

Law School Prices and the Enrollment of Students from Different Racial Backgrounds

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Abstract: Law schools in the United States have steadily increased their tuition and fee prices across the last decade, requiring more students to take out loans, which may disproportionately reduce access for students of color, who are underrepresented at law schools. Framed using human capital theory and student price sensitivity, this study incorporates institution-level data on 194 public and private law schools from 2006 to 2015 to explore whether enrollments of students from different racial groups change in response to tuition prices and estimated net costs of attendance. Results from two-way fixed effects models suggest that first-year enrollments of Black and Hispanic students do not change in response to increases in tuition or net costs. However, a greater number of Asian American and White students enroll when tuition prices are higher and among private law schools, a greater number of Asian American and White students enroll when net costs are higher.

Keywords: higher education; legal education; human capital; price sensitivity; tuition; diversity

Introduction

During the 2016-17 academic year, the median price of tuition and fees at public law schools in the United States was \$23,551 for in-state residents and \$38,649 for out-of-state residents. This is substantially higher than a decade ago, in 2006-07, when median tuition and fees was \$12,983 for in-state residents, and \$25,457 for non-residents, in CPI-adjusted 2016 dollars (American Bar Association 2017c; Author's calculations). Among private schools, median tuition and fees were \$46,176 in 2016-17, compared to \$32,972 in 2006-07.

Along with the increasing price of law schools, students are faced with high debt burdens, and a tepid legal job market that was dramatically affected by the Great Recession. Entry-level hiring by large law firms decreased after the recession started in 2008 (American Bar Association, 2015), which made it even more difficult for students to repay their loans.

Another troubling trend is that students of color are becoming more concentrated at law schools with lower median LSAT scores and are disproportionately excluded from more prestigious schools with higher LSAT scores (American Bar Association, 2015). This stratification is coupled with an overall lack of racial diversity in legal education and ultimately, the legal profession. The rising price of law school may disproportionately deter students from historically marginalized backgrounds from enrolling.

Yet, no research to date has explored how tuition prices and the actual cost of law school relates to student enrollment in law school. It is important to investigate if differential relationships exist between pricing and enrollment according to student race, given the existing underrepresentation of people of color at law schools and in the legal profession (American Bar Association, 2015). This topic is particularly interesting since the undergraduate literature suggests that student enrollment is responsive to changes in sticker prices and in net costs, and

demonstrates that race plays a factor in enrollment behavior. Thus, the current study aims to explore whether price sensitivity among law school students varies by race. Using institution-level data on a national sample of law schools, this study poses the following research questions:

Research Questions

1. What is the relationship between the published annual tuition and fee prices of law schools (sticker prices) and the enrollment of first-year students according to race?
2. What is the relationship between estimated net costs of attending law school (tuition plus fees minus financial aid) and the enrollment of first-year students by race?

Literature Review

Declining Affordability of Law School

In 2016-17, law school tuition and fees ranged from approximately \$11,434 for in-state residents at the University of North Dakota to upwards of \$65,260 at Columbia University. These numbers do not include estimated living expenses, which had a median of \$21,247 in 2016 (American Bar Association, n.d.; Author's calculations). Given that the median household income in the United States was \$59,039 in 2016, the latest year available (Federal Reserve Bank of St. Louis, n.d.), the combined annual sticker price of tuition, fees, and living expenses of attending many law schools exceeds what a typical household earns in a year.

Information is scarce on law school revenues and expenditures and the process by which schools set tuition rates, but it is evident that law schools are highly dependent on tuition—their primary revenue source (Wu, 2013). Law schools also generate revenue through endowments, auxiliary services (e.g. parking), and receive support from central administration if the law school is part of a university. Public law schools receive state appropriations, which make up a shrinking share of total budgets while students shoulder the majority of costs.

The declining affordability of law school, demonstrated by rising tuition and fees, results in students needing to take on more debt, and nearly 90% of law students take out loans (American Bar Association, 2015). At the time of graduation in 2013, students who had attended public law schools had average debt levels of \$88,000 and students who had attended private law schools had debt levels of \$127,000 (in 2014 dollars) (American Bar Association, 2015). High debt burdens can discourage graduates from pursuing public service and government jobs, which pay lower salaries than corporate and private sector law firms (Dolin, 2007).

Among the graduating class of 2016, 8.8% were still seeking employment in any field 10 months after graduation (American Bar Association, 2017a), and about one-third of all law school graduates do not obtain full-time jobs as lawyers (Tamanaha, 2013). With the exception of those working at large private firms, graduates do not earn lucrative salaries, with median starting salaries recently reported at \$60,000 to \$70,000 (Dinovitzer, Garth, & Sterling, 2013; Tamanaha, 2013). While the legal job market has seen a modest recovery in more recent years, enrollment in law school has declined (American Bar Association, 2015). Between 2009-10 and 2014-15, there were 30% fewer students enrolled at private law schools and 18% fewer enrolled at public law schools (*ibid*).

Racial Gaps in Legal Education and the Legal Profession

The financial shock of the Great Recession led law schools to shift their resources from need-based to merit-based financial aid, to attract students with high LSAT scores and undergraduate GPAs, both metrics which factor into the U.S. News and World Report rankings. Law schools have increasingly practiced tuition discounting, using institutional grant aid to recruit and retain students in the face of declining applicants and enrollments (AccessLex Institute and National Association of College and University Business Officers, 2016). Tuition

discounting overwhelmingly utilizes funds from full-paying students, typically those with lower entering academic credentials and who come disproportionately from underrepresented racial backgrounds, to subsidize students with high academic credentials (Organ, 2017), which creates critical distributional differences across student subgroups.

In recent years, law schools with the lowest median LSAT scores have increased enrollments of students of color, particularly Black and Hispanic students (American Bar Association, 2015). This has been viewed by the ABA as an enrollment management strategy by law schools to recruit full-paying students when overall enrollment demand has declined. At the same time, the proportions of White and Asian American students have increased at schools with higher median LSAT scores while proportions of Black and Hispanic students at these schools have decreased. What has transpired appears to be increasing stratification of legal education; students with lesser social capital are becoming more concentrated at schools with lower LSAT scores. These schools are typically lower ranked according to U.S. News and World Reports, and have lower bar passage rates and likelihood of employment after graduation (Morris & Henderson, 2008).

Increased stratification of enrollment is combined with an existing overall underrepresentation of students of color (non-White) at law schools. Although the percentage of students of color has increased at law schools nationally from 21.6% in 2006-07 to 32.0% 2016-17 (American Bar Association, n.d., n.d.; Author's calculations), this growth has slowed in recent years (American Bar Association, 2015).

The first row of plots in Figure 1 illustrate the *percentage* of first-year law students enrolled from different racial groups, averaged across 194 ABA approved law schools from years 2005-2016. Shown in top-left panel, the percentage of Hispanic students and Black

students have visibly increased, while the percentage of Asian American students has gradually decreased. The right panel adds data on the percentage of White students, which is markedly higher than any other group, and remains relatively steady across time.

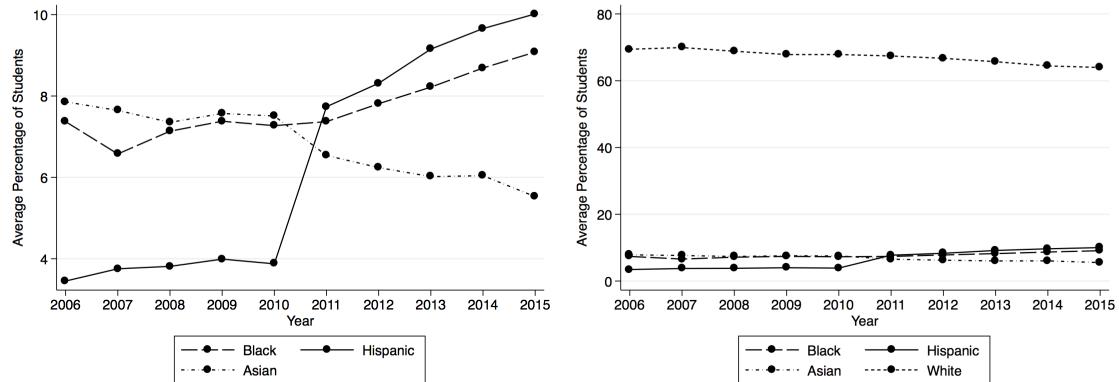
[Insert Figure 1]

The second row of plots in Figure 1 shows trends for the *number* of first-year law students from different racial groups, averaged across 194 law schools. The left panel demonstrates that from 2010 to 2011, there was a sharp increase in the number of Hispanic students. Across years 2006-2015, the number of Black students has stayed relatively stable, while the number of Asian American students has steadily declined. The right panel of the second row illustrates these same data with the inclusion of White students. The number of White students enrolled is notably higher, although there has been a decrease in raw numbers of White students from 2006-2015. In short, while more Black and Hispanic students have enrolled in law schools since 2006, fewer Asian American students have enrolled, and law schools are still predominantly composed of White students. The third row of Figure 1 will be described in a later section.

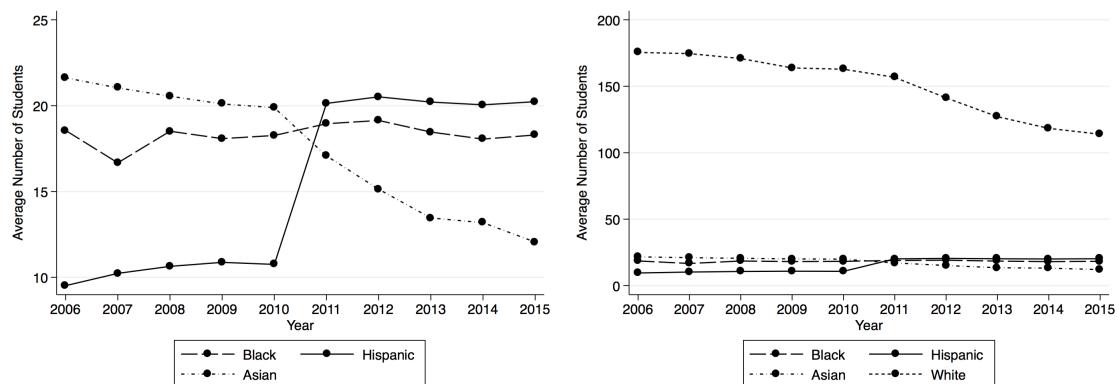
Moreover, previous research suggests that Black/African American, Asian American, and Latino/Hispanic law students face racial discrimination in the classroom, in dealings with professors and administrators, and in social interactions with classmates (Clydesdale, 2004). Students who experience racial discrimination tend to have lower law school GPAs, which ultimately affects their competitiveness for summer internships and post-graduation jobs.

Figure 1

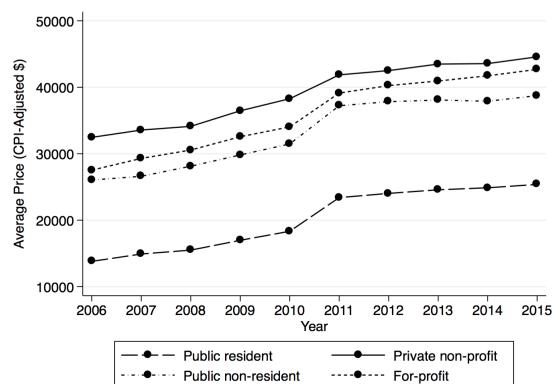
Percentage of first-year enrollment in law schools by race



First-year enrollment in law schools by race



Law school tuition and fees by sector



The lack of students of color in law schools translates to the legal workforce, in which people of color are still underrepresented compared to other professions. Nationally, 6.3% of employed lawyers identify as Black or African American, 4.1% identify as Asian American, and 8.4% identify as Hispanic (Bureau of Labor Statistics, 2016). Yet, as a percent of the total employed population, people of color constitute a higher proportion of the national population; Blacks comprise 11.9% of individuals employed, Asian Americans comprise 6.1%, and Hispanics comprise 16.7% of those employed. A recent task force report maintains that people of color remain profoundly underrepresented in law school and the legal profession (American Bar Association, 2015).

Student Price Sensitivity

The classic concept of price sensitivity can be defined as the degree to which the price of a product or service affects a consumer's purchasing behaviors (Leslie & Brinkman, 1987). It applies to students choosing whether to attend law school and which law school to attend, based on the price of the 'product', relative to other professional and educational pursuits such as continuing employment or pursuing a different graduate degree. If underrepresented students have a higher price sensitivity or are less likely to enroll due to increases in price, the trend of tuition increases in recent years will have disproportionately negative impacts on these access to legal education for these students. However, no research has explored how students from different racial groups respond to changes in the price of law school, and instead focuses almost exclusively on undergraduates.

Previous research has examined the impact of rising tuition prices, along with the receipt of financial aid, on undergraduate enrollment (Hemelt & Marcotte, 2011; Neill, 2009; Wetzel, O'Toole, & Peterson, 1998). The first set of studies on undergraduate price sensitivity examine

how changes in sticker price affect college enrollment, generally showing that increases in tuition at two- and four-year colleges lead to declines in enrollment, all other factors held constant. Utilizing data from 1991 to 2006, Hemelt and Marcotte (2011) demonstrate that, at public four-year institutions, a \$100 increase in tuition and fees (equivalent to \$121 in 2017 CPI-adjusted dollars) produced a 0.25% enrollment decline. Kane (1995) analyzed data from 1980 and 1992, showing that a \$1000 increase in tuition (equivalent to \$1740 today) produced a 1.2% enrollment decline at four-year institutions and a 4.7% decline at two-year institutions. Using data from 1994 to 2005, Denning (2017) showed that a \$1000 decrease in tuition led to a 5.1 percentage point increase in community college enrollment.

The second set of studies examines net cost of attendance, or the estimated costs that students must pay after receiving financial aid. Net costs are typically defined as tuition plus fees, minus financial aid and scholarships. Existing literature demonstrates that, *ceteris paribus*, college attendance increases when students receive various forms of financial aid, including federal need-based grants (Goldrick-Rab, Harris, & Trostel, 2009), state need-based grants (Toutkoushian, Hossler, DesJardins, McCall, & Canche, 2015), institutional merit-based aid (Leeds & DesJardins, 2015), and state merit-based aid (Cornwell, Mustard, & Sridhar, 2006; Stanley & French, 2009). Generally speaking, a \$1000 decrease in net college costs (tuition and fees less aid) produces a 2 to 4 percentage point increase in undergraduate enrollment (Deming & Dynarski, 2009; Denning, 2017).

Research has also examined differential price sensitivity among undergraduate students by race (St. John & Noell, 1989). Early research found that, for every \$1000 *decrease* in net cost (approximately \$1,729 in current dollars), enrollment yield (the percent of admitted students who choose to enroll) increased by approximately 6% for White students and 10% for Black students

(Wetzel et al., 1998). Black students are generally found to be the most sensitive to net cost changes (Heller, 1997), and are more sensitive than Whites (Kane, 1991). Results for Latinos are more mixed (Heller, 1997), and less research exists on this particular group. Some authors suggest that Latino students are very price sensitive and express great concern over college costs (Santos & Saenz, 2014; Swail, Cabrera, Lee, & Williams, 2005). No research to date has considered how net cost affects the initial enrollment of Asian American or Native American students.

The literature on loan aversion suggests that Hispanic and Asian American students are less likely to take out student loans compared to Black or White students (Cunningham & Santiago, 2008). Hispanic students tend to avoid borrowing if possible (Burdman, 2005) and are particularly loan averse compared to White students (Boatman, Evans, & Soliz, 2017). These findings would imply lower enrollment likelihood of Hispanic and Asian American students as a result. However, Black students are more likely to borrow for college and take out more sizable loan amounts compared to White students (Addo, Houle, & Simon, 2016; Grinstein-Weiss, Perantie, Taylor, Guo, & Raghavan, 2016).

Another strand of work focuses on undergraduate persistence in response to receiving financial aid. Compared to White students, Black, Hispanic, and Asian American students are less likely to drop out when awarded more financial aid in Pell Grants, which reduces the net costs that students must pay. In particular, Asian American students are less likely to drop out compared to White students, after receiving the same amount of Pell Grant aid (Chen & Desjardins, 2010).

Conceptual Framework

This study applies human capital theory to understand whether students choose to attend

law school given changes in published tuition prices and changes in net cost. Individuals make decisions on whether higher education ‘pays’ according to the expected monetary gain achieved by attending additional schooling (Becker, 1975). Expectations about future incomes are balanced by current costs, including the actual costs of attendance such as tuition, fees, and living expenses, in addition to opportunity costs, such as forgone earnings and time invested (Goldrick-Rab et al., 2009). The rate of return in investing in higher education pursuits will vary depending on the characteristics and ability of the individual. Human capital theory posits that individuals apply a rational choice model when evaluating their options on whether to pursue postsecondary education, and will consider tangible, financial factors in the determination of whether and where to enroll, along with relative employment opportunities after graduation.

Students from different racial backgrounds may expect different future incomes and job prospects as they consider investing in law school. The opportunity costs they incur may also vary depending on differences in economic and social circumstances. Moreover, based on the literature review on racial differences in price sensitivity and loan aversion at the undergraduate level, Hispanic and Asian American students might be more sensitive to cost increases when they apply human capital theory in the decision-making process surrounding law school enrollment. That is, if Hispanic and Asian American students are more loan averse, then the same increase in the cost of attending law school may feel more burdensome for them than for Black or White students.

On the other hand, there is theoretical basis for the possibility that students are not sensitive to rising law school prices; students may continue to enroll in law school despite price hikes. In fact, more students may choose to enroll in a law school with higher tuition prices relative to other schools. Campos (2018) described a pattern of tuition increases among law

schools from the 1950s to approximately 2012, coining law schools as a Veblen good in which demand increases as price increases. The demand for a Veblen good is inversely related to its price, reversing the standard relationship between price and demand. The reason why consumers are willing to pay more for a product is because, for one, Veblen goods reflect a ‘snob effect’ – purchasing the product is a symbol of economic status and social prestige. Second, consumers believe price is a proxy for quality. In the case of law schools, especially before 2012, there was less accurate and detailed publicly available data on employment outcomes. In such situations when there is limited information to compare quality, students depend on price signals to identify elements of quality and prestige (Campos, 2018).

This study investigates whether, across different racial groups, fewer students enroll in law school when tuition increases, as would be expected when framed in human capital theory, or if students choose to enroll in law schools *because* of higher tuition, as would be expected if law schools demonstrate characteristics of a Veblen good.

Data

Data Sources

I relied on two main data sources, the American Bar Association (ABA) and the Law School Admissions Council (LSAC), to collect institution-level data on law schools. Each year, law schools must submit data for the Standard 509 Information Reports and to the ABA for accreditation purposes (American Bar Association, 2017b). Using Standard 509 reports from the ABA website, I gathered data from 2011-2015 on all accredited law schools (American Bar Association, n.d.-c).

Although Standard 509 reports were unavailable before 2011, the Law School Admission Council (LSAC) reports official ABA data in PDF format from 2006-2014 on their website (Law

School Admission Council, n.d.). A team of graduate assistants downloaded each school's report for years 2006-2010, hand-entered data, and I reviewed these datasets for accuracy. I merged data to form a panel dataset by school across years 2006-2015. All lags in reporting were correctly identified so that data reported for calendar year 2015 matched data reported for academic year 2015.

Sample

According to the American Bar Association, there are currently 204 ABA-approved law schools that offer the Juris Doctor (J.D.) degree. Based on the data collected, several law schools had to be excluded from the sample because of missing or inconsistently reported data. Some law schools had started a branch campus, merged, or closed, and these cases were excluded from the sample. Law schools located in Puerto Rico had to be excluded because state-level control variables (to be discussed later) were unavailable for Puerto Rico. Additionally, several schools opened or were approved by the ABA after year 2006, thus only their available years of data were included.

The final sample consisted of 79 public law schools, 110 private non-profit law schools, and 5 private, for-profit law schools, for a total sample of 194 law schools. The total sample size across years 2006-2015 consisted of $N = 1893$ institution-years.

Outcome Variable

In order to examine whether students' enrollment decisions were influenced by published tuition and fees and estimated net costs, I utilized the total number of first-year students (full-time and part-time) who enrolled at each law school in each year, according to race.¹ The purpose of examining first-year students instead of total enrollments was to more accurately

¹ The ABA reports first-year student data across full-time and part-time students and does not differentiate by enrollment intensity.

capture initial (rather than continuing) enrollment decisions, as initial decisions are more apt to be price-sensitive.

I analyzed two outcomes, the percentage and the logged number of first-year students enrolled from each of the following racial groups: Black or African American; Hispanic; Asian American; and White.² Data on mixed-race students was only reported from 2011 onwards. Due to small percentages of American Indian or Alaska Natives (average across schools was less than 1%), and a large proportion of missing data on the enrollment numbers for these students, separate analyses for this subgroup was infeasible.

Predictor Variables

Tuition and Fees

The main predictor variable for first-year enrollments was the published annual price of tuition and fees.³ Applying human capital theory, students will make decisions about where to enroll in law school after weighing the costs and benefits of attending law school, compared to alternative choices. I hypothesize that, according to standard economic theory, there would exist, all else equal, a negative association between published tuition and fees and enrollments, and that this association will be stronger for students of color compared to White students.

In analyses on the sample of all law schools, tuition for public schools was calculated as the average value of resident and non-resident tuition. Although this is not a perfect measure of the tuition levels that individual students pay, it does consider that there are students comparing

² The following student race variables were excluded because they were only collected across select years in the dataset. The number and percent of Hawaiian or Other Pacific Islander students were collected only from 2011 onwards. Mexican student numbers and Puerto Rican student numbers were collected from 2006 to 2010, but not thereafter. Some student enrollment race variables were missing for select schools in isolated years (91 cases). In order to preserve sample size, since these schools reported data in the years before and after these isolated missing years, I chose to carry forward the previous year's values (when they appeared reasonable) into the missing year.

³ I used tuition data on full-time programs to establish greater consistency between programs that offer both full- and part-time programs and those that only offer full-time programs.

resident tuition with private school tuition, as well as students comparing non-resident tuition to private school tuition. In two alternative analyses on the full sample, I substituted resident tuition rates for all public schools and non-resident tuition rates for all public schools, which yielded substantively identical results. I also conducted separate analyses on the sample of public schools only using resident tuition, and private schools only. All financial variables were CPI-adjusted to 2015 dollars. Same-year values of predictor and control variables were used to analyze enrollments to reflect information relevant when students entered law school.

The bottom row in Figure 1 illustrates the trends in law school tuition and fees across years 2005-2015. As seen, tuition and fees across all sectors of law schools steadily increased in all years, on average, with a slightly sharper increase from 2010 to 2011. Private, non-profit law schools had the highest tuition and fee levels, followed by for-profit law schools. Non-resident prices at public law schools were slightly lower than private and for-profit law schools, while resident prices were substantially lower, on average.

Estimated Net Cost

The second variable hypothesized to predict the proportion and number of students of color who enrolled in law school was the net cost of attendance. Although the ABA reports data at the institutional level and not the individual level, the available data can be used to approximate aggregate financial aid packages offered to students. Specifically, the ABA reports the median grant amount awarded across all full-time students (not on first-year students only).

I approximated the median grant award by creating an interaction variable between the median grant awarded to full-time students and the percentage of all full-time students receiving grants. This functionally accounts for the students who received zero dollars in grants. While this calculation does not allow analyses on the effect of aid on the individual students who receive

aid, it captures an overall effect of aid on overall enrollment. Thus, the net cost for a school can be approximated by summing full-time tuition, fees, and estimated living expenses, then subtracting the estimated average grant award. For public schools, the average of resident and non-resident tuition was used. Law schools most frequently reported data on the cost of ‘living off campus’ as opposed to ‘living on campus’ or ‘living at home’, thus the data on ‘living off campus’ was used to calculate living expenses. Net cost was determined by the following:

$$\text{Net Cost}_{\text{Full-time}} = \text{Tuition}_{\text{Full-time}} + \text{Fees}_{\text{Full-time}} + \text{Living Expenses}_{\text{Full-time}} - (\text{Median Grant Award}_{\text{Full-time}} * \text{Percent Awarded Grants}_{\text{Full-Time}}) \quad (1)$$

I hypothesize that higher net costs of law school will be associated with lower proportions and lower numbers of students of color, after accounting for other relevant factors.

Institutional Control Variables

To control for factors that may impact the association between the outcome variables and the predictor variables, I added a series of institutional-level control variables, collected from the ABA. To capture additional measures of financial aid, I included: (1) the percentage of all students who received a full-tuition waiver, and (2) the percentage of all students who received a half-tuition waiver. These percentages are small, with a mean of 3.18% and 13.64% of students on full- and half-tuition waivers, respectively. The median grants variable (logged) was included as a control variable in models using tuition and fees but excluded in models using net costs since median grants was used to calculate net costs.

Additional control variables included the median undergraduate GPA of all applicants, the median LSAT score of all applicants,⁴ the percentage of all students currently enrolled who were female, the ratio of students to faculty and administrators (student to faculty ratio data was

⁴ The 50th percentile (median) GPA and LSAT score for applicants was reported for 2007 onwards. The 25th and 75th percentile values from 2006 were used to estimate the 50th percentile GPAs and LSAT scores for 2006.

not available), and the typical first year section size for full-time students.⁵ The purpose of including these variables was to capture incoming student characteristics, selectivity, student demographics, and academic features of the law school. These characteristics conceivably affect students' decisions on whether and where to enroll.

State Control Variables

Additionally, I included a set of state-level control variables. While some law schools have a national draw, many law schools will be more prominently affected by the demographic and economic circumstances in the state (or region) in which the school is located. First, I controlled for the supply of students who could realistically enroll in a law school. This measure approximates the number of college graduates who may subsequently attend law school, similar to controlling for high school graduates when analyzing undergraduate enrollment (Hemelt & Marcotte, 2011). I was unable to locate a data source that reported the number of college graduates by state across all years. Therefore, I relied on the American Community Survey (ACS), which reports educational attainment data by state. There are several age groups for which the population (and percentage) holding a bachelor's degree or higher is reported: 18 to 24; 25 to 34; 35 to 44, 45 to 54, and 65 years and up (Census Bureau American Fact Finder, 2017).

The ACS data can approximate the number of bachelor's-holding individuals residing in a state for each year. Conceptually, the supply of law school attendees might be estimated based on the total population of individuals residing in a state who already hold a bachelor's degree, regardless of how many years they have been out of college. According to LSAC, about half of all applicants from 2005-2009 and from 2010-2015 were between 22 and 24 years old, 30% were

⁵ When available, control variables based on all students (full and part-time combined) were used. If only full-time student data was reported, as was the case for law schools with exclusively full-time programs, these data were used.

between 25 and 29, 15% between 30 and 39, and 5% were 40 or above (Dustman & Gallagher, 2015; Law School Admission Council, 2010).

Therefore, the ACS category of bachelor's degree-holders from ages 18 to 24, plus ages 25 to 34 would reasonably approximate the number of individuals in a state who could potentially enroll in law school. Albeit an imperfect measure, this variable provides a convincing proxy. I downloaded ACS data (1-year estimates) and calculated the number of individuals aged 18 to 34 who held a bachelor's degree or higher in each state. All analytic models included the logged value of this variable for the state in which the law school was located as a control.

In addition, I included each state's annual average unemployment rate of the total civilian non-institutional population (Bureau of Labor Statistics, 2017). I added each state's personal income per capita, CPI-adjusted to 2015 dollars (Bureau of Economic Analysis, n.d.). Controlling for unemployment and personal income per capita helps to account for a state's relative wealth and economic health, along with social conditions related to students' decisions to attend law school and the potential opportunity costs of pursuing graduate education (Hemelt & Marcotte, 2011; Leslie & Brinkman, 1987).

Summary statistics for all variables are shown in Table 1, across all law schools, across the sample of public law schools only, and across the sample of private schools only. Percentage variables were multiplied by 100 to generate coefficients in more readily interpretable units.

[Insert Table 1]

Table 1: Summary Statistics

	All Law Schools	Public Law Schools	Private Law Schools			
Variable	Mean	SD	Mean	SD	Mean	SD
Total African American/Black students	18.31	25.94	16.74	24.41	19.37	26.89
Total Hispanic students	15.44	18.96	10.62	13.09	18.71	21.47
Total Asian American students	17.32	18.54	12.62	14.93	20.51	20.02
Total White students	149.95	95.81	126.18	54.79	166.07	112.84
Percent African American/Black students	7.70	9.57	8.31	10.94	7.29	8.50
Percent Hispanic students	6.44	7.13	5.57	6.88	7.03	7.23
Percent Asian American students	6.81	5.99	6.11	6.76	7.28	5.37
Percent White students	67.15	15.33	69.07	16.65	65.84	14.22
Resident tuition + fees, FT			20,269	9,390		
Non-resident tuition + fees, FT	36,767	8,981	33,286	9,288	39,128	7,944
Tuition + fees, full sample, FT ^a	34,137	10,336				
Estimated living costs	19,724	4,319	17,929	3,707	20,942	4,282
Estimated net cost, resident FT			32,902	8,891		
Estimated net cost, non-resident FT	49,052	9,676	45,919	9,211	51,178	9,406
Estimated net cost, full sample, FT ^(a)	46,422	10,790				
Median FT grant award * % FT students on grants	7,440	5,428	5,296	4,683	8,893	5,418
Median FT grant award	12,779	7,041	8,870	5,707	15,429	6,614
Percent students on grants	53.21	19.80	52.63	20.19	53.61	19.53
Percent students on half to full tuition waivers	13.64	10.14	12.11	9.01	14.67	10.73
Percent students on full tuition waivers	3.18	4.89	2.99	4.83	3.31	4.93
Median undergraduate GPA	3.39	0.23	3.46	0.19	3.35	0.25
Median LSAT score	157	6	157	5	157	7
Percent female students	46.92	5.49	46.00	5.77	47.55	5.21
Student to faculty and administrators ratio	3.88	1.25	3.78	1.07	3.95	1.36
Typical first-year section size, FT	67	21	65	22	69	21
State: Population of 18-34 year olds with BA or higher	670,380	601,508	504,819	509,225	782,661	632,768
State: Personal income per capita	46,054	7,456	43,475	5,961	47,803	7,853
State: Unemployment rate	6.95	2.23	6.69	2.23	7.12	2.22
	N = 1893		N = 765		N = 1128	

FT = full-time. Values are for full-time and part-time students combined unless denoted by FT (full-time only).

Percent and total numbers of students are based on first-year students only. All financial variables CPI-adjusted to 2015 dollars.

(a) These values were used in the full sample analyses. Includes private and public schools. The average of resident and non-resident tuition was used for public schools.

Method

The dataset consisted of multiple law schools across a period of 10 years as described, resulting in a panel data structure. I analyzed the data using fixed effects models, which help control for unobservable characteristics that are time-invariant. Each law school has omitted characteristics that are unchanged across time, captured by a fixed effect, which is treated as a parameter to be estimated. Similarly, each year has a time dummy to be estimated since years may also represent varying exogenous factors, resulting in a two-way fixed effects model (Angrist & Pischke, 2009).

Formally:

$$Y_{ist} = \alpha_i + \lambda_t + \delta D_{ist} + X_{ist} \beta_1 + X_{st} \beta_2 + \varepsilon_{ist} \quad (2)$$

where Y_{ist} is the outcome variable (percentage and number of first-year enrollment by race) for law school i in state s in year t . α_i and λ_t are school- and year-fixed effects, respectively. School fixed effects help control for time-invariant characteristics that may be related to the outcome and allow for the examination of within-school variation. Year fixed effects help control for national trends affecting all law schools, such as the job market for graduates. D_{ist} is the main predictor variable of interest (tuition and fee prices; net cost) for law school i in state s in year t . δ is the parameter of interest and generates an estimate of the effect of the predictor variable on the outcome variable. X_{ist} and X_{st} are vectors of school- and state-level control variables (Angrist & Pischke, 2009; Rabe-Hesketh & Skrondal, 2012). I clustered standard errors at the institution level to correct for panel heteroskedasticity and to account for serial correlation in the error term (Beck & Katz, 1995).

The identifying assumption for the models estimated is that tuition increases are mostly exogenous, at the institution level, and law schools have limited control over first-year

enrollments through modifying admissions criteria when determining tuition increases. Additionally, the model assumes that control variables are exogenous; control variables are uncorrelated with the error term. Yet, a school's percent of students on tuition waivers and median grant award are likely correlated with tuition and fees, that is, the level of tuition influences the school's decisions on the number and amount of financial aid to allocate, and the availability of these awards determines by how much the school raises tuition each year. Control variables capturing financial aid are therefore endogenous to tuition; both sets are jointly determined within the system (Angrist & Pischke, 2009). To address the endogeneity issue, I conducted a two-stage least squares estimation in which the financial aid controls served as instrumental variables for tuition and fees. Significant results were similar to the ones reported. Yet, given available data sources, it was challenging to identify feasible instrumental variables that are correlated with tuition yet not directly correlated with first-year enrollment. Thus, I retained the two-way fixed effects model. Re-estimating all reported models excluding the three financial aid control variables produced substantively identical conclusions, indicating that any endogeneity issues are unlikely to generate biased estimates.

Limitations

Before reporting the results from this study's analyses, it is important to note several limitations. First, the analytic results from this study are not intended to be interpreted as causal. While the two-way fixed effects model attempts to mitigate threats to internal validity, it is not a causal model. Results can pinpoint an association between law school tuition prices and enrollment of students from particular racial groups but cannot conclude that changes in tuition prices *caused* changes in enrollments. Second and most significantly, the data available was reported at the institution level and student-level analyses were not feasible. Therefore, this study

cannot determine the detailed financial aid packages awarded to each student or their effects, but rather utilizes an aggregate estimate across all students enrolled in a particular law school.

Student-level data on demographics and financial aid packages would provide more precision in estimating whether specific changes in net costs affected the enrollment decisions of individual students based on their racial identity, and whether acceptances and financial aid options from multiple schools factored into the student's decision. Correspondingly, results which state, for example, that 'more White students enrolled' should be interpreted as 'at each institution, on average, a higher total number of White students enrolled.'

A third limitation of this study is that there are likely additional demographic characteristics that interact with race, which can affect enrollment decisions. Previous research on undergraduates has shown that enrollment and persistence varies within racial groups based on income levels, such as between low-income Asian Americans and upper-middle-income Asian Americans (Paulsen & St. John, 2002). It is expected that law students also have characteristics within racial groups, such as income, gender, age, and marital status that would result in differential responses to tuition prices and net costs. The current study is constrained by data limitations in that aggregate data by school masks individual differences in price sensitivity. Nonetheless, results provide compelling details on enrollment changes among students when tuition and net costs change.

Results

Descriptive Correlations

I conducted a series of correlations to explore whether more selective law schools were higher priced. Indeed, the median LSAT score and median undergraduate GPA among law schools was positively and significantly correlated with tuition and fees. That is, law schools that

enrolled students with better academic credentials also tended to be more expensive. I also conducted correlations to assess if students from certain racial groups were more concentrated at selective law schools. The percent and number of Asian American students was positively correlated with law schools' median LSAT, median GPA, and tuition and fees. In other words, more selective and costlier law schools enrolled higher numbers and proportions of Asian American students. The relationship between White student enrollment and LSAT scores, GPA, and tuition was not consistent in either direction. Lower median LSAT scores and lower GPAs were significantly correlated with a greater number and percentage of Black students and Hispanic students. Consistent with reports from the ABA (2015), law schools with high LSAT and GPA metrics were enrolled fewer Black and Hispanic students. Although, Black students tended to be more concentrated at lower-priced schools, while Hispanic students tended to be more concentrated at higher-priced schools.

Sticker Price and Enrollment by Race

The first research question in this study asks whether there are differential price sensitivities by race among first-year law students in response to published annual tuition and fees. Table 2 reports estimates on the enrollment of students in each of the four racial groups as a percent of all students. All models include tuition and fees (the main predictor variable), the previously described institutional and state-level control variables, and school and year fixed effects. As seen in the first row, none of the coefficients for 'Tuition + fees (log)' were significant, and the standard errors were rather large. Despite changes to tuition and fees, the share of Black, Hispanic, Asian American, and White students at law schools did not change.

[Insert Table 2]

Table 2: Association between Tuition and Fees and Percent of First-Year Students by Race

	(1) % Black	(2) % Hispanic	(3) % Asian	(4) % White
Tuition + fees (log)	-1.307 (1.433)	-0.874 (1.825)	1.048 (1.218)	3.039 (2.667)
Percent students on half to full tuition waivers	0.006 (0.018)	-0.045 (0.025)	-0.007 (0.024)	0.033 (0.039)
Percent students on full tuition waivers	-0.004 (0.024)	-0.064 (0.045)	-0.013 (0.023)	0.094 (0.062)
Median FT grant (log)	0.766 (0.397)	-0.280 (0.258)	0.098 (0.141)	-0.763 (0.528)
Median undergraduate GPA	-3.508* (1.717)	-2.116 (1.496)	-0.521 (0.705)	4.860 (2.965)
Median LSAT score	-0.574*** (0.108)	-0.143 (0.125)	-0.035 (0.077)	0.766*** (0.226)
Percent female students	0.212*** (0.051)	0.207** (0.065)	-0.037 (0.042)	-0.344** (0.107)
Student to faculty and administrators ratio	0.104 (0.125)	0.059 (0.166)	0.016 (0.061)	-0.241 (0.240)
Typical first-year section size	-0.001 (0.006)	0.016* (0.008)	-0.002 (0.004)	-0.008 (0.014)
State: Population 18-34 year olds with BA (log)	0.351 (2.576)	12.223* (5.234)	-3.628 (2.301)	-20.788** (7.499)
State: Personal income per capita (log)	-16.593** (5.804)	2.734 (12.118)	2.904 (4.239)	16.418 (18.037)
State: Unemployment rate	-0.419** (0.147)	0.326 (0.230)	0.078 (0.098)	0.455 (0.346)
R squared	0.23	0.40	0.10	0.16
N (school-years)	1893	1893	1893	1893

Models include school and year fixed effects. Robust standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Next, Table 3 shows estimates for the total number of first-year students (logged) in each racial group. Estimates from column 1 and column 2 indicate that there was no relationship between tuition and fees and total first-year enrollments of Black or Hispanic students.

By contrast, among Asian American students, there was a positive relationship between tuition and fees and enrollment in law school (Table 3, column 3). The outcome and predictor variables were both logged so regression coefficients can be interpreted by exponentiating the coefficient. Specifically, for every 10% increase in tuition and fees, there was a 6.5% increase in first-year enrollment of Asian American students ($1.10^{\beta=0.659} - 1 = 0.065$). Contextualized, a 10% increase in tuition and fees is \$3,414 based on a mean of \$34,137 in the data, and 6.5% of the mean of Asian first-year enrollment (17) is approximately one student. If the average law school raised its tuition by about \$3,400 in one year, that school can expect an additional Asian American student to enroll. This finding is opposite of the hypothesized direction that higher tuition prices would produce enrollment declines among Asian American students, yet supports the theoretical notion that law schools operate as a Veblen good in that higher prices generate greater demand. Moreover, Asian American students were more concentrated at law schools with higher LSAT scores and GPA requirements—schools which also tend to have higher tuition prices.

Shown in Table 3, column 4, there was also a positive relationship between White student enrollment and law school tuition and fees. A 10% increase in tuition and fees was associated with a 1.5% increase in White students ($1.10^{\beta=0.162} - 1 = 0.015$), which equates to slightly more than two students for the average law school.

[Insert Table 3]

Table 3: Association between Tuition and Fees and Number (log) of First-Year Students by Race

	(1) # Black	(2) # Hispanic	(3) # Asian	(4) # White
Tuition + fees (log)	-0.231 (0.189)	0.395 (0.294)	0.659** (0.228)	0.162* (0.074)
Percent students on half to full tuition waivers	-0.002 (0.002)	-0.001 (0.003)	-0.005 (0.002)	-0.001 (0.001)
Percent students on full tuition waivers	-0.005 (0.004)	-0.011 (0.007)	-0.010 (0.005)	-0.005** (0.002)
Median FT grant (log)	0.026 (0.030)	-0.030 (0.037)	-0.008 (0.031)	0.004 (0.006)
Median undergraduate GPA	-0.377 (0.212)	-0.382 (0.243)	0.090 (0.106)	0.111 (0.061)
Median LSAT score	-0.085*** (0.015)	-0.013 (0.019)	-0.002 (0.013)	0.008 (0.007)
Percent female students	0.023*** (0.006)	0.014* (0.007)	-0.001 (0.006)	-0.009** (0.003)
Student to faculty and administrators ratio	0.064** (0.020)	0.066 (0.037)	0.061** (0.022)	0.054* (0.021)
Typical first-year section size	0.001 (0.001)	0.005*** (0.002)	0.002 (0.001)	0.002* (0.001)
State: Population 18-34 year olds with BA (log)	0.357 (0.354)	0.443 (0.646)	-0.823 (0.613)	-0.484* (0.211)
State: Personal income per capita (log)	-1.486 (0.820)	2.732 (1.427)	0.837 (0.927)	0.151 (0.371)
State: Unemployment rate	-0.028 (0.021)	0.085* (0.033)	0.029 (0.025)	0.014 (0.010)
R squared	0.15	0.33	0.22	0.33
N (school-years)	1893	1893	1893	1893

Robustness Checks

(A) Public law schools: Tuition + fees (resident, log)	-0.041 (0.209)	0.479 (0.348)	0.612* (0.256)	-0.012 (0.077)
R squared	0.15	0.34	0.20	0.26
N (school-years)	765	765	765	765
(B) Private law schools: Tuition + fees (log)	0.103 (0.487)	0.009 (0.462)	1.255** (0.421)	0.341 (0.189)
R squared	0.18	0.33	0.26	0.38
N (school-years)	1128	1128	1128	1128

Models include school and year fixed effects. Robust standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Robustness Checks

As a robustness check, I separated the sample of law schools. I first analyzed the set of public law schools only while using resident tuition prices (results displayed in Table 3, model A), and analyzed the sample of private law schools only (Table 3, model B). Estimates for the control variables are excluded here to save space. Separating the sample helps to determine whether any nuanced relationships existed between price and enrollment within the public and private sectors of legal education. When examining public law schools, there continued to be a positive relationship between tuition and fee prices and first-year enrollment of Asian American students (Table 3, model A, column 3). This positive association also remained among the sample of private law schools only (Table 3, model B, column 3), with a larger coefficient compared to public law schools. Interestingly, the positive association between tuition and White student enrollment disappeared when disaggregating law schools by sector, suggesting a small effect that only becomes statistically significant in the larger sample of schools. For Black and Hispanic students, disaggregating the sample did not yield any relationships between tuition and fees and total first-year enrollment, consistent with findings on the full sample of schools.

Net Costs and Enrollment by Race

The second research question in this study investigates whether estimated net costs of law school play a role in determining the first-year enrollment patterns of students by race. Results show that when utilizing the outcome of percentage of students by race, there were null results for the relationship between net costs and first-year enrollment across all four racial groups (not displayed). Perhaps the percentage of students in each group does not reflect enough variation even though subtle changes occur among the raw enrollment numbers.

Results analyzing the enrollment numbers of students by race are reported in Table 4. Results indicate that for Black and Hispanic students, there was no association between net costs and first-year enrollment. Interesting results emerge when considering the enrollment of Asian American and White students. Enrollment numbers for both groups of students increased when net costs increased, which is contrary to expectations based on price sensitivity, yet supports the conceptualization of law schools as a Veblen good. Contextualized, for a 10% increase in estimated net costs, equivalent to \$4,642 for the average law school in the sample, there would be a 6% increase in Asian American students, and a 2.8% increase in White students. This equates to about one Asian American student and four White students. One possibility that Asian American and White students may be more concentrated at law schools located in urban areas and locations with a higher cost of living, which would contribute to the positive relationship between net costs and enrollment.

[Insert Table 4]

Robustness Checks

I again separated the sample of law schools into public and private schools and analyzed the log of first-year enrollments by race. Results are reported for public schools in Table 4, Model A and for private schools in Table 4, Model B. The association between net cost and Asian American students was significant among private schools, but not among public schools. Therefore, the significant coefficient reported in the main results inclusive of the full law school sample was driven by private schools. Similarly, there was a significant positive relationship between net cost and White students in the private school sample, but not among public schools.

Table 4: Association between Estimated Net Cost and Number (log) of First-Year Students by Race

	(1) # Black	(2) # Hispanic	(3) # Asian	(4) # White
Estimated net cost (log)	0.031 (0.187)	0.352 (0.266)	0.615** (0.199)	0.285*** (0.081)
Percent students on half to full tuition waivers	-0.001 (0.003)	0.001 (0.004)	-0.001 (0.003)	0.001 (0.001)
Percent students on full tuition waivers	-0.004 (0.004)	-0.010 (0.007)	-0.006 (0.005)	-0.003 (0.002)
Median undergraduate GPA	-0.376 (0.212)	-0.387 (0.243)	0.077 (0.103)	0.107 (0.060)
Median LSAT score	-0.086*** (0.015)	-0.011 (0.019)	0.002 (0.013)	0.009 (0.007)
Percent female students	0.023*** (0.006)	0.014 (0.007)	-0.002 (0.006)	-0.009** (0.003)
Student to faculty and administrators ratio	0.063** (0.020)	0.066 (0.037)	0.062** (0.022)	0.053* (0.021)
Typical first-year section size	0.002 (0.001)	0.005** (0.002)	0.002 (0.001)	0.002* (0.001)
State: Population 18-34 year olds with BA (log)	0.344 (0.347)	0.389 (0.650)	-0.919 (0.625)	-0.533* (0.211)
State: Personal income per capita (log)	-1.411 (0.815)	2.718 (1.442)	0.761 (0.906)	0.168 (0.365)
State: Unemployment rate	-0.027 (0.021)	0.082* (0.033)	0.026 (0.025)	0.013 (0.010)
R squared	0.15	0.33	0.22	0.33
N (school-years)	1893	1893	1893	1893

Robustness Checks

(A) Public law schools: Estimated net cost (resident, log)	0.101 (0.196)	0.363 (0.284)	0.202 (0.196)	0.053 (0.072)
R squared	0.15	0.34	0.19	0.26
N (school-years)	765	765	765	765
(B) Private law schools: Estimated net cost (log)	0.177 (0.327)	0.108 (0.365)	0.871** (0.309)	0.476** (0.142)
R squared	0.18	0.33	0.25	0.38
N (school-years)	1128	1128	1128	1128

Models include school and year fixed effects. Robust standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

It appears that Asian American and White students are more willing to attend private law schools when net costs are high, but do not show the same preferences towards public schools. An explanation for this finding is that the enrollment of Asian American and White students have increased at higher ranked law schools with higher LSAT scores (American Bar Association, 2015), which would encompass elite private schools with high attendance costs. It may not be the higher cost among private schools that attracts students, but rather that the selective law schools deemed more attractive are also more likely to be private and higher priced.

Discussion

This study shows that there is a lack of student price sensitivity to law school tuition prices and estimated net costs. Specifically, none of the reported results suggest that the enrollment of first-year students declines when tuition and fees increase, nor when net costs increase. This is in contrast to earlier research on undergraduate price sensitivity (Hemelt & Marcotte, 2011), suggesting that law school is a fundamentally different ‘product’ compared to college, and one that students willingly invest in despite increasing prices. One major contribution from this study is that among Black and Hispanic students, increases in tuition and fees and in net costs are not associated with enrollment declines.

This lack of a relationship suggests that price increases do not deter Black and Hispanic students from pursuing law school, at least measured in enrollment numbers at the institutional level. From a policy perspective, this might be viewed as a positive finding, implying that law schools are providing adequate financial aid resources to Black and Hispanic students. The lack of price sensitivity is particularly reassuring given research showing that undergraduate Black and Hispanic students are less likely to enroll in college when prices increase (Heller, 1997). In terms of affordability being a prohibitive factor for students of color to gain access to law school,

this study concludes that tuition increases have not created disproportional barriers for Black and Hispanic students compared to White students.

However, Black and Hispanic students are more likely to enroll at law schools with lower LSAT scores and GPAs, which would create or perpetuate inequitable job opportunities. Law schools with stronger academic credentials produce graduates with higher bar passage rates and job placement rates (Morris & Henderson, 2008). The concentration of Black and Hispanic students at lower quality law schools is a concern. These enrollment patterns would ultimately fail to increase diversity among practicing lawyers if Black and Hispanic students graduate predominantly from law schools with less competitive employment prospects. Selective law schools should consider incorporating recruitment practices aimed at students of color, via partnerships with undergraduate career service offices, especially at minority-serving institutions, and by offering diversity scholarships and mentorship programs.

A second contribution of this study is that the enrollment of Asian American and White students increase when tuition prices are higher and when net costs are higher at private schools, which is opposite of expectations grounded in human capital theory (Becker, 1975). Although, the concept of law schools as a Veblen good convincingly explains this phenomenon (Campos, 2018). When students are expected to pay higher costs, they may consciously believe they are receiving a better quality legal education. In fact, receiving exceptionally generous financial aid packages may cause students to question the desirability and prestige of the law school they are considering. While these ideas are counterintuitive from a human capital framework, they are aligned with the conceptualization of law schools as a Veblen good.

Findings also suggest that the effect of increased net costs on enrollment of Asian American and White students is strongest at private schools. Students have a preference to attend

private law schools that require, on average, higher out-of-pocket costs. Because private schools tend to charge higher tuition to begin with, students subconsciously influenced by the idea of law schools as a Veblen good may perceive these schools to be more beneficial. Asian American and White students also more frequently gain admission to selective law schools, which typically have higher costs.

Nevertheless, Campos (2018) argues that, in more recent years, greater transparency about law school costs and graduate employment outcomes have caused law schools to lessen the likeliness to operate as a Veblen good. Greater competition for a smaller pool of law school applicants is anticipated to result in law schools needing to offer greater tuition discounting in the future (Campos, 2018).

Prior research suggests that Asian American students place a greater value on higher education than do other racial/ethnic groups (Paulsen & St. John, 2002), which further explains why these students are willing enroll in law school despite higher sticker prices and net costs. There may be cultural influences at play that can explain why Asian American students in particular are more likely to attend law school with higher price tags. Additional research, particularly from the qualitative vein, would be useful to understand why Asian American and White students choose law schools with higher costs. Furthermore, it would be interesting to examine if Black and Hispanic students would also show preferences for higher priced law schools if more gained admittance to prestigious schools.

In practice, law school administrators might be assured that increasing their tuition and fee prices will not disproportionately reduce the diversity of the entering class. However, more outreach is needed to actively invite students of color to apply at more selective law schools and offer greater tuition discounting for underrepresented racial groups.

Future research would benefit from examining decisions to pursue law school using student-level data to see how overall trends from the current study manifest on an individual level. The vast majority of students apply to multiple law schools, and each acceptance provides another opportunity to consider the financial aid packages offered. Data at the individual level would conceptualize the choice as attending one of several law schools, leveraging and comparing different sources and amounts of financial aid that can reduce net cost. Greater understanding of the types of schools that students from different racial backgrounds apply to, get accepted to, as well as the levels of aid offered and the ultimate choice of where students attend, will further shed insight on the access barriers faced by students of color and strategies to increase diversity among law schools and in the legal profession.

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