Final Brief: Institutional Factors and Student Debt

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Bio: Kai Schropfer is a rising tenth-grader with interests in economics, statistics, and education research. He hopes to study applied math and economics, along with French. During the summer of 2023, Kai worked with PERI[2] researchers on a number of different projects related to STEM education in Higher Education. In his spare time, Kai enjoys running, playing basketball, and skiing.

In 1958, the United States Government first recognized student debt as an issue plaguing young adults across the country. In 1995, when organizations and the Federal Government started tracking the total student loan debt, it hovered around $187 billion (Swagel, 2020). Today, student debt in the US is roughly 1.6 trillion dollars, an amount that has surged dramatically in the last twenty years (Hahn, 2023). The rise in student debt has been almost in parallel to the steep rise in college selectivity, with the colleges in the University of California (UC) system and other colleges seeing drops in the acceptance rate of up to 50%, displaying how undergraduate colleges are rapidly becoming more selective despite the growing number of applicants looking to attend and despite what seems to be a period of college un-affordability (Illumin Education, 2014).

These parallel trends motivate the line of inquiry in this white paper that focuses on examining institutional characteristics among institutions that produce the most student debt.

Data & Study Sample
This study uses data from the following four sources: (1) *Integrated Postsecondary Education Data System (IPEDS)* is a system that gathers data from every college, university, and technical and vocational institution that participates in the federal student financial aid program. Data used in this study are from the 2015-2016 and 2021-2022 academic years[1]; (2) *College Scorecard* is a tool that provides information on the economic and financial sides of colleges, such as their net costs, average debt, and student earnings post graduation[2]; (3) *The New York Times Chetty College Mobility Tool* is one that provides specific, in-depth data into the economics of colleges through the analyzation of tax records[3], and (4) *Third Way* ranks every institution in the US in terms of their economic mobility, meaning how well the institution is able to move the bottom 10% in terms of economic status up to higher tiers[4].

Table 1 includes the study sample. The study sample includes the twenty-five institutions in the US with the largest amount of student debt, on average. These institutions are listed in column 1, in descending order based on average individual debt. These institutions are all undergraduate, general-education institutions, with all but the University of Maryland, Baltimore representing a

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[1] Data retrieved from: https://nces.ed.gov/ipeds
[2] Data retrieved from: https://collegescorecard.ed.gov/
[3] Data retrieved from: https://www.nytimes.com/interactive/projects/college-mobility
[4] Data retrieved from: https://www.thirdway.org/graphic/rating-colleges-by-economic-mobility

private institution. As a comparison group, I use the top ten most selective institutions, as measured by acceptance rate (column 3). The ten most selective institutions are listed in Table 2.

Table 1 also includes seven other variables to describe the study sample. These variables are:
   (1) The percentage of students that move from the bottom income quintile to the top (column 4)
   (2) The percentage of students that move up two or more income quintiles (column 5)
   (3) The median family income of the total student body (column 6)
   (4) Tier in the economic mobility index (Tier 1 is the top 20%, Tier 2 is the 20-40%, etc.) (column 7)
   (5) The proportion of students that are awarded federal student loans (column 8)
   (6) The percent of the undergraduate students that are part of a minoritized student population (column 9)
   (7) Six-year Graduation rate (column 10)

Table 1. Summary statistics (full study sample)

Institution (*= Ten Most Selective)	Average Debt	Selectivity	% Moved from the Bottom Income Quintile to the Top	% Moved Up 2 or More Quintiles	Median Family Income	Economic Mobility	% Awarded Federal Student Loans	MSP %	Graduation Rate
1	2	3	4	5	6	7	8	9	10
Tufts University*	$89,597	0.11	0.02	0.12	$224,800	4	0.63	36.94%	0.94
University of Maryland, Baltimore	$86,398	0.81				1	0.25	45.48%	
University of the Pacific	$81,101	0.79	0.04	0.25	$99,100	1	0.43	44.22%	0.69
Georgetown University*	$80,852	0.12	0.02	0.11	$229,100	3	0.21	38.52%	0.95
Creighton University	$77,043	0.78	0.02	0.13	$138,700	4	0.48	20.51%	0.79
University of Southern California*	$75,663	0.12	0.02	0.20	$161,400	2	0.23	43.99%	0.92
Columbia University*	$71,977	0.04	0.03	0.14	$150,900	1	0.17	51.00%	0.97
Yeshiva University	$71,498	0.62	0.02	0.08	$176,300	3	0.17	40.12%	0.80
Case Western Reserve University	$68,727	0.30	0.02	0.17	$125,700	4	0.5	35.69%	0.84
Harvard University*	$68,677	0.04	0.02	0.11	$168,800	4	0.02	47.46%	0.97
Logan University	$67,032	0.66				1	0.43	30.11%	
University of Chicago*	$64,283	0.06	0.02	0.14	$134,500	4	0.06	47.12%	0.96
Nova Southeastern University	$63,378	0.92	0.03	0.29	$81,200	2	0.46	62.66%	0.61
MCPHS University	$61,752	0.98	0.09	0.38	$96,300	2	0.65	46.43%	0.67
University of Detroit Mercy	$61,222	0.93	0.02	0.20	$99,400	2	0.2	44.32%	0.67
Wake Forest University	$58,922	0.25	<0.01	0.09	$221,500	4	0.17	28.58%	0.90
Vanderbilt University*	$58,642	0.07	0.02	0.11	$204,500	3	0.11	41.96%	0.93
Northwestern University*	$57,110	0.07	0.02	0.11	$171,200	3	0.19	40.39%	0.95
George Washington University	$57,097	0.50	0.02	0.15	$182,200	3	0.27	38.41%	0.84
Howard University	$55,078	0.35	0.04	0.27	$68,300	3	0.51	95.36%	0.64
New York University*	$54,815	0.13	0.04	0.18	$149,300	3	0.26	58.28%	0.87
University of Pennsylvania*	$52,743	0.06	0.02	0.13	$195,500	4	0.1	40.25%	0.96
American University	$52,310	0.64	0.01	0.13	$155,300	4	0.33	39.37%	0.79
Simmons University	$51,631	0.84				3	0.65	31.92%	0.71
Duke University*	$50,697	0.06	0.02	0.11	$186,700	3	0.3	44.99%	0.96
AVERAGES:	**$66,148**	**0.41**	**0.03**	**0.16**	**$155,486**	**2.84**	**0.3112**	**43.76%**	**0.84**

Table 2 (the ten most selective institutions)

Institution (*= Ten Most Selective)	Average Debt	Selectivity	% Moved from the Bottom Income Quintile to the Top	% Moved Up 2 or More Quintiles	Median Family Income	Economic Mobility	% Awarded Federal Student Loans	MSP %	Graduation Rate
1	2	3	4	5	6	7	8	9	10
Harvard University*	$68,677	0.04	0.02	0.11	$168,800	4	0.02	0.47	0.97
Columbia University*	$71,977	0.04	0.03	0.14	$150,900	1	0.17	0.51	0.97
University of Chicago*	$64,283	0.06	0.02	0.14	$134,500	4	0.06	0.47	0.96
University of Pennsylvania*	$52,743	0.06	0.02	0.13	$195,500	4	0.1	0.40	0.96
Duke University*	$50,697	0.06	0.02	0.11	$186,700	3	0.3	0.45	0.96
Northwestern University*	$57,110	0.07	0.02	0.11	$171,200	3	0.19	0.40	0.95
Vanderbilt University*	$58,642	0.07	0.02	0.11	$204,500	3	0.11	0.42	0.93
Tufts University*	$89,597	0.11	0.02	0.12	$224,800	4	0.63	0.37	0.94
University of Southern California*	$75,663	0.12	0.02	0.20	$161,400	2	0.23	0.44	0.92
Georgetown University*	$80,852	0.12	0.02	0.11	$229,100	3	0.21	0.39	0.95
AVERAGES:	$67,024	0.08	0.02	0.13	$182,740	3.1	0.202	0.43	0.951

Summary Statistics

As shown in Table 1, the average acceptance rate using the full study sample is 41%. An acceptance rate of over 50% automatically places a school into the top 27% of all institutions in the US in terms of selectivity, meaning that an average institution in this study would roughly be in the top 27% of the hardest colleges to be accepted to. With regards to economic mobility, the average score is 2.84, indicating that the average institution in the study is roughly in the top 35% of US colleges in terms of economic mobility. To be more specific, four institutions are in Tier 1, four are in Tier 2, nine are in Tier 3, eight are in Tier 4, and none are in Tier 5. The graduation rate is 84%. Lastly, in terms of student background characteristics, the median family income in the full study is $155,486 as compared to the ten most selective colleges being $27,000 higher at $182,740. The marginalized student population percentages are nearly identical in both samples at around 43%.

Key Findings

### 1. Average debt is almost a year of median salary

As we show in Table 1, the average individual student debt for the full sample was $66,148. With the median household income in the US being around $74,580 (Guzman, Koller, 2023), this means that the average student in this study would graduate with more than a median year's salary pre-tax in debt as would students in sixteen out of the twenty-five colleges.

2. Selectivity does not necessarily correlate with lower student debt

Figure 1 displays the average acceptance rate for both the full study sample and the ten most selective sample, in addition to the average debt, in thousands of dollars. As Figure 1 shows, there are differences when comparing these two study samples. First, the average debt is $876 more among the top ten study most selective sample ($67,024) as compared to the full study sample ($66,148). Second, the average acceptance rate is 8% among the top ten most selective institutions as compared to 41% among the full study sample. These differences suggest that although prestigious institutions are more difficult to get accepted to, in terms of financial freedom post-graduation, they are slightly worse than even the top 25 colleges in terms of highest debt.

Figure 1:

Full Study vs. Ten Most Selective
Comparing Average Acceptance Rate and Average Debt

Full Study   Ten Most Selective
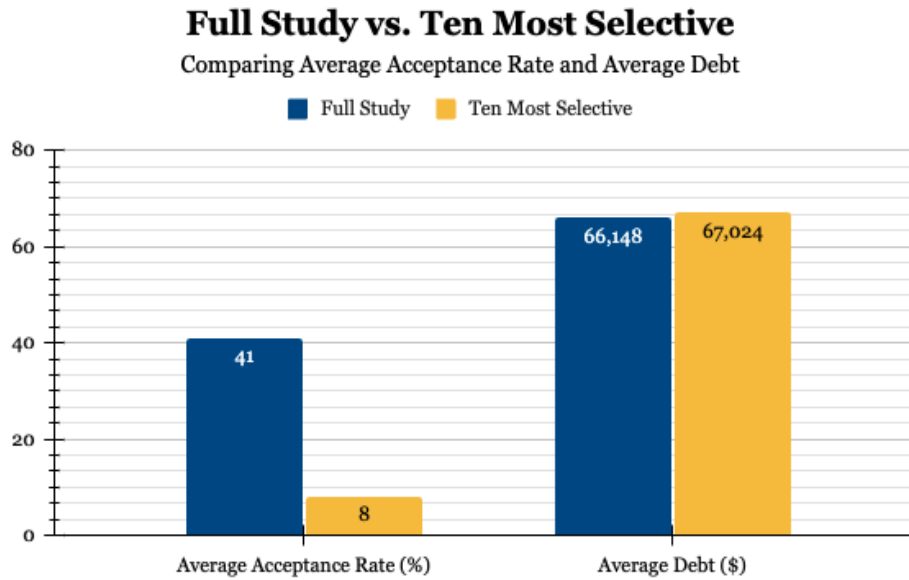
3. Economic Mobility is Worse at Selective Colleges

Figures 2 and 3 show economic mobility for the full study (left panel) and the top ten selective institutions (right panel). As Figures 2 and 3 show, the economic mobility of the selective colleges is significantly worse than that of the full study. The economic mobility of the selective colleges is a 3.1, putting it low in the third tier. However, the average economic mobility of the full study is 2.84, placing it high in the second tier. This trend is supported by the more specific data from these colleges, shown in Figure 3. The percentage of students that move from the bottom income quintile to the top is 1% lower in the selective colleges, and the percentage of students that move up two or more income quintiles is also 3% lower in the selective colleges.
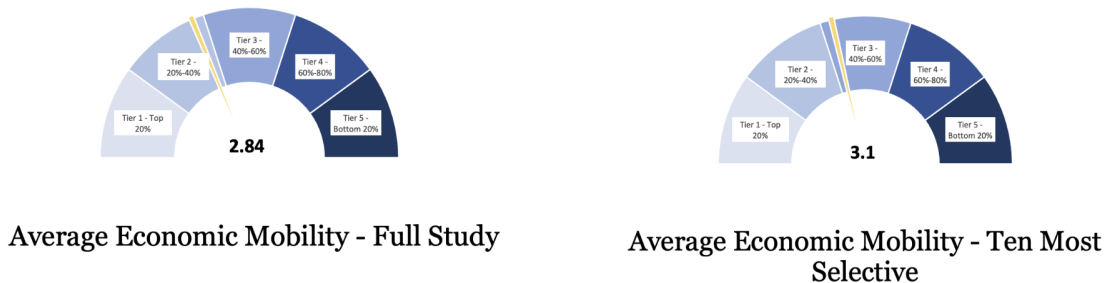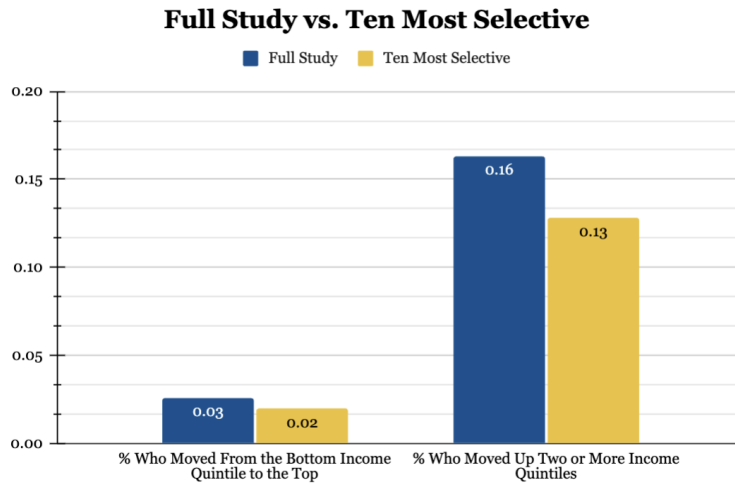
Figure 2:

Average Economic Mobility - Full Study   Average Economic Mobility - Ten Most Selective

Figure 3:

Full Study vs. Ten Most Selective

■ Full Study ■ Ten Most Selective

### 4. More financial aid doesn't necessarily mean more financial freedom

Figure 4 compares pre-acceptance traits with post-graduation data. As shown, the full study sample has a much higher acceptance rate equal to 42% as compared to 8% among the selective institution sample. Further, students in the full study sample are 12.4% more likely to receive a federal student loan. However, those who attend more selective colleges are 10% more likely to graduate. These data points and comparisons demonstrate a possible trade-off that comes with more selective and prestigious colleges. Although they seem to offer a substantial amount of financial aid, students graduate with more debt (as shown in Figures 2 and 3) and are less likely to move up in terms of economic mobility (Figure 2). Similarly, students who attend one of these colleges are much less likely to receive a federal financial loan to help manage the higher student loans that come from a selective college. However, despite these potential financial drawbacks, students attending a more prestigious university (based on selectivity) are more likely to graduate. As some researchers and policymakers contend, in some fields, earning a degree from these types of institutions could carry more weight, thereby making it more likely for the student to land a career that will assist them in handling their student loan debt (Anyaso, 2021).

Figure 4:

Full Study vs. Ten Most Selective

Comparing Acceptance Rate, Graduation Rate, and % Awarded Federal Loans

■ Acceptance Rate (%)   ■ Graduation Rate(%)   ■ % Awarded Federal Loans

Full Study	42	83.5	32.2
Ten Most Selective	8	94	19.8
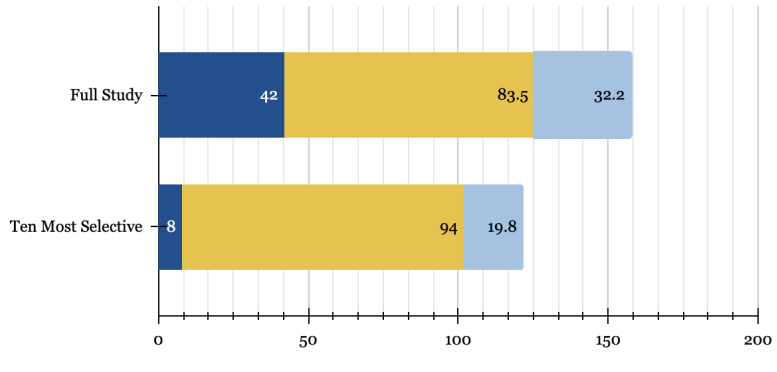
References

Anyaso, H. H. (2021, December 7). *When does selective college matter?* Northwestern Now.

    Retrieved September 25, 2023, from

    https://www.google.com/url?q=https://news.northwestern.edu/stories/2021/12/when-does

    -selective-college-matter/&sa=D&source=docs&ust=1699147306090291&usg=AOvVaw

    2_dTcagTWka79YgsIel0Sb

Economic diversity and student outcomes at America's colleges and universities. (2017). The

    New York Times. Retrieved September 10, 2023, from

    https://www.nytimes.com/interactive/projects/college-mobility

Guzman, G., & Koller, M. (2023, September 12). *Income in the United States: 2022*. United

    States Census Bureau. Retrieved September 26, 2023, from

    https://www.census.gov/library/publications/2023/demo/p60-279.html

Hahn, A. (2023, July 16). *2023 student loan debt statistics: average student loan debt*. Forbes.

    Retrieved October 8, 2023, from

    https://www.forbes.com/advisor/student-loans/average-student-loan-debt-statistics/

Itzkowitz, M. (2022, July 21). *Rating colleges by economic mobility*. Third Way. Retrieved

    August 28, 2023, from

    https://www.thirdway.org/graphic/rating-colleges-by-economic-mobility

Should UC Berkeley have a max enrollment? (2022, April 5). Illumin Education. Retrieved

    August 28, 2023, from

    https://www.ilumineducation.com/blog-posts/2022/4/5/should-uc-berkeley-have-a-max-e

    nrollment

Swagel, P. L. (2020, November 10). *The volume and repayment of federal student loans: 1995 to 2017*. Congressional Budget Office. Retrieved September 8, 2023, from https://www.cbo.gov/publication/56754