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An Empirical Analysis of the Impact of Legacy Preferences on Alumni Giving at Top Universities

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Introduction and Summary of Findings

A great debate is taking place about the application of legacy preferences in American colleges and universities. A primary justification often cited in favor of granting legacy preferences is that such policies have a positive impact on the amount of alumni giving.[1] The corollary proposition is that elimination of such policies would restrict an important source of funding for higher education. As far as we can tell, since these claims seem never to have been documented empirically, it is time to bring empirical data to the debate and test the claim of a link between legacy preference policies and alumni giving.

Our primary finding is that, after inclusion of appropriate controls, including wealth, there is no statistically significant evidence of a causal relationship between legacy preference policies and total alumni giving among top universities. Using annual panel data covering 1998 to 2008 for the top one hundred universities,

we show that, after controlling for year, institution size, public/private status, income, and a proxy for alumni wealth, more than 70 percent of the variation in alumni giving across institutions and time can be explained. The coefficients all have the expected signs and there is no statistically significant evidence that legacy preferences impact total alumni giving.

These results should not be surprising. Legacy preference policies, in their pure form, do not purport to reward alumni donations with a greater chance of acceptance; they purport to give a greater chance of acceptance to all alumni, regardless of whether they donate. Therefore, there is no a priori reason to believe legacy preference policies themselves provide incentives for greater alumni giving.

Prior to controlling for wealth, however, the results indicate that schools with legacy preference policies indeed have much higher alumni giving. These combined results suggest that higher alumni giving at top institutions that employ legacy preferences is not a result of the preference policy exerting influence on alumni giving behavior, but rather that the policy allows elite schools to over-select from their own wealthy alumni. In other words, the preference policy effectively allows elite schools essentially to discriminate based on socioeconomic status by accepting their own wealthy alumni families rather than basing admissions on merit alone.

Literature Review

As mentioned, to our knowledge, there is no well-accepted systematic empirical analysis that establishes a causal relationship between legacy preferences and alumni giving behavior. A 2008 study by Steve D. Shadowen, Sozi Tulante, and Shara L. Alpern attempted to address the issue directly; it finds no evidence of a significant relationship between alumni giving and legacy preferences.[2] Those authors employ a cross-sectional multiple regression at the school level to test whether legacy preference policy is correlated with alternative measures of private giving.[3] Their data

include information for the top seventy-five national universities and the top seventy-five liberal arts colleges from 1992 to 2006. They acknowledge that there are serious weaknesses in the data employed because it could not distinguish between alumni donations versus grants and contracts.[4] Our study seeks to expand and improve upon the work done by Shadowen and his colleagues by employing more robust data and econometric models. For example, our data isolate alumni giving from other forms of giving, and we introduce additional variables that generate greater explanatory power.

The 2008 study also investigates, in a cursory way, whether there is a change in total alumni giving after the abolition of legacy preferences at certain schools; they find no evidence of a decrease. We also expand upon this analysis and report the results of a more formal model of the change in alumni giving attributable to observed changes in legacy preference policies.

A 2003 study by Charles T. Clotfelter uses data from two cohorts of college graduates to explore the determinants of alumni giving.[5] Clotfelter identifies a number of determinants of alumni giving, including satisfaction with the institution, income, and obtaining a graduate degree, as well as other factors. While the purpose of the study was not to identify the impact of legacy preferences, for a subset of his data he had an indicator of whether a relative attended the institution. Clotfelter finds that alumni giving is correlated positively with having a relative that attended the school. Note, however, that Clotfelter's interpretation of this finding is not that legacy preferences result in greater giving, but that having a relative that previously attended the institution is a proxy for unmeasured wealth. Indeed, it is not even clear if the schools Clotfelter examined employed legacy preferences.

Two 2009 studies by Jonathan Meer and Harvey Rosen—one on altruism and one on family bonding with universities—attempt to analyze the impact on alumni giving of admitting alumni's children (and other relatives, in the case of the family bonding study).[6] Both of these studies rely on data from a single anonymous "selective research" institution—presumably one that employs legacy preferences. As a result, their analysis does not allow for a direct comparison of aggregate giving behavior between legacy granting and non-legacy granting schools. Rather, their study focuses on micro data and the determinants of giving behavior.

Meer and Rosen's study of altruism documents that, at least within this single institution, there was an increase in giving as alumni children approached admission age. There is no reason to believe, and Meer and Rosen certainly do not show, however, that these apparent "bribes" are a function of legacy preference policies. In other words, if parents believe (true or not) that donations increase the likelihood of admission, there is no reason to believe this effect would be limited to schools with legacy preferences. Recall that even within schools that employ legacy preference policies, the admissions decision is supposedly independent of prior giving.

Not surprisingly, Meer and Rosen's study of altruism also shows that alumni whose children are rejected give less than those whose children were accepted. One might try to bootstrap this finding into an argument that legacy preference policies, by simply rejecting fewer alumni children, must significantly increase alumni giving. This argument is speculative for a number of reasons. First, Meer and Rosen do not attempt to disentangle the effects of the preference policy on the applications process itself. In other words, in the absence of legacy preference policies, it is likely that fewer unqualified alumni children would apply in the first place—thus sparing them the rejection that Meer and Rosen demonstrate has a deleterious effect on future giving (relative to those that never apply). In addition, the reduction in giving by those rejected may be a function of the preference policy itself; in other words, alumni could be particularly offended by having their children rejected from a school they know has a legacy preference policy. Third, this study is done at the micro-level. While they may find differences in propensities to give at that level, total alumni giving, as they acknowledge, is driven in large part by a small number of very large donations,[7] which they find, in their study of family bonding, to be unrelated to whether other family members attend the school. Therefore, it would not be at all surprising to find that legacy preferences have little or no impact in the aggregate.

In the analysis of bonding, Meer and Rosen attempt to test the proposition that legacy preferences "bind entire families to the university" and thereby increase donations from these families. They perform regression analyses that purport to show greater giving by alumni when their children, and to a lesser extent, other descendants and previous generations (for example, children-in-law, nieces and

nephews, aunts and uncles, and so on) are admitted to the institution.[8] Their regression is essentially testing for the marginal giving associated with having a relative that attended the institution. As suggested by Clotfelter, Meer and Rosen's findings could be largely a function of unmeasured wealth. One would expect that a family that has multiple generations that have attended a "selective research institution" has different levels of wealth than those that do not. Indeed, the authors raise that specific possibility and attempt to control for it to the extent their data allow (by controlling for SAT and excluding the largest gifts), but they admittedly do not employ a direct measure of family wealth. Their controls for current income also are limited to dummy variables for degree, time since graduation, and occupations in which the alumnus has worked during his career. While these variables are likely somewhat correlated with income and wealth, they cannot tell the whole story.

In summary, the Meer and Rosen studies highlight a number of interesting relationships within an example institution, but their analyses fall far short of a direct test of the aggregate impact of legacy preference policies—either within the institution they study or the higher education system more broadly. The authors specifically caution again at the end of their study that the results are based on a single institution and their findings may not be applicable to other institutions.

There are a number of other studies that analyze the determinants of alumni giving, but do not focus on the impact of legacy preferences. For example, James Monk investigates the influence of individual characteristics on alumni giving from twenty-eight institutions.[9] He specifies a linear regression model conditional on some level of giving with the natural logarithm of total giving as the dependant variable. Consistent with other studies, he finds a significant link between alumni income and giving (he specifies a model that has linear and quadratic income terms). He also finds a negative correlation between student loans and later alumni giving. The amount of debt is likely a proxy for family wealth—thus further supporting wealth as an important determinant of giving. Similar to other researchers, Monk also finds a very significant relationship between satisfaction with the undergraduate institution and later giving.

In a 2001 study, Phanindra V. Wunnava and Michael Lauze analyze determinants of alumni giving at a small liberal arts college.[10]

Their study is interesting for our purposes because they include a variable that indicates whether a "RELATIVE" attended the school and find that there is a statistically significant positive relationship between giving and whether a relative attended the school. The authors do not discuss what mechanism may account for this; moreover, their model does not include any controls for wealth or income. As a result, like Clotfelter concluded for his own study, we believe that RELATIVE could simply be a proxy for family wealth. Moreover, it is not even clear whether the school studied by Wunnava and Lauze employed legacy preferences. Therefore, their findings cannot be interpreted as support for legacy preferences exerting an influence on alumni giving.

Data

The schools in our data-set are the top one hundred national universities as of August 27, 2007, according to *U.S. News and World Report*.[11] For each of these schools, we analyze data for the period 1998 through 2008. The data were gathered and assimilated through a variety of sources.

First, the Council for Aid to Education, which represents roughly a quarter of the four thousand colleges and universities in the United States, administers the annual Voluntary Support for Education (VSE) survey.[12] Each year the VSE collects and reports a multitude of information related to giving for each school such as alumni giving, athletic giving, corporate giving, religious organization giving, bequests and deferred gifts, property gifts, endowments, expenditures, and so on. This survey is entirely voluntary, but schools have an incentive to participate because it "provides an institution a structure for summarizing its fundraising results,"[13] allowing it to see where strengths and weaknesses are in fundraising and support to the institution, as well as the ability to benchmark itself against similar schools.

We also used data from the Integrated Postsecondary Education Data System (IPEDS), which gathers data from all institutions participating in federal student financial aid programs. Participation in the IPEDS survey is mandatory for the institution to continue participation in the federal programs. The data gathered by the IPEDS survey, for purposes of our analyses, primarily deal with Pell Grants and aid for students. The

primary publisher of IPEDS data is the National Center for Education Statistics, which conducts the IPEDS survey and is a part of the U.S. Department of Education.

The IPEDS data are important because for each institution they allow use of Pell Grants per undergraduate as a proxy for the wealth of student families—an important determinant of giving often discussed but rarely measured in the previous literature. In order to qualify for the federal Pell Grant, a student must fill out the Free Application for Federal Student Aid (FAFSA) form. Current and prospective college students fill it out to determine their eligibility for federal student financial aid. The FAFSA asks a series of questions regarding the student's finances (and parents' if the student is a dependent) to determine his or her Expected Family Contribution (EFC). Some of the many factors that are used to determine the EFC are family income, family assets, household size, and the number of household members in college. The EFC will, ultimately, determine what type of federal financial aid (grant, loan, work study) a student is eligible for and the amount for which he or she is eligible.[14]

Previous research also has indicated income is an important determinant of alumni giving. Data on the salaries of alumni by school was gathered from PayScale.com. (PayScale.com data has been used extensively by outside researchers and news organizations such as *Forbes* magazine.[15]) The salaries in our analyses include base salary or hourly wage in addition to commissions, bonuses, overtime compensation, and profit sharing. We use the median salary reported by PayScale.com members who are considered mid-career or "full-time employees with at least 10 years of experience in their career or field who hold a Bachelor's degree and no higher degrees."[16] We chose to use the mid-career salary as opposed to starting salary because it is a better indicator of the financial resources the parents of alumni have if and when their children apply to college. We were able to identify the median mid-career salary for nearly 80 percent of the schools in our dataset. It is important to highlight that the income measure from PayScale.com is an indicator of the median income of the *entire alumni population,* while the wealth measure we have (Pell Grant per undergraduate) is of the *admitted student population*.

Data regarding legacy preferences for applicants was gathered a number of ways. First, we e-mailed the majority of schools inquiring about legacy preference directly.[17] We also consulted the Common Data Set (CDS) provided on each institution's website. The CDS

initiative is "a collaborative effort among data providers in the higher education community and publishers as represented by the College Board, Peterson's, and *U.S. News & World Report*. The combined goal of this collaboration is to improve the quality and accuracy of information provided to all involved in a student's transition into higher education, as well as to reduce the reporting burden on data providers."[18] In addition to admission requirements data, the CDS also contains information and statistics on enrollment; transfer admissions and policies; academic offerings and policies; student life/activities; annual expenses; financial aid; faculty and class size; and degrees offered. One area of the survey requires institutions to rank the importance of various factors for admission, including alumni relations. The school must then mark one of: "not considered," "considered," "important," or "very important."[19]

In some instances, if a school did not have their CDS available for 2008, the data was taken from collegedata.com. Collegedata.com has a similarly structured chart also containing *alumni/ae relations* as a factor. To further verify their status on legacy preferences, we looked directly on the application provided on the institution's website, if it was provided online. If it asked whether or not the student was related to an alumnus, we considered that to be showing preference for legacy applicants.

In order for us to consider an institution to be applying legacy preferences, two sources had to agree that they did. If one source conflicted with the others, then we marked the indicator as missing. That is, if a school did not ask an applicant about her relation to alumni, and on their CDS they said that alumni relations were "considered," but replied in an e-mail to us that they did not have legacy preferences, we marked that as missing, since the CDS and the e-mail response conflicted.

Table 5.1 presents a distribution for variables relevant to our analysis. LEGPREF is an indicator variable for whether an institution employed legacy preferences in that year. LEGPREF has a mean value of 0.764, indicating that legacy preferences were applied for 76.4 percent of the SCHOOL-YEAR combinations in our data. Appendix 5.1 (see page 119) shows the list of schools with and without legacy preferences as of 2007. Private schools are much more likely to practice legacy preferences. Private schools make up 52.3 percent of the top one hundred universities, but 94 percent of those schools employ legacy preferences as opposed to 50 percent for public universities.

Table 5.1 Distribution of Relevant Variables

Variable	N	Mean	Std. Dev.	Min	Max	P10	P25	P50	P75	P90
GIVINGPERALUM	1,040	$265.35	$376.93	$4.83	$4,898.69	$36.71	$77.96	$145.03	$298.45	$577.76
LEGPREF	1,000	0.764	0.425	0	1	0	1	1	1	1
PGRANT_UG	984	$394.33	$208.59	$49.00	$1,400.00	$187.00	$250.50	$340.00	$475.50	$696.00
ALUMREC	1,099	160,247	107,666	12,089	532,923	42,227	77,869	129,890	223,486	324,271
CAREERSAL	946	97,076	13,501	74,600	134,000	82,700	85,900	95,200	106,000	116,000
PSOLIC	1,085	0.861	0.153	0.146	1.000	0.650	0.810	0.909	0.974	1.000
PUBLIC	1,166	0.462	0.499	0	1	0	0	0	1	1
SAT	711	1,266	106	1,040	1,525	1,140	1,185	1,245	1,335	1,425

TOTALALUMGIVING comes from the VSE data and represents the total alumni giving in each year.[20] This value is obviously greatly dependant on school size, therefore we either include a measure of the alumni population (ALUMREC) in our models or use GIVINGPERALUM, which is the ratio of the two variables.[21] Table 5.1 shows that the mean giving per alumni is $265 per year but that there is significant variance across schools since there are values as low as $4.83 and as high as $4,898.69 even within the top one hundred universities. Unconditional on any controls, schools with legacy preferences have a much higher giving per alumni ($317.14 versus $201.04).

Alumni giving also varies substantially between public and private institutions—giving per alumni is 221 percent[22] higher at private schools versus public schools. The reasons for this are not entirely clear, although one could speculate that public universities exhibit much more diversity in terms of socioeconomic status, are larger, and that public funding makes them less dependent on alumni giving. Whatever the reason, it is clear that PRIVATE/PUBLIC is an important determinant of alumni giving.

The VSE data includes an indicator of the number of alumni that were solicited for donation so we can measure the fraction (or probability) solicited (PSOLIC). Clearly we would expect schools that expend more resources soliciting their alumni to have higher giving after controlling for other factors. Table 5.1 shows that the average school solicits 86.1 percent of its alumni, but this ranges from 14.6 percent to 100 percent. While this measure is somewhat crude because it does not measure the intensity with which alums are solicited, it provides a good first-order measure of effort.

CAREERSAL measures the midlife median earnings for alumni of each school. The mean of this variable is roughly $97,000 and ranges from $74,600 to $134,000. This measure of income likely understates the disparities in earnings across schools. First, it is a median measure of income, which necessarily lessens the influence of outliers. Second, the economic literature clearly documents that the distribution of earnings exhibits a long right hand tail. As a telling example, there was a recent report that Harvard has more than double the number of billionaires as its next clos-

est rival.[23] More detailed alumni earnings measures would likely increase the explanatory power of our models.

PGRANT_UG measures the amount of Pell Grants per undergraduate. Pell Grants, as explained earlier, are provided based on need, and overall family wealth is considered in the application process. Therefore, PGRANT_UG serves as an important proxy for wealth. Table 5.1 shows that the average Pell Grant per undergraduate is $394, with a range of $49 (Harvard University) to $1,400 (Howard University). These statistics demonstrate the remarkable range of family wealth of admitted students across institutions.

Our proxy for family wealth is highly negatively correlated with legacy preferences. The average Pell Grant per undergraduate for institutions with legacy preferences is $329, while the same figure for institutions without legacy preferences is $559. Thus, students at non-legacy preference institutions qualify for almost 70 percent more in government grants than those at legacy preference institutions.

Finally, SAT measures the midpoint of the 25th and 75th percentile of SAT score for each school.[24] The average SAT across schools is 1266 and the range is from 1040 (University of California–Riverside) to 1525 (California Institute of Technology). The average SAT is higher for legacy preference schools (1295) than for non-legacy preference schools (1202). It is interesting to note, however, that this difference reverses and is insignificant after controlling for PUBLIC/PRIVATE.

Description of Models and Results

In the statistical models we employ to analyze the relationship between legacy preference policies and alumni donations, we control for a number of school characteristics (size, public/private, alumni solicited), year, characteristics of the total alumni population (income), and characteristics of the admitted population (wealth).

We use multiple ordinary least squares regression with the log of TOTALALUMGIVING as the dependent variable.[25] Since we have panel data with each institution appearing multiple times in the dataset, we cluster by institution to obtain robust standard errors. Table 5.2 provides the formal results.

Table 5.2 OLS Regression Analysis Testing the Claim that Legacy Preferences Increase Aggregate Giving by Alumni (control for wealth removed)

lnTOTAL ALUMGIVING	β	Robust Std. Err.	t-stat
LEGPREF	0.058	0.201	0.29
PGRANT_UG	-0.002	0.000	-3.16**
lnNALUMREC	1.067	0.112	9.54**
CAREERSAL	0.000	0.000	-1.70
CAREERSAL^2	0.000	0.000	2.48*
PSOLIC	0.993	0.326	3.05**
PUBLIC	-0.179	0.184	-0.97
1998	-0.200	0.094	-2.12*
1999	-0.072	0.077	-0.94
2000	-0.039	0.072	-0.55
2001	-	-	-
2002	-0.130	0.074	-1.76
2003	-0.082	0.090	-0.91
2004	-0.056	0.085	-0.67
2005	0.018	0.095	0.19
2006	0.148	0.093	1.58
2007	0.139	0.094	1.47
2008	-	-	-
_CONS	7.410	3.871	1.91
R^2:	0.721		
N:	669		

* Robust standard errors were used in order to account for clustering and correlation of the error term.

* p <= .05

** p <= .01

The first thing to note is that the coefficient on LEGPREF is slightly positive (0.058), but statistically insignificant (t-stat=.29). This indicates that after controlling for the other factors in the model, the presence of a legacy preference policy does not have a statistically significant impact on alumni donations. Using the point estimate of 5.8 percent and the

mean value of giving per alumni ($265.35), it would imply that schools with legacy preference policies collect, on average, only $15.39 more per alumni than non-legacy preference schools after the relevant controls. This $15.39 per alumni is sufficiently small that we cannot reject simple randomness as the cause.

The other variables have the expected signs and the adjusted R-square is quite high at 0.72—indicating that our independent variables can explain 72 percent of the variation in alumni giving across schools and time. We would expect the coefficient on size (lnNALUMREC) to be close to one. In other words, for every one percentage point rise in size of institution, there is a one percentage point increase in alumni giving. The coefficient is 1.06, and we cannot reject the null hypothesis the true parameter is different from one.

Our measure of family wealth within the admitted student population (PGRANT_UG) is statistically significant and has the expected negative sign (Pell Grants are inversely related to wealth). Consistent with other studies, we include linear and quadratic terms for income (CAREERSAL and CAREERSAL2). Inclusion of each variable adds explanatory power. The insignificance of LEGPREF is not influenced by inclusion or exclusion of quadratics for PGRANT_UG or CAREERSAL.

As expected, the rate of solicitations (PSOLIC) is positively related to giving and is statistically significant. The coefficient of 0.996 implies that, at the margin, increasing the number of alumni solicited by 1 percent increases alumni giving by 1 percent. PUBLIC is negative as expected, but is not statistically significant. It is possible that the size and wealth variables account for the true underlying factors causing PUBLIC/PRIVATE differences in giving. We also include a set of YEAR dummies which are generally increasing over time, except for the post-recession year of 2002.

SAT is available for just slightly more than half the observations; therefore, we do not include it in Table 5.2. Running a separate regression that includes SAT shows it is significant and positive, but it has no influence on the LEGPREF coefficient.

In summary, after controlling for a reasonably narrow and intuitive set of factors, there is no evidence that legacy preference policies themselves exert an influence on giving behavior.

The more insidious result masked by Table 5.2 is the importance of wealth in explaining the coefficient on legacy preferences. Table 5.3 shows the same regressions but removes the wealth variable.

Table 5.3 OLS Regression Analysis Testing the Claim that Legacy Preferences Increase Aggregate Giving (control for wealth removed)

lnTOTAL ALUMGIVING	β	Robust Std. Err.	t-stat
LEGPREF	0.357	0.217	1.64
lnNALUMREC	1.084	0.114	9.48**
CAREERSAL	0.000	0.000	-1.33
CAREERSAL^2	0.000	0.000	2.04*
PSOLIC	0.951	0.326	2.92**
PUBLIC	-0.271	0.201	-1.35
1998	-0.042	0.064	-0.66
1999	-	-	-
2000	0.095	0.047	2.04*
2001	0.108	0.057	1.88
2002	-0.090	0.066	-1.35
2003	-0.121	0.055	-2.22*
2004	-0.102	0.062	-1.66
2005	-0.036	0.062	-0.59
2006	0.135	0.075	1.79
2007	0.126	0.065	1.96
2008	0.187	0.083	2.26*
_CONS	5.898	4.383	1.35
R^2:	0.68		
N:	807		

* Robust standard errors were used in order to account for clustering and correlation of the error term.
* p <= .05
** p <= .01

The coefficient on LEGPREF in this regression is a positive 0.357 and statistically significant at the 10 percent level. The coefficient of 0.357 implies that schools with legacy preferences, on average, have 35.7 percent higher alumni giving than non-legacy preference schools before controlling for wealth. What does this tell us? This suggests that schools with legacy preferences have higher

alumni giving, but it can be explained entirely by the wealth of their *admitted* students. The fact that legacy preference schools, on average and holding all else equal, have wealthier admitted students is consistent with the notion that elite schools achieve higher giving simply by selecting disproportionately from families of their own wealthy alumni—not that giving legacy preferences somehow changes giving behavior.

To make this point abundantly clear, take two elite schools and assume that they are comparable in all relevant ways, including the demographics of their applicant pools. If admission were based purely on merit, we would expect the resulting student populations to be similar in terms of ability, income, and wealth. Now assume one of the schools has a legacy preference policy and that its own alums (because they are graduates of an elite institution) have higher income and wealth than the general population. By giving preference to and selecting a disproportionate number of applicants from alumni families, the legacy preference school will have higher wealth families (and thus donations). Thus, it is not that these elite institutions are simply lucky enough to have wealthier families in their student body. Instead, the preference policy itself allows, contributes to, and perpetuates over-selection from the upper class. Once we control for whatever wealth differences there are (whether endogenous to the selection process or exogenous to the applicant pool), there is no evidence suggesting legacy preference policies contribute to greater giving.

What does this imply about the impact of abolishing legacy preferences? Would it have an immediate deleterious impact on the finances of elite institutions because they would start selecting from "poorer" populations? While our models certainly suggest that abolishing legacy preferences would have an effect on the elite institutions as a result of selecting from less wealthy populations and rejecting more of their alumni's children, this impact would occur over a long time horizon. Consider the impact of admitting a less wealthy student populace in 2011. This would only change the demographics of one class out of the many legacy classes. In other words, it would take a generation or more for the full impact to be felt. This at least partially explains why Shadowen, Tulante, and Alpern find no immediate impact of changing legacy preference policies at certain schools.[26]

To explore this notion, we empirically test whether we observe a significant change in alumni giving for schools that have given up legacy preferences during the time period covered by our data. The procedure we employ is to create a dichotomous variable (LEGPREF_DROPPED) that is set to one in each year after a school dropped legacy preferences and zero otherwise. We then estimate a model of lnTOTALALUMGIVING that controls for LEGPREF_DROPPED, size, income, wealth, solicitation percentage, public/private, year, and school.[27] If the change in legacy preference policy caused a reduction in alumni giving, then we would expect to observe a negative coefficient for LEGPREF_DROPPED. The results of this regression are summarized in Table 5.4 and show the coefficient on LEGPREF_DROPPED is slightly positive and statistically insignificant. Unsurprisingly, the model suggests there is no short-term measurable reduction in alumni giving as a result of abolishing legacy preferences.[28]

Moreover, any loss in alumni giving at the elite institutions would presumably be at least partially, if not fully, offset by additional giving to alternative institutions where parents of wealthy students might donate as an alternative, and the wealthy students themselves would become alumni.

The importance of alumni giving should also be placed in the context of the total financial resources of the top one hundred universities. We constructed a variable called BUDGET_FRACTION which represents annual alumni giving as a fraction of annual total expenditures.[29] The mean of BUDGET_FRACTION in our data-set is 0.051 and the median is 0.035. This suggests that alumni donations make up roughly 5.1 percent of total expenditures on average and it is only 3.5 percent for the median institution. The ninety-fifth percentile is 14.8 percent. Therefore, while there is no denying that alumni donations play a significant and important role in funding higher education, once one combines the lack of empirical evidence that legacy preference policies play a substantial role in total giving with the fact that alumni donations make up a relatively small fraction of expenditures for the vast majority of institutions, it is difficult to see how the abolition of legacy preferences would have a major deleterious impact on the funding of higher education.[30]

Table 5.4 OLS Regression Analysis Testing the Claim that Ceasing the Practice of Legacy Preferences Results in Lower Aggregate Giving by Alumni

lnTOTAL ALUMGIVING	β	Robust Std. Err.	t-stat
LEGPREF_DROPPED	0.042	0.134	0.32
PGRANT_UG	0.000	0.000	-0.23
lnNALUMREC	0.208	0.161	1.29
CAREERSAL	0.000	0.000	1.11
CAREERSAL^2	0.000	0.000	0.02
PSOLIC	-0.026	0.170	-0.16
PUBLIC	0.562	0.219	2.57*
1998	-0.236	0.069	-3.4**
1999	-0.132	0.057	-2.32*
2000	-0.025	0.053	-0.47
2001	-	-	-
2002	-0.169	0.063	-2.68**
2003	-0.154	0.069	-2.22*
2004	-0.122	0.065	-1.87
2005	-0.005	0.070	-0.08
2006	0.151	0.074	2.03*
2007	0.176	0.067	2.62*
2008	-	-	-
_CONS	11.276	1.555	7.25**
78 categories absorbed for ID			
R^2:	0.943		
N:	669		

* Robust standard errors were used in order to account for clustering and correlation of the error term.

* p <= .05

** p <= .01

Conclusion

Our findings cast serious doubt on the financial justification for legacy preference policies. Using an OLS regression model with controls for size, public/private, income, wealth, year, and fraction of alumni solicited, we show that the presence of legacy preference policies does not result in significantly higher alumni giving. Moreover, we show that prior to controlling for wealth, there is a strong correlation between alumni giving and legacy preferences. This suggests that greater alumni giving at elite schools with legacy preferences is driven by the school's ability to over-select from their own wealthy alumni populations—not a result of the preference policies themselves inducing additional giving.

Appendix 5.1
Legacy Preference Status as of 2007

Schools with Legacy Preferences	Schools without Legacy Preferences
Auburn University	Brigham Young University
Baylor University	California Institute of Technology
Boston College	Colorado School of Mines
Boston University	Georgia Institute of Technology*
Brandeis University	Iowa State University
Brown University	Ohio State University
Carnegie-Mellon University	Rutgers University
Case Western Reserve University	Texas A&M University*
Clemson University	University of Arizona *
College of William and Mary	University of California, Berkeley*
Columbia University	University of California, Davis*
Cornell University	University of California Irvine*
Dartmouth College	University of California, Los Angeles*
Duke University	University of California, Riverside*
Emory University	University of California, San Diego*
Fordham University	University of California, Santa Barbara*
George Washington University	University of California, Santa Cruz*
Georgetown University	University of Georgia*
Harvard University	University of Iowa*
Indiana University	University of Kansas

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Schools with Legacy Preferences	Schools without Legacy Preferences
Johns Hopkins University	University of Massachusetts, Amherst*
Lehigh University	University of Nebraska, Lincoln*
Marquette University	University of Pittsburgh
Massachusetts Institute of Technology	University of Texas at Austin
Miami University	Vanderbilt University**
New York University	
North Carolina State University at Raleigh	
Northeastern University	
Northwestern University	
Pennsylvania State University	
Pepperdine University	
Princeton University	
Purdue University	
Rensselaer Polytechnic Institute	
Rice University	
Southern Methodist University	
Stanford University	
Stevens Institute of Technology	
Syracuse University	
Tufts University	
Tulane University	
University of Alabama	
University of Chicago	
University of Colorado	
University of Connecticut	
University of Delaware	
University of Florida	

Schools with Legacy Preferences	Schools without Legacy Preferences
University of Illinois—Urbana–Champaign	
University of Maryland College Park	
University of Miami	
University of Michigan	
University of Minnesota	
University of North Carolina at Chapel Hill	
University of Notre Dame	
University of Pennsylvania	
University of Rochester	
University of Southern California	
University of Tennessee	
University of the Pacific	
University of Vermont	
University of Virginia	
University of Washington	
University of Wisconsin	
Virginia Polytechnic Institute	
Washington University	
Worcester Polytechnic Institute	
Yale University	

*Denotes change in legacy preference policy over the time span our study encompassed. For the University of Nebraska in particular, although it asks applicants for information about their parents' college, the evidence nevertheless suggests that the university does not use legacy preference.

** Our evidence suggests Vanderbilt originally had legacy preferences and then dropped them. Recent evidence that post-dates the time period of study suggests they now employ legacy preferences.

The legacy preference information was not available for the following schools: American University, Clark University, Howard University, Illinois Institute of Technology, Michigan State University, Saint Louis University, SUNY-Binghamton, SUNY-College of Environmental Science–Forestry, SUNY-Stony Brook, University of Denver, University of Missouri-Columbia, University of Tulsa, Wake Forest University, Yeshiva University.