

Amy Li
Minor revision to ACCESS Group/AIR research proposal
Data section

After doing some investigation, I have made some revisions to the data section of my initial proposal. Here, I outline the changes and err on the side of providing extensive detail.

As the reviewers state, the project would be strengthened by extending the time period of observation to cover earlier years, starting in 2005. In this updated proposal of this project, I plan to use data from 2005 to 2015. This period covers the Great Recession, which had a remarkable dampening effect on the career prospects of law school graduates. The coverage of the pre- and post-recessionary periods will contribute to a more comprehensive analysis. I will contact the ABA for access to data from years 2005 to 2010. Noted in my initial proposal, publically available data is reported by ABA for years 2011 to 2015. Note that the ABA data has since been updated to 2016. ABA now reports 2016 as the latest year of many variables used in this study (e.g. 2016 1L JD Applicant/Matriculants Data, 2016 JD Matriculants by Gender & Race/Ethnicity). However, the data for this project will still go to 2015 because it is the latest year of data available from the necessary Census Bureau and IPEDS surveys.

IPEDS Sample Determination

I describe changes to the use of IPEDS data, but first mention some details on the data usage in response to the reviewer's request to be clearer about which elements of IPEDS will be used. Using the filters in IPEDS, the sample will be restricted to institutions that meet the following requirements in the "special characteristics" section: sector (public, 4-year or above, private not-for-profit, 4-year or above, and private for-profit, 4-year or above); degree-granting status (degree-granting); and, located in the 50 states. IPEDS provisional release data will be used, which covers up to 2014-2015 (versus 2013-2014 in final release data) for the following surveys: Completions, 12-month Enrollment, and Fall Enrollment (2014). The survey for Institutional Characteristics as well as for Pricing and Tuition have provisional release data for 2015-2016, understandably a year ahead of the student enrollment and completion surveys.

The reviewer is correct in that IPEDS does not explicitly report the number of college graduates in each state in each year. In the original proposal, I intended to use the IPEDS Institutional Characteristics survey. The section on "Directory Information" lists the location of the institution (i.e. state, zip code). However, as the reviewer points out, using the institution's location would introduce error into the analysis, because students graduating from online degree programs who live in a different state would be inaccurately counted as living in the institution's state. Thus, this data would not capture the important control variable—geographic demand for attending a law school located in the same state as the undergraduate institution. I have not found a dataset that directly reports this variable. I ponder two potential solutions and explain their strengths and weaknesses.

Exclude Distance Education Institutions in IPEDS

The first solution is to exclude all online-only (distance-education only) institutions from the sample. The IPEDS Institutional Characteristics survey has a question in the "Special

characteristics” section that says “All programs offered completely via distance education”: yes or no. Even though this criteria has been reported in IPEDS since 2011, it is likely to be applicable to earlier years. Examples of online-only institutions are Capella University and Western Governors University. Note that institutions such as University of Phoenix are not considered online-only because they offer both online and traditional brick and mortar programs.

IPEDS defines distance education as “education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously” (Integrated Postsecondary Education Data System, 2016, p. 10).

The sample inclusion of institutions that offer all programs via distance education does not completely solve the data challenge, since graduates of online-only programs who reside out of state cannot be differentiated from graduates residing in the state. In my exploration of the data, eliminating online-only institutions reduces the total sample size by 45, after using the previously mentioned other sample restrictions for sector, degree-granting status, and location in the U.S.

Additionally, about 2.8 million students (undergraduate and graduate) took all their courses online in 2014, which makes up 14% of all students (Allen, Seaman, Poulin, & Straut, 2016). Approximately 48% percent of these students attended public institutions, 21% attended private non-profit institutions, and 30% attended for-profit institutions. Allen et al. (2016) defines an online course as one that delivers 80% of content online, less stringent than the IPEDS definition of exclusively online.

Public institutions report that 84% of their online-only students reside in the institution’s state. Private non-profit institutions report this amount as 56%, and for-profits report it as 75% (Allen et al., 2016). This is encouraging because the majority of graduates in the IPEDS sample would be accurately counted as living in the same state as the institution. Interestingly, 49.1% of student enrolled in any distance education course are concentrated at just 5% of institutions in IPEDS, so only a small segment of the sample would be “contaminated” by out of state online-only graduates.

With these data considerations, it would be difficult to precisely tease out the students in IPEDS who reside in a different state than their institution’s state. In the absence of perfect data, restricting the sample in IPEDS would get closer to counting the number of college graduates in each state-year. Thus, I plan to use several different versions of my dataset. The first is to include all institutional types (public, private non-profit, for-profit) and exclude online-only institutions. A second is to separately exclude public, private non-profit, and for-profit institutions from the sample to see how results change. Running the equivalent model on various different samples, as well as using different year cutoffs, can serve as robustness checks.

As the reviewer states, IPEDS does report, via the Fall Enrollment survey in the “Residence and migration of first-time freshmen”, the number of “First-time degree/certificate-seeking undergraduate students” by “State of residence when student was first admitted”. However, I agree with the reviewer that this variable does not capture bachelor’s degree graduates, intended to be a measure of student demand for law school attendance in a particular state.

American Community Survey Educational Attainment Data

The second option to capture a better measure of college graduates in a state is to use the American Community Survey (ACS). ACS reports annual data by state on their subject “Educational Attainment”. There are several age groups for which the population (and percentage) holding a bachelor’s degree or higher is reported: 18 to 24; 25 and older; 25 to 34; 35 to 44, as well as ages 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. The available data points to several conceptual considerations. First, do we consider student demand for law school to be related to the number of college graduates from institutions located in the state for each year? Or, is the demand for law school 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? Conceptually, the second definition makes more sense to me. If we assume this definition, another question is the selection of an age group. Specifically, which of the age categories would best represent the population of students applying to and entering law school?

According to the Law School Admissions Council (2015), approximately half of all applicants from 2011 to 2015 were between 22 and 24 years of age, 30% were between 25 and 29, approximately 15% between 30 and 39, and 5% were age 40 years or above. Across 2011 to 2015, the median age was 24 and the mean was between 26 and 27 (Dustman & Gallagher, 2015). In years 2005 to 2009, numbers were very similar—half of applicants were between ages 22 and 24, slightly less than 30% were between 25 and 29, 15% were age 30 to 39, and 5% were age 40 and above (Law School Admission Council, 2010).

Consequently, the ACS category of bachelor’s degree-holders from age 18 to 24, combined with 25 to 34-year olds and 35 to 44-year olds would closely approximate the number of individuals in a state, relative to other states, who would potentially apply to and enroll in law school. Granted, this is an imprecise measure, but in the absence of other available data, it is a convincing estimate. I will explore different versions of this variable by conducting analyses using the population counts of different age cutoffs (i.e. 18 to 34-year olds, 18 to 44-year olds).

In conclusion, I will continue to explore the availability and precision of data as I am building the dataset to answer this study’s research questions. Certainly there are no perfect datasets. Therefore, I will apply conceptual ideas, identify data and variable definitions, and consider what other researchers have done to create the most useful and accurate dataset.

- Allen, I. E., Seaman, J., Poulin, R., & Straut, T. T. (2016). *Online report card: Tracking online education in the United States*. Babson Park, MA: Babson Survey Research Group. Retrieved from <http://www.babson.edu/Academics/faculty/provost/Pages/babson-survey-research-group.aspx>
- Census Bureau American Fact Finder. (2017). Educational Attainment: 2011-2015 American Community Survey 5-year estimates. Retrieved February 7, 2017, from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_S1501&prodType=table
- Dustman, K., & Gallagher, A. (2015). *Analysis of ABA law school applicants by age group: 2011-2015*. Newtown, PA: Law School Admission Council. Retrieved from [http://www.lsac.org/docs/default-source/data-\(lsac-resources\)-docs/analysis-applicants-by-age-group.pdf](http://www.lsac.org/docs/default-source/data-(lsac-resources)-docs/analysis-applicants-by-age-group.pdf)
- Integrated Postsecondary Education Data System. (2016). *IPEDS 2016-17 data survey materials: Glossary*. Washington, DC: National Center for Education Statistics. Retrieved from <https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx?>
- Law School Admission Council. (2010). *LSAC report: Newsletter of the Law School Admission Council*. Newtown, PA: Law School Admission Council. Retrieved from [http://www.lsac.org/docs/default-source/publications-\(lsac-resources\)/december2010_lsrdec2010.pdf](http://www.lsac.org/docs/default-source/publications-(lsac-resources)/december2010_lsrdec2010.pdf)



Dear Amy Li,

Thank you for submitting your proposal. A printable summary is below. Your confirmation number is 15516. A confirmation email will be sent to you within 24 hours.

Applicants will be notified of the status of the proposed project on February 2, 2017.

If you have questions or need assistance regarding your application please contact the AIR Grant staff at 850-391-7109 [☎](tel:850-391-7109) or grants@airweb.org.

SUMMARY

Personal Information

Name	Dr. Amy Y Li
Informal Name	Amy Li
Affiliation	University of Northern Colorado
Unit/Department	Leadership, Policy, and Development
Title	Assistant Professor
Year began this position	2016
Email	amy.li@unco.edu
Preferred Mailing Address	McKee Hall 420 Greeley, Colorado 80639 United States Phone: 801-556-3268 ☎
Secondary Address	

Demographics

Highest degree	
Discipline of highest degree	
Position description	
Staff members in IR office	
Campus type	
Years of experience in IR	
IR Roles	
Year of birth	
Race/Ethnicity	
Gender	

Grant Type

I am applying for a:

Research Grant

Financial Representative

Name

Nicole Morse

Affiliation

University of Northern Colorado

Department

Office of Sponsored Programs

Title

Grants & Contracts Administrator

Address

Kepner 025 | Campus Box 143

City

Greeley

State or Province

CO

Zip or Postal Code

80639

Country

USA

Additional Contacts

Project Description

Project title:

Dollars and Sense: Student Price Sensitivity to Law School Tuition Costs

Statement of the research problem and national importance (limit 750 words):

- What is the research problem this proposal intends to address?
- How does this topic relate to the research priorities areas of access, affordability, and value of legal or graduate/professional education?
- Why is this topic of national importance?
- Why is it timely to conduct this research at this time?

Tuition costs at law schools have been steadily rising. In 2003, the average cost of tuition and fees at public law schools was \$10,819 for in-state residents, and \$20,171 for non-residents (American Bar Association, 2016a). By 2013, these costs had grown to \$23,879 and \$36,859 for residents and non-residents, respectively. Among private schools, average costs have risen from \$25,574 in 2003 to \$41,985 in 2013. Tuition and fees in 2015 ranged from approximately \$23,000 at Brigham Young University to upwards of \$60,000 at schools such as Columbia University and Cornell University. These numbers do not include the \$15,084 average cost of living expenses and books.

One consequence of rising tuition is declining affordability of law school. Median household incomes, which were \$55,823 in 2003 and \$56,516 in 2015, have certainly not kept up with law school tuition prices (Federal Reserve Bank of St. Louis, n.d.). Many students must take out loans and in 2011, the average debt among graduates of public law schools was \$75,728 and at private schools, \$124,950 (Tamanaha, 2013). While the 2007 College Cost Reduction and Access Act provided income-based repayment options and public service loan forgiveness (Schrag & Pruet, 2011), many graduates are still burdened by the sheer amount of debt. Large debt levels discourage graduates from pursuing lower-paying public service jobs (Dolin, 2007).

The last recession was detrimental to the legal job market, and recent numbers show that approximately a third of law school graduates do not secure jobs as lawyers, and only 55% secure permanent full-time lawyer jobs within nine months of graduation (Tamanaha, 2012, 2013). For the class of 2015, 9.7% were still seeking employment nine months after graduation (American Bar Association, 2016b). With the exception of those working at large private firms, graduates do not earn lucrative salaries, with median starting salaries reported at \$60,000 to \$70,000 (Dinovitser, Garth, & Sterling, 2013; Tamanaha, 2013). Consequently, the ever-rising cost of law school, as well as employment outcomes, may deter future students from applying, particularly those from underrepresented backgrounds.

While existing research has examined the impacts of tuition and financial aid on undergraduate enrollment, no studies have examined law schools specifically, nor explored differential impacts by race or gender. Price sensitivity refers to the degree to which the price of a product or service (e.g. legal education) affects the consumer's (e.g. student's) purchasing behaviors. If underrepresented minorities have a higher price sensitivity, the trend of tuition increases will have disproportionately negative impacts on their access to legal education. Data shows that minorities are still underrepresented in the legal profession, with 12% of lawyers reporting as people of color in 2010 (compared to 11% in 2000), and 36% reporting as female in 2016

(American Bar Association, 2016). Rapidly rising costs may perpetuate these inequitable participation rates.

Using institution-level data on law schools nationally, this study poses the following research questions:

1. Does the number of applicants to law school change as a result of published annual tuition and fee costs?
2. Does first-year enrollment in law schools change as a result of average net costs (tuition and fees minus grants)? Does first-year enrollment change based on the percent of students who receive tuition waiver scholarships?
3. Does the percent of first-year enrollment of students of color and female students change as a result of average net costs?

These questions relate directly to affordability and access in legal education. In recent years, national media attention has highlighted the timeliness of these topics. The law school "tuition bubble" has been compared to the sub-prime mortgage crisis (Nichol, 2012). News outlets such as the New York Times have commented on the astronomical cost of legal education (Segel, 2011a, 2011b). Scholars have also questioned the return on investment for attending law school (Chen, 2012; Dinovitzer et al., 2013; Dolin, 2007; Tamanaha, 2013). Tamanaha's (2012) book, *Failing Law Schools*, offered a blunt critique of law school as a poor investment.

Recently, a group of Harvard students wrote a letter to the dean and members of the Harvard Corporation, calling for an end to their law school's tuition, stating that the cost (noted as \$59,550) restricts access for underrepresented minorities (Sullivan, 2016). A blogger predicted that, by 2021, average tuition costs alone will be \$60,000, and at selective schools such as Cornell, Yale, and Columbia, over \$70,000 (Leichter, 2012). It is likely that law schools will continue their current trajectory of price increases.

Ultimately, the proposed topic of the relationship between law school costs and attendance is important because of public discourse, a lack of scholarly work in this area, the expected continued rise in prices, and the contribution of this topic to access and affordability of legal education.

Review the literature and establish a theoretical grounding for the research (limit 1000 words):

- What has prior research found about this problem?
- What is the theoretical/conceptual grounding for this research?

While no empirical research exists on the relationship between law school tuition prices and student demand, numerous studies have examined how undergraduate tuition prices and the net cost of attendance affect undergraduate enrollment (net cost typically defined as tuition, or tuition and fees minus financial aid and scholarships). Using data from the 1970s and 1980s, Heller (1997) found that a \$100 increase in tuition led to a 0.5% to a 1% decline in enrollment. Data from 1980 to 1992 indicated a 1.2% decline in enrollment at four-year institutions for every \$1000 increase in tuition, and a 4.7% decline for the same increase at two-year institutions (Kane, 1995). In a meta-analysis of studies published between 1967 and 1982, declines in enrollment were consistently associated with tuition increases (Leslie & Brinkman, 1987). Analyzing more recent data from 1991 to 2006, Hemelt and Marcotte (2011) found that at four-year public institutions, an increase of \$100 in tuition and fees led to an enrollment decline of 0.25%.

A second important independent variable in explaining enrollment numbers is the net cost of attending law school. This becomes a more relevant factor after students are admitted and receive notification of their financial aid packages. In studies of undergraduates, a \$1,000 increase in grant aid increased the probability of college attendance by approximately 3.6 percentage points (Dynarski, 2003). National and state-specific studies show a positive association between academic merit-based aid and college attendance (Cornwell, Mustard, & Sridhar, 2006; Leeds & DesJardins, 2015; Stanley & French, 2009).

Research has also examined, to a lesser extent, price sensitivity among undergraduate students by race. Scholars have found that for every \$1000 decrease in net cost, enrollment yield (the percent of admitted students who choose to enroll) increased by approximately 6% for white students and 10% for Black students (Wetzel, O'Toole, & Peterson, 1998). Black students are generally found to be the most sensitive to cost changes (Heller, 1997), and 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 explored how Asian American or Native American students respond to tuition increases (possibly due to small sample sizes). In addition, few scholars have focused on gender differences in undergraduate price sensitivity, although most studies include gender as a control variable.

Based on evidence for student responses to undergraduate tuition charges and financial aid, we might expect prospective law students to behave similarly, as well as for students of different racial groups and genders to respond differently.

Previous work analyzing longitudinal survey data from the After the J.D. Project found that the survey respondents, who began their law careers in 2000, generally saw law school as a worthwhile investment (Dinovitzer et al., 2013). However, as covered in the literature review, rising tuition costs, consequent debt levels, and uncertain job market prospects may deter newer incoming classes from applying and enrolling in law school, particularly those from underrepresented backgrounds.

Human capital theory posits that individuals that invest in further education and training attain greater skills and abilities, which increases their future earnings potential (Becker, 1975). Human capital models have been used to "examine how students make cost-benefit analyses and subsequent decisions on whether to attend and persist in college based on certain information, including tuition, fees, books and supplies, transportation costs, foregone earnings, and financial aid" (Stuart, Rios-Aguilar, & Deil-Amen, 2014, p. 329). "Tuition is the most visible college price, and it is the one that is most inescapable...annual increases generally are well publicized and often are debated publically" (Leslie & Brinkman, 1987, p. 183).

Applying human capital theory, students are expected to evaluate their decision to apply to law school, and enroll in a particular law school, according to their knowledge of costs associated and future earnings potential. A student first makes the decision to apply to law school(s). After the student is accepted, the student then makes a second decision of whether and where to enroll, weighing the newly available information on grants and scholarships they are awarded. Human capital theory suggests that students will make such choices regarding law school application and matriculation, based on the information available to them, in order to minimize costs and maximize benefits. In aggregate, these individual choices produce school-level data on total applications to law school, first-year enrollment numbers, and the racial and gender composition of the first-year entering class.

Describe the research method that will be used (limit 1000 words):

- What are the research questions to be addressed?
- What is the proposed research methodology?
- What is the statistical model to be used?

This study addresses the primary research question of whether there exists an association between applications to law schools nationally and published tuition and fee costs; and between enrollments and net price, calculated using each school's allocation of grant awards and scholarships. The secondary research questions are whether these associations vary by race and gender.

Data will be collected from the American Bar Association website, which reports institutional-level data from years 2011 to 2015 on 203 ABA-approved law schools that confer the Juris Doctor (J.D.) degree (currently there are 205 ABA-approved law schools, although only 204 confer the J.D., and 203 have data across all years). A panel dataset will be created, for a total sample size of $N = 1,015$ institution-years. The proposed analysis is a two-way fixed effects model, described later. It is possible that five years of data (2011 to 2015) is not enough for a fixed effects model to be estimated efficiently. In this case, data on previous years will be requested from the ABA to create a longer panel.

Since ABA reports data at the institutional level, individual student financial aid recipients cannot be tracked. However, data is reported on grant amounts allocated to all students, at the 25th, 50th, and 75th percentile. Therefore, the net price for a school can be approximated by subtracting the average grant award amount from tuition and fees. Data is also available on the percent of all students at a school who receive grants; full-tuition waivers; and half-tuition waivers, which serve as independent variables representing financial aid.

The first outcome variable of interest is the number of first-year students who apply to a full-time program at each law school (excludes transfer students). Only data on full-time programs will be used to ensure consistency between programs that offer both full-time and part-time programs, and those that only offer full-time programs. The main independent variable of interest in the first research question is the published cost of annual tuition and fees. For public schools, resident tuition will be used in one set of analyses, and in alternative analyses, non-resident tuition will be used.

The second outcome variable is the number of first-year students who enroll at each law school. In this case, the main independent variable is average net cost (tuition and fees minus average grant award amount across all students). Another way to approximate net cost is to include a variable for the percent of all students who receive tuition waivers, which plausibly reduces the average net cost to first-year students (data on tuition waivers for first-year students only is not reported). Specifically, two variables will be used: the percent of all students who received a full tuition waiver, and the percent who received a half tuition waiver.

In addition, the percent of students enrolled from each of the following racial groups will be analyzed separately: Hispanic; Black or African American; Asian; and white. Due to small percentages of Native Hawaiian or Pacific Islanders; and American Indian or Alaska Natives (both average less than 1%), and lack of variation across schools, separate analyses for these groups are not feasible. The purpose of disaggregating the incoming class by race is to investigate if rising net costs have a disproportional effect on certain groups. Similarly, the percent of female students in each entering class will be analyzed as an outcome variable, to explore price sensitivity by gender.

A series of institutional-level control variables will be used to account for other factors that may affect the relationship between price sensitivity and the independent variables. These are the average GPA of applicants, average LSAT score, acceptance rate, faculty-student ratio, and bar passage rate, in order to capture incoming student characteristics, selectivity, and academic "quality" of the law school. These characteristics likely affect prospective students' choices of where to apply and their likelihood of matriculating if accepted. In studies of undergraduate enrollment, these factors and related characteristics have been used.

At the state level, the number of college graduates per state population will be included, using data from the Integrated Postsecondary Education Data System (IPEDS) and the Census Bureau. While this variable is an imperfect measure, since many students leave the state of their undergraduate institution to attend law school, it is still the best proxy for the "supply" of potential law school applicants. Additionally, unemployment data will be added from the Bureau of Labor Statistics (Hemelt & Marcotte, 2011; Leslie & Brinkman, 1987). Personal income per capita, collected from the Bureau of Economic Analysis will control for a state's relative wealth and potential tuition setting influences (Hemelt & Marcotte, 2011). In addition, geographic region has been included in prior studies of college enrollment and price, and will be explored as a possible control variable (Lucia & Baumann, 2009).

Data on multiple observations of individual units over time can be analyzed using fixed effects models. Unobserved characteristics of units may be correlated with both independent and outcome variables, and controlling for such unobservables using fixed effects can reduce selection bias (Schneider, Carnoy, Kilpatrick, Schmidt, & Shavelson, 2007). Each law school has certain characteristics that are unchanged across time, captured by the fixed effect, which is treated as a parameter to be estimated (Angrist & Pischke, 2009).

Formally, the model is as follows:

$$Y_{it} = \alpha_i + \tau_t + \delta D_{it} + X_{it} \beta_1 + X_{st} \beta_2 + \epsilon_{it}$$

where Y_{it} is the outcome variable (applications, enrollments, enrollment demographics) for law school i in year t . α_s and τ_t are school- and year-fixed effects, respectively. School fixed effects control for time-invariant characteristics that might affect outcomes, year fixed effects control for national trends affecting all schools. D_{it} is the main independent variable of interest (tuition and fee prices, net cost, or percent on tuition waiver scholarships) for law school i in year t . δ is the parameter of interest and provides an estimate of the effect of the independent variable on the outcome variable. X_{it} and X_{st} are vectors of school- and state-level control variables (Shadish, Cook, & Campbell, 2001). For model diagnostics, panel Breusch-Godfrey tests will be run to check autocorrelation in the error term (Wooldridge, 2010), and standard errors will be clustered at the school level to correct for panel heteroskedasticity (Beck & Katz, 1995).

References cited (no word limit):

- American Bar Association. (2016). Financial information. Retrieved December 7, 2016, from http://www.americanbar.org/groups/legal_education/resources/statistics.html
- American Bar Association. (2016). Law school employment database. Retrieved December 7, 2016, from

- http://www.americanbar.org/groups/legal_education/resources/statistics.html
American Bar Association. (2016). Lawyer demographics. Retrieved December 9, 2016, from http://www.americanbar.org/resources_for_lawyers/profession_statistics.html
- Angrist, J. D., & Pischke, J.-S. (2009). *Mostly harmless econometrics: An empiricist's companion*. Princeton, NJ: Princeton University Press.
- Beck, N., & Katz, J. N. (1995). What to do (and not to do) with time-series cross-section data. *American Political Science Review*, 89(3), 634–647.
- Becker, G. S. (1975). *Human capital: A theoretical and empirical analysis, with special reference to education* (2nd ed.). Cambridge, MA: National Bureau of Economic Research.
- Chen, J. (2012). A degree of practical wisdom: The ratio of educational debt to income as a basic measurement of law school graduates' economic viability. *William Mitchell Law Review*, 38(3), 1185–1208. <http://doi.org/10.1525/sp.2007.54.1.23>.
- Cornwell, C., Mustard, D. B., & Sridhar, D. J. (2006). The enrollment effects of merit-based financial aid: Evidence from Georgia's HOPE program. *Journal of Labor Economics*, 24(4), 761–786.
- Dinovitzer, R., Garth, B. G., & Sterling, J. S. (2013). Buyers' remorse? An empirical assessment of the desirability of a lawyer career. *Journal of Legal Education*, 63(2), 211–234.
- Dolin, J. M. (2007). Opportunity lost: How law school disappoints law students, the public, and the legal profession. *California Western Law Review*, 44(1), Article 6.
- Dynarski, S. M. (2003). Does aid matter? Measuring the effect of student aid on college attendance and completion. *The American Economic Review*, 93(1), 279–288.
- Federal Reserve Bank of St. Louis. (n.d.). Real median household income in the United States. Retrieved December 18, 2016, from <https://fred.stlouisfed.org/series/MEHOINUSA672N>
- Heller, D. E. (1997). Student price response in higher education: An update to Leslie and Brinkman. *The Journal of Higher Education*, 68(6), 624–659.
- Hemelt, S. W., & Marcotte, D. E. (2011). The impact of tuition increases on enrollment at public colleges and universities. *Educational Evaluation and Policy Analysis*, 33(4), 435–457. <http://doi.org/10.3102/0162373711415261>
- Kane, T. J. (1991). *College entry by Blacks since 1970: The role of tuition, financial aid, local economic conditions and family background* (unpublished dissertation). Harvard University.
- Kane, T. J. (1995). *Rising public college tuition and college entry: How well do public subsidies promote access to college?* (No. Working Paper No. 5164). Cambridge, MA: National Bureau of Economic Research.
- Leeds, D. M., & DesJardins, S. L. (2015). The effect of merit aid on enrollment: A regression discontinuity of Iowa's national scholars award. *Research in Higher Education*, 56, 471–495. <http://doi.org/10.1007/s11162-014-9359-2>
- Leichter, M. (2012, October 8). *Private law school tuition projections for 2016, 2021*. The Last Gen X American. Retrieved from <https://lawschooltuitionbubble.wordpress.com/2012/10/08/private-law-school-tuition-projections-for-2016-2021/>
- Leslie, L. L., & Brinkman, P. T. (1987). Student price response in higher education: The student demand studies. *The Journal of Higher Education*, 58(2), 181–204. <http://doi.org/10.2307/1981241>
- Lucia, K. E., & Baumann, R. W. (2009). Differences in the college enrollment decision across race. *The American Economist*, 53(1), 60–74.
- Nichol, G. R. (2012). Rankings, economic challenge, and the future of legal education. *Journal of Legal Education*, 61(3), 345–352.
- Santos, J. L., & Saenz, V. B. (2014). In the eye of the perfect storm: The convergence of policy and Latina/o trends in access and financial concerns, 1975–2008. *Educational Policy*, 28(3), 393–424. <http://doi.org/10.1177/0895904812465111>
- Schneider, B., Carnoy, M., Kilpatrick, J., Schmidt, W. H., & Shavelson, R. J. (2007). *Estimating causal effects using experimental and observational designs*. Washington, DC: American Educational Research Association.
- Schrag, P. G., & Pruett, C. W. (2011). Coordinating loan repayment assistance programs with new federal legislation. *Journal of Legal Education*, 60(4), 583–618.
- Segel, D. (2011a, July 16). *Law school economics: Ka-ching! The New York Times*. New York, NY. Retrieved from <http://www.nytimes.com/2011/07/17/business/law-school-economics-job-market-weakens-tuition-rises.html>
- Segel, D. (2011b, December 17). *For law schools, a price to play the A.B.A.'s way. The New York Times*. New York, NY. Retrieved from <http://www.nytimes.com/2011/12/18/business/for-law-schools-a-price-to-play-the-abas-way.html>
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2001). Fixed effects, DD, and panel data. In *Experimental and quasi-experimental designs for generalized causal inference* (2nd ed., pp. 226–247). Boston, MA: Cengage Learning.
- Stanley, R. E., & French, P. E. (2009). Evaluating increased enrollment levels in institutions of higher education: A look at merit-based scholarship programs. *Public Administration Quarterly*, 33(1), 4–36.
- Stuart, G. R., Rios-Aguilar, C., & Deil-Amen, R. (2014). "How much economic value does my credential have?": Reformulating Tinto's model to study students' persistence in community colleges. *Community College Review*, 42(4), 327–341. <http://doi.org/10.1177/0091552114532519>
- Sullivan, C. (2016, April 20). *Harvard students demand end of tuition in push for diversity*. Bloomberg Law. Arlington, VA. Retrieved from <https://bol.bna.com/harvard-students-demand-end-of-tuition-in-push-for-diversity/>
- Swail, W. S., Cabrera, A. F., Lee, C., & Williams, A. (2005). *Latino students and the educational pipeline. Part III: Pathways to the bachelor's degree for Latino students*. Stafford, VA: Educational Policy Institute.
- Tamanaha, B. Z. (2012). *Failing law schools*. Chicago, IL: The University of Chicago Press.
- Tamanaha, B. Z. (2013). Is law school worth the cost? *Journal of Legal Education*, 63(2), 173–188.
- Wetzell, J., O'Toole, D., & Peterson, S. (1998). An analysis of student enrollment demand. *Economics of Education Review*, 17(1), 47–54. [http://doi.org/10.1016/S0272-7757\(97\)00013-7](http://doi.org/10.1016/S0272-7757(97)00013-7)
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.

Project Description - Appendix

There are no files attached.

Datasets

List the datasets that will be used and explain why they best serve this research (limit 500 words)

As described in the methodology section, data will be collected from the American Bar Association. The ABA is a voluntary organization that supports the legal profession. All law schools are required to report data for the Standard 509 Information Report, as part of an annual questionnaire filed with

the Section of Legal Education and Admissions to the Bar. Information is then verified by the Section of Legal Education and Admissions to the Bar and the Law School Admission Council. Currently, the ABA website has data from 2011 to 2015, with the intent to make more data publicly available. For purposes of this study, additional years of data may be necessary and if so, data will be requested from the ABA.

Data published by the ABA as part of the Standard 509 Information Reports includes law schools' tuition, fees, and living expenses; applications and acceptance rates; enrollments, ethnicity, and gender; GPA and LSAT scores; grants and scholarships; faculty and administrators; and bar passage rates.

The number of college graduates in each state will be collected from the Integrated Postsecondary Education Data System (IPEDS). IPEDS reports institutional-level data on factors such as student enrollment, completions, majors, demographics, and finances. Unemployment data by state is available from the Bureau of Labor Statistics, and personal income per capita will be collected from the Bureau of Economic Analysis.

Statement of use of restricted datasets (limit 250 words):

Applicants should provide a statement indicating whether the proposed research will require use of restricted datasets. If restricted datasets will be used, the plan for acquiring the appropriate license should be described.

If restricted datasets will not be used, leave this text box blank and click *Save and Continue*.

Timeline and Deliverables

Timeline:

Provide a timeline of key project activities.

March – June 2017:

Collect data

Merge and clean datasets

Address missing data

Write conceptual framework and literature review

July – October 2017:

Explore data descriptively

Conduct analyses

Test for assumptions

Write data and methods section

Submit preliminary results for inclusion in 2018 AERA conference

November 2017 – February 2018:

Conduct robustness checks

Write results and discussion section

Edit and finalize paper

Submit paper abstract for inclusion in 2018 AEFP conference

March – April 2018:

Submit final report and related documents to AIR

Submit paper(s) to peer-reviewed publications

Deliverables:

List deliverables such as research reports, books, and presentations that will be developed from this research initiative.

The first written report on the results of this study will be submitted to the grantor. Two peer-reviewed publications will be proposed based on findings from this study. The first paper will likely address the primary research questions on price sensitivity to tuition and net costs for all entering law school students. The second will likely address the racial and gender composition of the entering class. A paper will be presented at the 2017 Access Group Legal Education Research Symposium. Papers will also be submitted for presentation at professional conferences, such as the Association for Institutional Research, American Educational Research Association, and Association for the Study of Higher Education.

Disseminate results:

Describe how you will disseminate the results of this research.

(Note: Costs of travel to meetings should be calculated on the budget page.)

The scope of findings from this study are suitable for publication in peer-reviewed education journals such as *Research in Higher Education*, *Journal of Higher Education*, *Educational Evaluation and Policy Analysis*, and *Journal of Education Finance*. Results of this study may also be aligned with law-specific journals such as the *Journal of Legal Education*. Law school costs and student attendance are highly relevant topics in today's higher education landscape, and the intended audience for this study includes academics, policymakers, college pre-law advisors, and law school admissions officials. Conference venues to share this work include those of the Association for Institutional Research, American Educational Research Association, Association for the Study of Higher Education, and Association for Education Finance and Policy. Furthermore, results from this study can be summarized in a policy report through partnerships with organizations such as the Southern Education Foundation.

IRB Statement

Statement of Institutional Review Board approval or exemption (limit 250 words):

As part of the proposal, a statement outlining a plan for Institutional Review Board (IRB) approval is required. The statement should outline the applicant's timeline and plan for submitting the proposal to an IRB or explain why IRB approval is not necessary. Final IRB action is not necessary prior to submitting the application.

Not applicable

Biographical Sketch(es)**Biographical sketch (limit 750 words):**

Amy Li is an Assistant Professor of Higher Education and Student Affairs Leadership at the University of Northern Colorado. Amy Li earned her Ph.D. in Educational Leadership, Organizations, and Policy from the University of Washington in 2016. She was an Institute of Education Sciences Pre-Doctoral Fellow from 2012-2015 and was awarded an American Educational Research Association dissertation grant in 2015-16. She has an M.Ed. in Higher Education from the University of Utah.

Li's research agenda is on higher education finance and policy. She examines the adoption and impact of state policies that allocate resources to colleges, and how colleges respond to improve student retention and completion. Topics she studies include performance funding, financial aid and student loans, state appropriations, and institutional behavior, with special interest in implications for access at community colleges.

Previous research conducted by Li combines large-scale federal, state, and institutional-level data (e.g. from IPEDS, Census Bureau datasets). She utilizes advanced quantitative techniques on longitudinal data, focusing on survival/event history analysis, time series, and quasi-experimental designs such as difference-in-differences. Li has secured competitive awards from the Interuniversity Consortium for Political and Social Sciences (ICSPR) and AERA, and has consulted on projects funded by the Gates Foundation and the Spencer Foundation.

Li has published in Research in Higher Education, the Palgrave International Handbook of Higher Education Policy and Governance, and the Community College Journal of Research and Practice. She recently published two co-authored reports on a project funded by the TIAA Institute. Li has forthcoming work in the ANNALS of the American Academy of Political and Social Science, and solo- and co-authored works at various stages of the review process at Research in Higher Education, Review of Higher Education, Educational Policy, and Community College Review. Li presents regularly at the Association for the Study of Higher Education, the Association for Education Finance and Policy, and the American Educational Research Association.

Budget

- [budget](#)

Funding History**Funding history (limit 250 words):**

A statement of prior, current, and pending funding for the proposed research from all sources is required. The statement should also include a history of all prior funding from AIR to any of the PIs for any activity. Funding from other sources will not disqualify the application but may be considered in the funding decision.

There is no prior, current, or pending funding for the proposed research.

Dissertation Advisor Letter of Support

There are no files attached.



Research Grant Proposal Budget Form



Name Amy Li

Personnel - Salary

Principal Investigator \$ 33,023

Second Principal Investigator \$ 0

Third Principal Investigator \$ 0

Graduate Research Assistant \$ 12,000

Travel

2017 Access Group Legal Education Research symposium: \$ 1500

Other research related travel: \$ 1000

(Note: Other planned travel should be listed in the "Timelines and Deliverables" section)

Other research expenses

Please provide a breakdown of expenses below and add the total value in the box to the right. Allowable expenses include: materials, such as software, books, supplies, etc.; consultant services, such as transcription, analysis, external researchers, etc.; and costs for publishing articles in journals. The purchase of computer hardware, overhead or indirect costs, and living expenses are not allowable. If you have questions about specific expenditures, please contact AIR. \$ 1900

Statistical software: \$600
Publication fees: \$300

Travel for one graduate research assistant to attend 2017 Access Group Legal Education Research symposium: \$1000

TOTAL REQUESTED – Maximum Allowable is \$50,000 \$ 49,423