ILLINOIS EDUCATION RESEARCH COUNCIL
Southern Illinois University Edwardsville

IOWA STATE UNIVERSITY

Patterns of Retention and Completion in Illinois: Is Student Debt a Barrier to Completion?

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Introduction

College Completion Agenda

- United States now ranks 14th among 37 nation members of Organization for Economic Co-Operation and Development (OECD) in percentage of young working adults (25-34) with a postsecondary credential (OECD, 2014).
- If current trajectories hold, United States will fall short of the goal to have 60% of working adults with a postsecondary credential by 2025 (Lumina, 2014).

Increases in Cost of Attendance

- Since 2004, the average published costs for tuition and fees has increased 41 percent at public, four-year institutions and 24 percent at private, not-for-profit four year institutions (The College Board, 2015).

Rise of Student Debt

- 69 percent of undergraduate students leave a nonprofit postsecondary institution (public and private) with some amount of student loan debt – on average $28,000 (Project on Student Debt, 2014).
- African American students and students from low-SES families are most likely to borrow (Baum, 2010; Jackson & Reynolds, 2013).

Literature Review

- Since 1990s, loans have become primary source for paying postsecondary cost of attendance (Dynarski & Scott-Clayton, 2013).
- Recent research student borrowing and persistence rates find mixed results (Cadena & Keys, 2010; Houle, 2014; Jackson & Reynolds, 2013; Turner, 2012).
- Results from limited research examining the influence of institutional characteristics related to financial aid on persistence are more consistent (Chen, 2012; Hillman, 2014; Kim, 2007; Titus, 2004).
- Many of these studies use national-level data, limiting institution-specific comparisons. Additionally, research in this area tends to focus on impact of institutional characteristics related to student aid on persistence rather than degree completion.

Research Questions

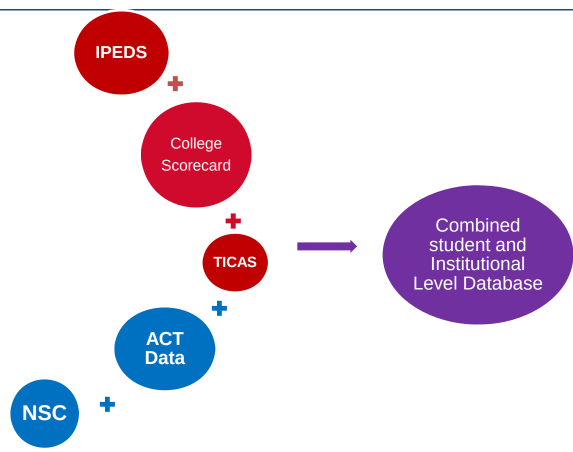
We examine potential relationships between borrowing, institutional type, and graduation rates among specific institutions in the same geographic context. More specifically, we use institutional-level data four-year colleges and universities to consider the following questions:

- What is the correlation between student persistence patterns and institutional characteristics related to student debt?
- Do institutional effects moderate the relationships between college readiness or family income and student persistence?
- What is the profile of students who successfully complete in four years, with regards to college readiness, financial factors, and institutional factors?

ILLINOIS

- Postsecondary rates in Illinois remain stagnant, increasing slightly from 40.2 percent in 2008 to 42.5 percent in 2012 (Lumina, 2014).
- Seventy percent of students attending four-year colleges in Illinois leave with some level of debt, the fourth highest percentage in the country (Project on Student Debt, 2014).
- For students in Illinois, the average loan debt is approximately $28,500, slightly above the national average.

Methods – Data Sources



Methods – Sample Selection

Institutions

- Illinois public and private institutions and primarily online institutions
- 2 private institutions did not have median debt of graduates data
- Screened out institutions with less than 10 students from IL database
- Final sample, N = 57: n_{public} = 11, $n_{priv\text{-}np}$ = 42, $n_{priv\text{-}fp}$ = 4

Students

- 2009 Illinois public high school graduating class, N = 109,031
- Selected those that entered one of the matched Illinois 4-year institutions in the fall 2009, n = 28,024

Methods – Institutional Measures

Institutional Characteristics

- Average debt of graduates from institution
- Percent of students with federal loans
- Barron's selectivity rating
  - Highly & most competitive, Very competitive, and Competitive or lower
- Institutional sector
  - Public 4-year, Private non-profit 4-year, Private for-profit 4-year
- Percent first generation

Methods – Student Measures

Outcomes

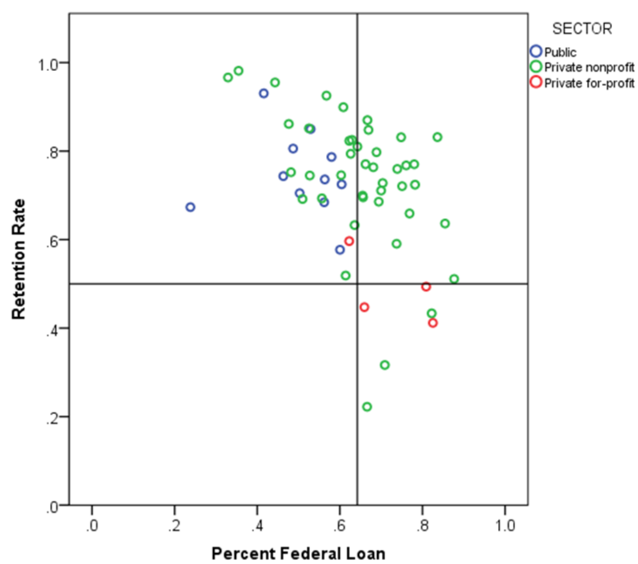
- Retention to Year 2, Year 3, & Year 4 at the same institution
- Completed Bachelor's degree in 4-years at the same institution

Student-Level Predictors

- Whether student met ACT English (18) or math benchmark (22)
- Student reported family income level:
  - Low income: ≤ $36,000 (20%)
  - Mid income: $36,000 to and including $80,000 (22.2%)
  - Mid-High income: $80,000 to and including $120,000 (24%)
  - High income: > $120,000 (33.5%)

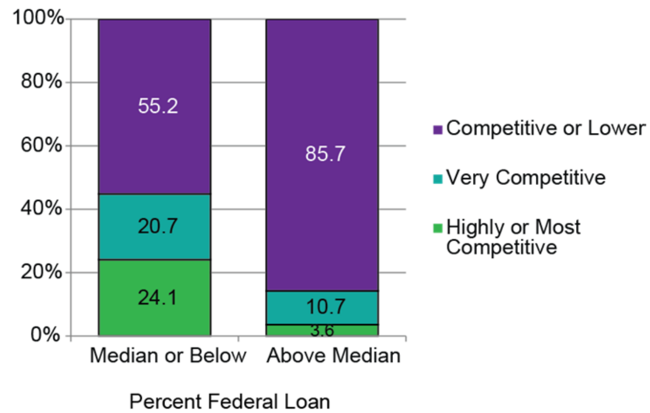
9

Retention by Percent Federal Loans

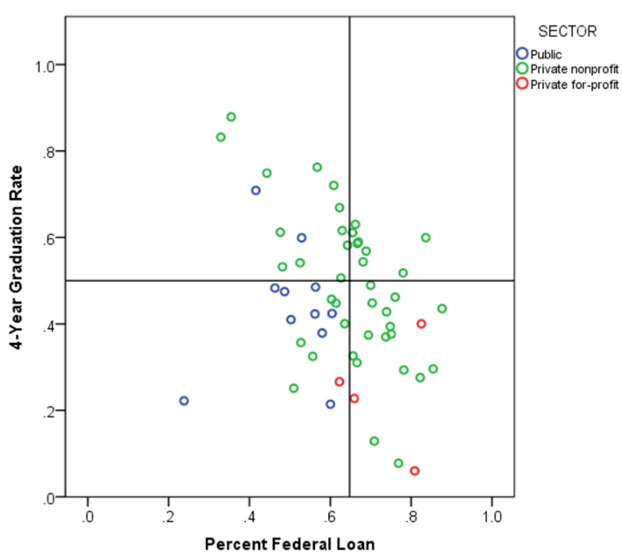


10

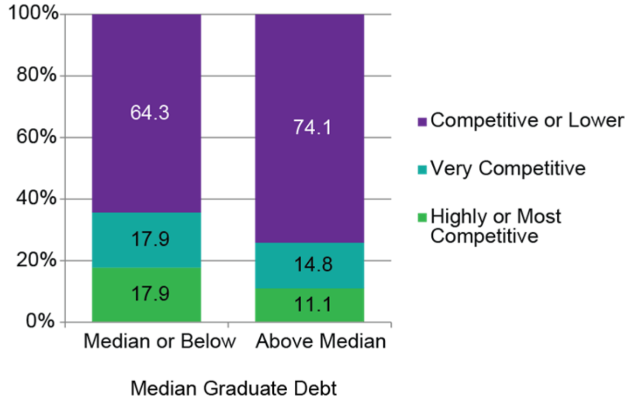
Composition of Institutions by Barron's Selectivity based on Percent Federal Loans



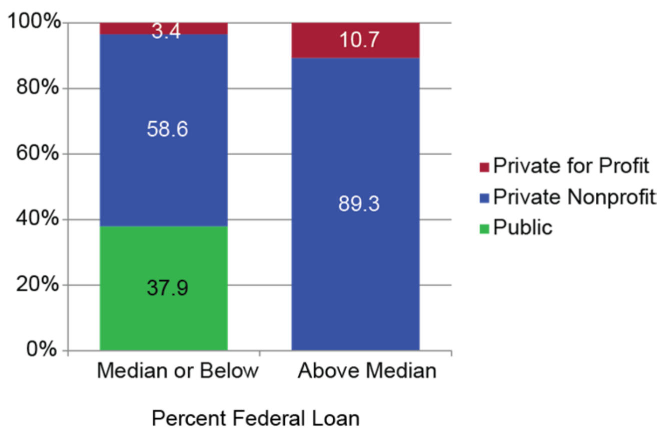
4-Year Completion by Federal Loan



Composition of Institutions by Barron's Selectivity based on Median Debt of Graduates



Composition of Institutions by Institutional Sector based on Percent Federal Loans



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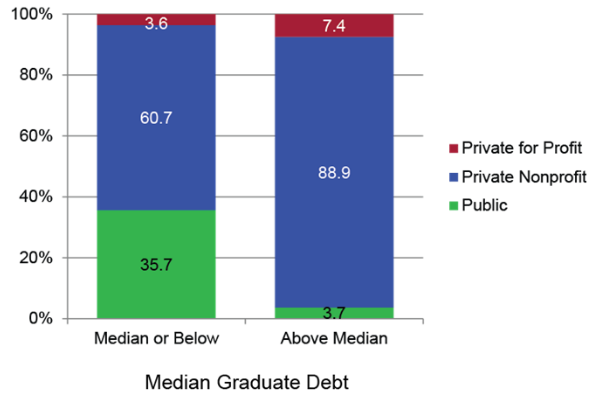
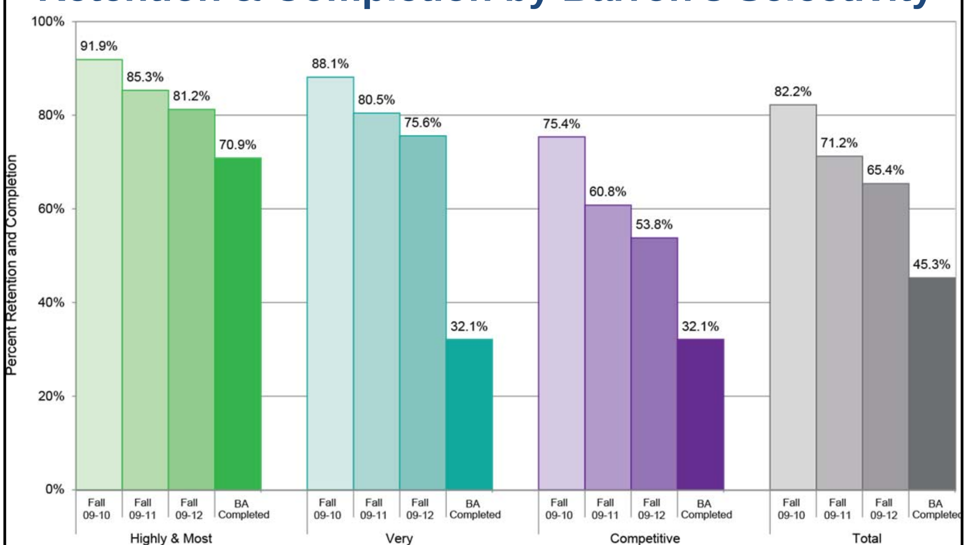
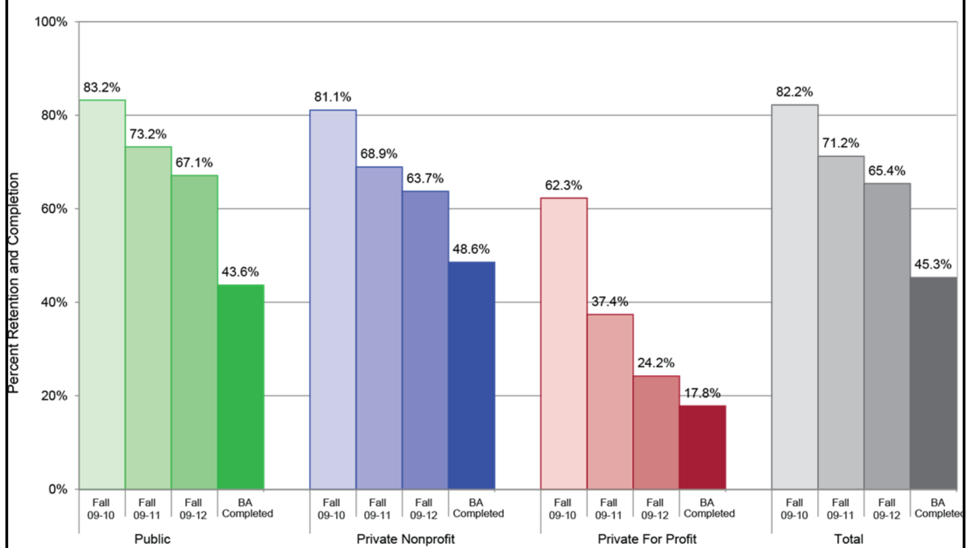


Retention & Completion by Barron's Selectivity



Retention & Completion by Institutional Sector



Multilevel Analysis

- Used multilevel logistic regression, using a Bernoulli distribution to model the binary student-level outcomes from student and institutional predictors
- Used unit-specific models with robust standard errors so results indicate effects for a typical institution assuming large sample size
- Primary focus is the effect of the institutional level variables (level-2 variables)

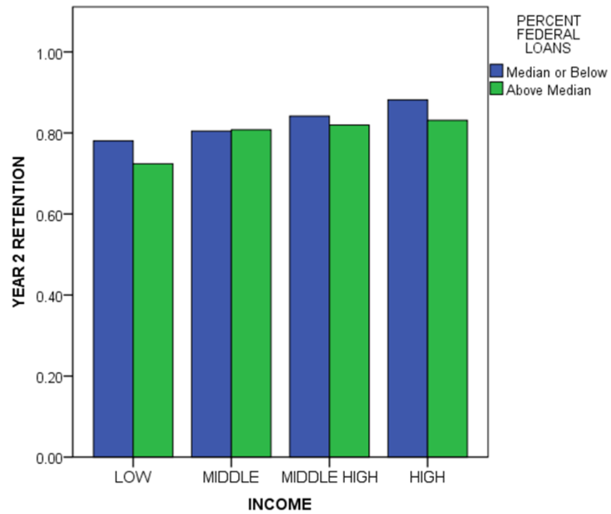
Main Effects of Institutional-level Factors

- Attending institutions with high percent of students with federal loans was negatively related to retention across all years, controlling for income or college readiness in math and English.
- Attending institutions with high percent of first generation students was negatively related to retention across all years and negatively related to completion, controlling for income or college readiness in math and English.
- Attending more selective institutions was positively related to retention across all years and to completion, controlling for income level.
- Being college ready, mitigated some of the effects of institutional selectivity.
- Attending for profit institutions had a negative effect on retention across all years, controlling for college readiness.

Interaction of Institutional-level Factors and Family Income Level

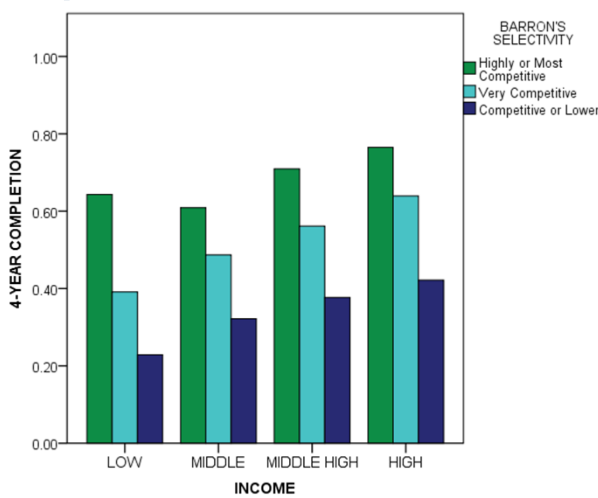
- Inconsistent interactions of institutional-level factors and family income on retention and completion.
  - In year 2, attending an institution with a high percent federal loans, was associated with a larger retention gap between students from mid and low income families.
  - In years 3 and 4, attending a non-profit private vs. public, increased the retention gap between students from mid and low income families.
  - There were not any interactions of percent first generation and family income on retention or completion.
  - Barron's selectivity level, did not have consistent effects on retention but attending a most or highly selective institution mitigated the effect of family income on completion as compared to attending a competitive institution for low income students.

Percent Federal Loans & Family Income on Year-2 Retention



21

Barron's Selectivity & Family Income on Completion



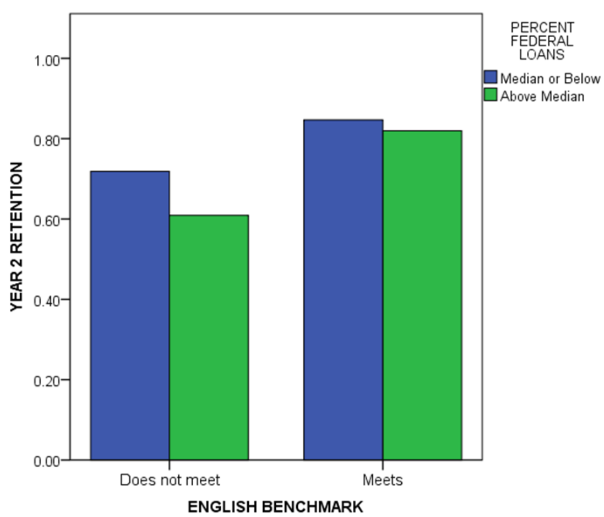
22

Interaction of Institutional-level Factors and College Readiness

- Limited effects of institutional-level factors on the effect of college readiness on retention & completion.
  - In years 2 & 3, attending an institution with a high percent federal loans, was associated with a larger retention gap for students not college ready in English.
  - Less of a year 2 retention gap based on Barron's selectivity if college ready in math.
  - There were not any interactions of percent first generation and college readiness on retention or completion.
  - Non-profits had a higher retention gap with publics in years 3 & 4 for those who did not meet CR benchmarks in math.
  - For profits had a higher completion gap from publics when students were not college ready in math, although still a large gap.

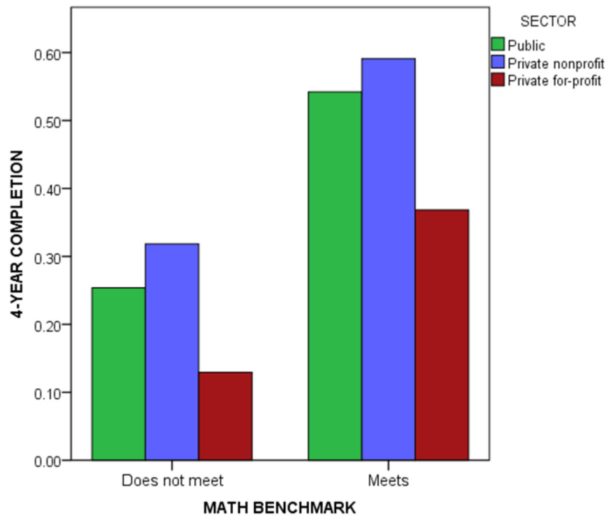
23

Percent Federal Loans & College Readiness on Year-2 Retention



24

Sector & College Readiness on Completion



25

Summary – Student Effects

- The percent of students with debt was negatively related to retention but not to 4-year completion
  - More negative effects on year 2 retention when not CR in English
  - More negative effects on year 2 retention when from low income family
- Barron's selectivity was positively related to both retention and completion
  - Did counter the effects of poverty on *completion*
- Percent first generation negatively related to both retention and completion
- For profits were negatively associated with retention
  - Some intensification of retention & completion gap between private & public if not college ready

26

Student Characteristics of those who Complete in 4

- Female (61% Completers vs. 53% Non-completers)
- White (76% Completers vs. 59% Non-completers)
- Middle High Income (33% Completers vs. 27% Non-completers) and
- High Income (28% Completers vs. 18% Non-completers)
- Did not plan to work more than 20 hours in college (9% Completers vs. 18% Non-completers)
- Met the ACT Benchmarks, e.g., English (e.g., 96% Completers vs. 82% Non-completers)
- Met the ACT Benchmarks, e.g., Math (e.g., 78% Completers vs. 52% Non-completers)
- College prep curriculum (78% Completers vs. 66% Non-completers)

Institutional Characteristics of those who Complete in 4

- More Private non-profit (39% Completers vs. 30% Non-Completers)
- More Highly Competitive (16% Completers vs. 7% Non-Completers)
- More Very Competitive (50% Completers vs. 29% Non-Completers)
- Lower % of Students Receiving PELL (12 mos. average)
  (30% Completers vs. 37% Non-Completers)
- Lower 2009 Loan Default Rate (4.6% Completers vs. 6.4% Non-Completers)
- Higher Net Price of Attendance ($18,808 Completers vs. $17,054 Non-Completers)
- Little difference on average student debt, % students with debt, % student and instructional expenditures

Institutional Characteristics for Low vs. High Income Completers

Low Income

- 45% Non-profit Privates
- $27,720 Average Student Debt
- 67% Students with Debt
- 42% at Competitive Institutions
- 33% of Students Receiving PELL
- 5.2% Cohort Default Rate

High Income

- 33% Non-profit Privates
- $26,911 Average Student Debt
- 62% Students with Debt
- 23% at Competitive Institutions
- 27% of Students Receiving PELL
- 3.8% Cohort Default Rate

Institutional Characteristics for Low Income Completers vs. Non-Completers

Completers

- 45% Non-profit Privates
- $27,720 Average Student Debt
- 67% Students with Debt
- $18,961 Net Price
- 42% at Competitive Institutions
- 33% of Students Receiving PELL
- 5.2% Cohort Default Rate

Non-Completers

- 30% Non-profit Privates
- $26,387 Average Student Debt
- 62% Students with Debt
- $16,652 Net Price
- 73% at Competitive Institutions
- 41% of Students Receiving PELL
- 7.1% Cohort Default Rate

College Readiness of Low Income Students

Completers

- 40% met Science
- 65% met Math
- 68% met Reading
- 89% met English

Non-Completers

- 20% met Science
- 35% met Math
- 45% met Reading
- 70% met English

Observations

- For profit institutions are generally high debt and low retention and completion.
- Public institutions fare better on retention than completion.
- Institutional factors, such as percent loans and percent first generation, negatively related to student outcomes.
- Barron's selectivity positively related to college outcomes, especially completion.
- Barron's selectivity was the only factor that reduced the completion gap between high and low income students.

Discussion

- How are competitive, private non-profit institutions recruiting and retaining students from low-income backgrounds?
- What are the sources of financial support that hold down student debt at private, non-profit institution for low-income students?
- Readiness is clearly important. What can we do to foster more college readiness, particularly among low-income students?

33

Future Research

- Are there circumstances in which high debt is worth the ROI? For whom?
- What characterizes the low college-ready and/or low-income completing students? What college majors?
- Look at student-level financial aid data - may be more about individual circumstance than institutional composition.

34

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