college. Drawing upon the latest national longitudinal survey of students who completed a bachelor’s degree during 2007-2008, this study investigates whether and how having attended a community college during their undergraduate years plays a role in baccalaureate recipients’ access to graduate and professional education four years since their college completion. The research design follows two main steps: (1) the propensity score matching to establish “treatment” and “control” groups based on students’ community college attendance, and (2) logistic regression analyses to answer the following two main research questions.

RESEARCH QUESTIONS

Two questions guide this study:

First, what is the impact of community college attendance on baccalaureate recipients’ access to graduate and professional schools in general?

Second, how does previous community college attendance influence student enrollment in different professional and graduate programs, including law school enrollment?

Four main areas of graduate study, including STEM, humanities, social sciences, and professional programs.

A separated analysis regarding community college attendance’s impact on enrollment in law school was conducted.

METHOD(S)

Two main steps:

First, one to one propensity score matching is conducted to establish “treatment” and “control” groups, using socio-demographic characteristics and high school experiences as covariates.

Second, binary logistic and multinomial logistic regression models are estimated to answer the two research questions respectively, based on the matched sample and accounting for a set of covariates.

Other technical details:

❖ Adopted and analyzed two definitions of community college attendance, i.e., beginning postsecondary education at a community college (Definition 1), or having ever attended a community college regardless of first postsecondary institution (Definition 2)
❖ Multiple imputation to handle missing data
❖ Complex survey design features accounted for
❖ Addressed potential moderation by adding a series of interaction terms, e.g., the highest expected education level and community college attendance.

DATA SOURCES

Restricted-use data from the 2008-12 Baccalaureate and Beyond Longitudinal Study (B&B:08/12), conducted by the National Center for Education Statistics:

❖ The third and latest administration of the national longitudinal survey of students’ education and work experiences after completing a bachelor’s degree.
❖ Followed a nationally representative sample of bachelor’s degree recipients who completed their degree requirements during the 2007-08 academic year.
❖ Two follow-up studies, with the first administered one year after graduation, and the second completed in 2012, both examining students’ enrollment in graduate and professional programs as well as labor market experiences since college graduation.

RESULTS (PRELIMINARY)

PSM Results:

Over 95% of the students who have attended a community college (about 2,760 out of 2,770 students based on Definition 1 and 5,040 out of 5,270 students based on Definition 2) were successfully matched and analyzed. All the covariates were balanced, and the maximum value of relative bias of all covariates across 5 imputed data sets were smaller than .10.

Regression Findings:

For the first question, preliminary findings indicate that, based on Definition 1 of CC attendance, there is no treatment effect; whereas based on Definition 2, CC attendance showed a significant and positive effect on access to graduate and professional programs among students who expected to obtain a bachelor’s, master’s, professional, or doctoral degree.

IMPLICATIONS (PRELIMINARY)

Our preliminary findings indicate that having attended a CC does not hurt, and using a more liberal definition, is beneficial to the pursuit of graduate or professional studies, including law school in general. This finding bear several implications:

❖ Community colleges represent a unique opportunity to diversify graduate and professional education.
❖ Offering much more affordable course and program options, community college attendance may lower the total costs of graduate and professional school.
❖ Community colleges factor into a larger viable pathway to graduate/professional education; Community colleges and graduate and professional schools can work together to cultivate more seamless educational pathways.

REFERENCES


To contact authors:
[xwang273@wisc.edu; ylee373@wisc.edu]
ABSTRACT

The study contributes new evidence on the factors influencing graduate degree aspirations, enrollment, and attainment, with particular attention on gender and racial/ethnic differences. Drawing on nationally representative data (ELS:2002/12), we are examining students’ entering college characteristics and undergraduate educational experiences in relationship to three key graduate education outcomes: 1) graduate degree aspirations, 2) enrollment, and 3) attainment. In addition to examining the general effects that predict these outcomes, we assess if the effects are conditional on gender and racial/ethnic identity. Preliminary results show that graduate aspirations, enrollment, and attainment are associated with ascribed background characteristics as well as factors including: majors, institutional type, academic performance, undergraduate engagement, and total accumulated debt.

PRIMARY AIM

To obtain new empirical evidence on the factors affecting the graduate education pipeline, particularly among students of different gender and racial/ethnic identities.

METHODS

Phase 1: Data Conditioning. Recode and rename variables, conduct missing data analysis, replace missing data using advanced multiple imputation methods (i.e., the Markov chain Monte Carlo – MCMC - iterative method, see Li, Raghunathan, & Rubin, 1991; Schafer, 1997), and transform, scale, and standardize select variables.

Phase 2: Descriptive and Bivariate Analysis. Compute means, standard deviations, and frequencies of the different variables under investigation. Use a chi-square analysis and one-way ANOVA to examine whether significant differences are evident for particular groups based on their gender and race/ethnic identification, across pertinent variables in the analytic model.

Phase 3: Multivariate Analysis. Logistic regression and conditional effects modeling are being used to examine the general effects of variables across the three outcomes under investigation (i.e., aspirations, enrollment, and attainment of a graduate degree). The general effects model arrives at an estimated effect for each variable, averaged across all individuals in the sample. The conditional effects result from re-analyzing the model to identify how, or if, estimated effects vary based on students’ gender or racial/ethnic identities. This approach may also be referred to as examining moderating effects (see Hayes, 2013; Mayhew, et al., 2016). The regression equations are as follows:

RESULTS (PRELIMINARY)

Significant differences by “ascribed” background characteristics:

Controlling for educational experiences, undergraduate institutions, total accumulated student debt, and other measures, we found that students’ ascribed background characteristics continue to influence likelihoods of aspiring to, enrolling in, and completing a graduate degree following college. Compared to the reference groups (males, whites, and those that aspire for a Ph.D.), results show:

- Females were more likely to aspire to, and complete a graduate degree within the first few years of college. No gender gap appeared in terms of likelihood of graduate enrollment.
- Black students were more likely than Whites to aspire, enroll, and attain a graduate degree.
- Hispanics were more likely than Whites to aspire to a graduate degree, but not different in their odds of graduate enrollment or attainment.
- SES positively influenced the likelihoods of graduate enrollment and attainment.
- Early educational aspirations have strong and lasting effects: the higher a student’s aspirations in high school, the more likely he/she is to maintain high aspirations, enroll in, and graduate from a graduate program.

MEASURES

Phase 1: Data Conditioning. Recode and rename variables, conduct missing data analysis, replace missing data using advanced multiple imputation methods (i.e., the Markov chain Monte Carlo – MCMC - iterative method, see Li, Raghunathan, & Rubin, 1991; Schafer, 1997), and transform, scale, and standardize select variables.

Phase 2: Descriptive and Bivariate Analysis. Compute means, standard deviations, and frequencies of the different variables under investigation. Use a chi-square analysis and one-way ANOVA to examine whether significant differences are evident for particular groups based on their gender and race/ethnic identification, across pertinent variables in the analytic model.

Phase 3: Multivariate Analysis. Logistic regression and conditional effects modeling are being used to examine the general effects of variables across the three outcomes under investigation (i.e., aspirations, enrollment, and attainment of a graduate degree). The general effects model arrives at an estimated effect for each variable, averaged across all individuals in the sample. The conditional effects result from re-analyzing the model to identify how, or if, estimated effects vary based on students’ gender or racial/ethnic identities. This approach may also be referred to as examining moderating effects (see Hayes, 2013; Mayhew, et al., 2016). The regression equations are as follows:

RESULTS (PRELIMINARY)

Significant differences by “ascribed” background characteristics:

Controlling for educational experiences, undergraduate institutions, total accumulated student debt, and other measures, we found that students’ ascribed background characteristics continue to influence likelihoods of aspiring to, enrolling in, and completing a graduate degree following college. Compared to the reference groups (males, whites, and those that aspire for a Ph.D.), results show:

- Females were more likely to aspire to, and complete a graduate degree within the first few years of college. No gender gap appeared in terms of likelihood of graduate enrollment.
- Black students were more likely than Whites to aspire, enroll, and attain a graduate degree.
- Hispanics were more likely than Whites to aspire to a graduate degree, but not different in their odds of graduate enrollment or attainment.
- SES positively influenced the likelihoods of graduate enrollment and attainment.
- Early educational aspirations have strong and lasting effects: the higher a student’s aspirations in high school, the more likely he/she is to maintain high aspirations, enroll in, and graduate from a graduate program.

DATA SOURCES

Restricted-Use NCES Datasets


Postsecondary Education Transcript Study (PETS)

Q1: Graduate Aspirations

a) What factors influence aspirations to attain a graduate degree?

b) To what extent are these influences conditional on students’ gender and racial/ethnic classifications?

Q2: Graduate Enrollment

a) What factors influence enrollment in a graduate program?

b) To what extent are these influences conditional on students’ gender and racial/ethnic classifications?

Q3: Graduate Degree Attainment

a) What factors influence the attainment of a graduate degree?

b) To what extent are these influences conditional on students’ gender and racial/ethnic classifications?

REFERENCES


IMPLICATIONS (PRELIMINARY)

These preliminary findings suggest several implications:

- After controlling for a host of undergraduate and aspirational variables, there is little evidence of pervasive sex or racial/ethnic gaps. Gaps are apparent in terms of precollege educational aspirations and family SES, pointing to the pervasive sources of socioeconomic inequality and inherent policy challenges.

- Early and sustained academic achievement matters a lot, as does being actively engaged as an undergraduate student.

- Undergrad major has less of an influence than anticipated, based on the literature (e.g., Carnevale, 2016; Carnevale, et al., 2012).

- Institution attended has largely, possibly countereffective influence: for-profit and less selective institutions may push students to attend graduate school to improve labor market opportunities.

Emerging results appear to suggest the conditionality of graduate education models, particularly based on racial/ethnic identities:

- For White students, family SES uniquely affects graduate enrollment and attainment, net of a host of educational and other demographic factors. This may indicate the maintenance of socioeconomic advantage among White students.

- College involvement and faculty contact is particularly advantageous for Blacks, pointing to clear programmatic ways to foster additional graduate education success among Black students.

To contact author(s): gwolniak@nyu.edu