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The Pro Bono Penalty: Extracurricular Activities and Demographic Disparities in Bar Exam Success

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ABSTRACT

The Pro Bono Penalty: Extracurricular Activities and Demographic Disparities in Bar Exam Success*

Demographic disparities in bar exam pass rates are problematic but poorly understood. We investigate a possible explanation: participation in extracurricular activities, which could either distract from bar exam preparation or motivate and prepare students to succeed. Generally, participation in extracurricular activities while in law school does not play a large role in bar exam success. However, there is a significant, arguably causal, penalty associated with one particular activity—pro bono work—most notably in lower-ranked law schools. This penalty is sizable: pro bono work is associated with a 5 percentage point (6%) decrease in the chances of passing the bar exam on the first attempt. This penalty is largest for Black and female students and may explain as much as 20% of the Black-white gap in first-attempt bar pass rates.

JEL Classification: I23, I24

Keywords: law school, bar exam, extracurricular activities, pro bono work

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1 Introduction

The legal profession is unrepresentative, in terms of race and gender, of the nation it serves. This is troubling, given the general importance of diverse perspectives, and has important implications for equity in legal outcomes (Laffey and Ng, 2018) (Holder 2001). For example, the lack of representation in the U.S. judiciary likely contributes to documented demographic disparities in sentencing (Mustard 2001), if for no other reason than that white judges often hold implicit (unconscious) biases against nonwhite defendants (Rachlinski and Johnson 2009). While efforts have been made to diversify the legal profession (e.g., by changing law school admissions processes), persistent demographic gaps in Bar exam success rates (Cross, 2004; Wightman and Ramsey Jr., 1998)—which serves as a gateway to the legal profession—suggest that these efforts are not yielding as diverse and representative a legal profession as they might be.

Accordingly, this study provides some novel insights into the potential sources of demographic gaps in Bar pass rates. Specifically, we probe the hypothesis that differential rates of participation in voluntary, extracurricular activities (ECA) during law school contribute to analogous differences in Bar pass rates. This research is motivated by a large literature in the sociology and economics of education that seeks to disentangle the causal effects from the selection effects of primary and secondary school students’ participation in ECA, namely school sports and clubs, on students’ educational outcomes (Carbonaro and Maloney, 2019; Crispin, 2017). The thorny problem facing researchers is that ECA participation is not randomly assigned; rather, those who do participate tend to have “stronger” backgrounds than those who do not (Hunt, 2005).¹ Rigorous studies that address this selection problem typically find modest, arguably causal positive effects of participation in ECA on outcomes such as GPA, test scores, and graduation rates (Crispin, 2017; Stevenson, 2010; Rees and Sabia, 2010). Of course, whether the findings in the secondary school setting carry over to the law school setting is unclear, given the difference in students’ ages and educational

¹This is known as positive selection into treatment in the program evaluation literature.

experiences as well as the different nature of the ECA in question.

Our empirical analysis, which proceeds in two steps, uses data from the nationally representative After the JD (AJD) dataset. These data follow a national sample of lawyers admitted to the bar in 2000 from nearly every law school in the U.S. for the first decade of their careers. The first part of our analysis applies recent developments in the selection-on-observables literature (Murnane and Willett, 2010; Oster, 2019) to estimate the causal effect of participation in law school ECA on Bar pass rates. Here, we find that the effect of participation in ECA is very heterogeneous across law school tiers by student demographics and type of ECA. Overall, we find little to no effect of law school ECA participation on Bar success. However, for certain groups of students, we find sizable *negative* impacts of performing pro bono legal work while in law school. Specifically, students in Tier 3 and 4 law schools who performed pro bono work were about 5 percentage points (about 6%) less likely to pass the bar exam on their first attempt. This penalty is primarily borne by female students and is about twice as large for Black students as for white students.

The second part of our analysis thoroughly investigates demographic gaps (e.g., Black-white and male-female) in ECA participation and in Bar pass rates, then decomposes the gaps in Bar success rates into “explained” and “unexplained” components using decomposition methods common in labor economics (Elder, Goddeeris and Haider, 2010; Fairlie, 2005). Intuitively, the explained portion of the gap is due to pre-existing, observable differences between demographic groups. This descriptive exercise sheds light on, among other things, how disparities in bar success rates may be addressed by changing law school policy and practice regarding ECA participation. Overall, we find that differences by race in observable characteristics explain 22% of the bar pass rate, while differences in participation in pro bono work while in law school explain about 5% of the gap. The gender gap itself is much smaller, and more than 70% of this gap is explained by observable differences between male and female students.

This work contributes to our understanding of the law school education production func-

tion, and specifically the role that ECA play in determining student success. In doing so, we contribute to a small but growing literature on the educational inputs and activities that affect law students' success. Examples include class size (Ho and Kelman 2014), individualized student feedback programs (Schwarcz and Farganis 2017), and having a same-sex or same-race instructor (Birdsall, Gershenson and Zuniga, 2020). These findings also highlight the potential for institutions, hidden curricula, and social networks to hinder diversity initiatives.

2 Theoretical Background and Literature Review

Lawyers constitute a governing class whose actions influence society. However, the profession is unrepresentative of the nation it serves: Black and Latino individuals make up about 21% of the U.S. population, but only about 10% of active attorneys (Laffey and Ng, 2018). Women are similarly under-represented in law firms and the judiciary despite now outpacing men in law school admissions. This lack of racial and gender diversity has received much attention of late, but action to address the problem has primarily focused on law school admissions, while inequities in law school academic experiences remain largely unaddressed.

Law students from under-represented backgrounds face discrimination and other challenges in law school (Birdsall, Gershenson and Zuniga, 2020; Lain, 2016; Wald, 2011) that culminate in racial gaps in Bar success, which is troubling given the Bar's role as gatekeeper. Specifically, the first-time pass rate for Blacks is 30% lower than for whites (Wightman and Ramsey Jr., 1998). More troubling is that 11% of Black students do not reattempt the exam, despite high levels of success on re-takes, compared to only 2% of whites (Wightman and Ramsey Jr., 1998). Gender differences in bar success are more subtle: women are slightly more likely than men to *never* pass (Yakowitz, 2010), but tend to do better than men on retakes (Kaufman et al., 2007).

This suggests that demographic pass-rate gaps are not entirely due to differences in abil-

ity, but to cultural aspects of law school as well, and aligns with the fact that qualifications like LSAT scores do not fully explain gaps in Bar success (Cross, 2004). Instead, some of the gap is likely due to informal learning and “hidden curricula” in law schools that disproportionately benefit white students (Cassman and Pruitt, 2004). Success in law is tied to social connections made outside the classroom and an important venue for forming those connections and learning “hidden curricula” is extracurricular activities (Cassman and Pruitt, 2004). Besides enhancing career opportunities and law school connections, law school extracurricular activities provide mentorship and peer support (Cassman and Pruitt, 2004), which may contribute to Bar success.

Participation in ECA is thought to benefit first-generation undergraduate students in myriad ways (Pascarella and Terenzini, 2005). However, a broader and more credible evidence base comes from high school, where a number of studies find arguably causal, positive effects of participation in ECA on outcomes such as GPA, test scores, and graduation rates (Crispin, 2017; Stevenson, 2010; Rees and Sabia, 2010). Broh (2002) finds mixed results, meaning that participation in ECA boosts some educational outcomes but hinders others, and identifies three channels through which ECA might improve outcomes: directly via skill development, indirectly by building social capital, or by changing a student’s peer group. Mahoney and Carryl (2005) identify increased expectations and motivation as channels through which ECA might improve outcomes.

Of course, participating in ECA comes with some costs, which could potentially outweigh the benefits discussed above. The most obvious cost is time: time spent at the ECA is time not spent studying, resting, exercising, and so on. Similarly, students have limited mental bandwidth and focusing too much on ECA might displace energy from academic pursuits. Finally, the skills acquired in ECA might simply not align with those required for narrowly defined academic pursuits, such as the Bar exam. Indeed, in informal conversations with recent law school graduates, unsolicited, this idea was raised with regards to pro bono work’s association with the bar exam. It is therefore an empirical question, which we address in this

study, whether and how ECA participation in law school affects bar pass rates. Similarly, we examine whether racial or gender differences in ECA participation contribute to analogous gaps in Bar success. If ECA do affect Bar pass rates or demographic disparities in those pass rates, then this seems like a useful lever with which to address the lack of representation in the legal profession.

3 Data

3.1 After the JD Survey

We address our research questions using the After the JD (AJD) dataset, which follows a nationally representative cohort of lawyers admitted to the bar in 2000.² This publicly available dataset includes graduates from nearly every law school in the U.S. over the first decade of their careers. It includes socioeconomic and demographic background characteristics including race, ethnicity, gender, and birth year, as well as a rich set of variables on attitudes, performance, and experiences during law school. Importantly for the current study, the AJD also includes rich information on students' participation in extracurricular activities during law school. Specifically, the data include binary indicators of participation in nine types of extracurricular activities, as well as an indicator for working in a part-time job. The extracurriculars are listed in Table 1. The AJD data have previously been used in numerous studies of the legal profession, including several studies that sought to examine the association between demographic background, law school experiences, and professional outcomes (e.g., salary) (Birdsall, Gershenson and Zuniga, 2020; Dinovitzer, Reichman and Sterling, 2009; Fowler and Birdsall, 2020; Yakowitz, 2010).

²All analyses are weighted using AJD-provided sampling weights that correct for the AJD's non-random sampling frame.

3.2 Sample and Summary Statistics

Our analytic sample of bar admits with reasonably complete data contains 3,564 observations. Table 1 summarizes the analytic sample overall and separately by law school tiers: top 20, 21-100, and others. Our measure of bar success is an indicator equal to one if the student passed on the first attempt, and zero otherwise. Overall, about 90% of students admitted to the bar passed on their first attempt. However, this varies quite a bit by law school rank, as 97% of graduates from top-20 law schools passed on their first attempt compared to 92% at top 21-100 law schools and only 85% of students at schools outside the top 100.

Overall, 81% of admits in 2000 participated in at least one extracurricular activity while in law school. The most common activities were participating in the ABA student division (42%) and performing pro bono legal work (32%). There is some variation in participation by law school rank, though whether higher ranked schools see higher rates of participation depend on the particular extracurricular activity in question. Pro bono work, for example, is most common at top-20 law schools (44%), compared to only 34% students at 21-100 ranked schools and 25% of students at Tier 3/4 schools. Working part time outside of the legal industry while in law school, meanwhile, is decidedly less common in higher-ranked law schools. Lawyers who attended top 20 institutions also participate in extracurricular activities at a higher rate than those who attended top 100 or tier 3 or tier 4 law schools.

[Table 1 about here.]

The analytic sample is about 82% white, 4% Latino, 5% Black, and 6% Asian. White students are slightly over-represented at lower-ranked schools while the opposite is true for Asian students. Black students are more or less evenly distributed across school tiers. The sample is about 47% female and female students are ever so slightly over-represented outside the top 20 law schools. Table 2 further investigates these demographic differences by summarizing the data separately by race and sex. On average, white law school graduates pass the bar exam on the first try at a higher rate (91%) than Black (77%), Asian (83%),

and Latino (86%) law school graduates, which is consistent with previous research using the AJD and other data sets. The Black-white gap of about 14 percentage points is striking, as it constitutes almost 20% of the baseline rate for Black graduates. There is also a small, two percentage point gender gap that favors women. In terms of participation in ECA, overall, we see that Black students were 13 percentage points more likely to engage in at least one ECA than white students and that women were 7 percentage points more likely to do at least one ECA than men. For pro bono work specifically, there is also significant variation across demographic groups: women are more likely engage in this activity than men and students of color are significantly more likely to engage than white students.

[Table 2 about here.]

Finally, it is important to look a bit more at other dimensions of selection into extracurricular activities to get a sense of how estimates of the effect of participation on bar success may be biased. Figure 2 plots participation rates in pro bono work across bins of undergraduate GPA. This figure clearly demonstrates a positive, monotonic relationship between GPA and participation in pro bono work, which suggests that there is positive selection into pro bono work. The reasoning is that GPA is generally recognized as a good measure of both academic ability and non-cognitive skills (Jackson, 2018), and so individuals who are predisposed to do well on the bar exam are also more likely to engage in pro bono work. We return to this point when interpreting the results in section 4.

4 Extracurricular Activities and Bar Exam Success

4.1 Methodology

We attempt to isolate the causal effects of participating in extracurricular activities during law school on students' first-time Bar pass rates using a variety of multiple regression and selection-on-observables techniques. Multiple regression and related propensity score

matching (PSM) approaches address the fact that the students who choose to participate in these activities may be systematically different from those who do not by assuming that those differences only occur along observable dimensions, such that we can adjust for them using the covariates observed in the AJD dataset (Murnane and Willett, 2010). Of course, there could be differences along unobserved dimensions as well, and so we will also rely on partial identification “bounding arguments” to make causal inferences. Here, the idea is that selection will occur in a similar way along unobserved dimensions as it does on observed dimensions (Oster, 2019; Altonji, Elder and Taber, 2005).

All three approaches start with a straightforward linear regression model. Specifically, we estimate the following model:

$$y = \beta_1 ECA + \beta_2 X + \epsilon, \tag{1}$$

where y is an indicator for passing the bar exam on the first attempt; ECA is a vector of indicators for participation in various extracurricular activities; X is a vector of controls relating to students’ ability, performance, and socio-demographic background; and ϵ is an error term that represents the unobserved determinants of Bar exam success. The OLS estimates of equation (1) turn out to be robust, as (i) they are nearly identical to nearest-neighbor PSM estimates that model specific ECA as flexible logits of X and (ii) the bounding exercise suggests that if anything, the OLS estimate is too small; both of these results are discussed in relation to the OLS estimates in section 4.2.

4.2 Main Results

Table 3 displays baseline estimates of equation (1) for the full sample and separately by program rank: graduates of top 20 law schools, top 21-100, and tier 3 and 4 law schools. Each regression includes the full set of controls: a series of binary variables measuring law school GPA, a series of binary variables measuring undergraduate GPA, education debt,

credit card debt, a binary variable indicating whether the respondent is a member of the Republican Party, and binary variable indicating whether either of the respondent's parents are a lawyer.³ The nine ECA indicators are not jointly statistically significant in any of the four specifications estimated in Table 3 and for the most part are individually insignificant as well.⁴

[Table 3 about here.]

In fact, in column (1) only two activities seem to influence passing the bar exam on the first attempt: working with a public interest group and performing pro bono work. Interestingly, participation in a public interest group increases the chances of passing the bar on the first attempt by about three percentage points (3%) while performing pro bono work reduces those chances by a similar amount. Columns (2) through (4) show that the benefit of working with a public interest group is roughly constant at all law school ranks, though this effect is only statistically significant in top-20 law schools. Meanwhile, the pro bono penalty is only found in the Tier 3 and 4 law schools. Here, the penalty is 7.7 percentage points, or 9%.

From this point forward we focus exclusively on participation in pro bono work for a few reasons. First, this is one of the most common types of extracurricular activities, and it is significantly more common than public interest group work, which was the only other activity to have a statistically significant association with bar exam success. Second, the effect of pro bono work is concentrated in the Tier 3 and 4 law schools, which have the lowest average Bar success rates, while the effect of public interest group work is concentrated in the top-20 law schools, which have the highest average Bar success rates. Finally, the large penalty associated with pro bono work in lower-tier law schools is a threat to marginal students' chances on the bar exam, and thus something that merits more analysis, discussion, and awareness.

³Column 1 additionally includes a series of binary variables controlling for law school rank.

⁴Models that instead report a single indicator for participation in any extracurricular activity similarly find this coefficient to be statistically indistinguishable from zero.

4.3 Sensitivity Analyses

The OLS estimates reported in Table 3 conditioned on a rich set of covariates in an effort to compare observationally similar students who did and did not participate in ECA. Table 4 presents a number of alternative estimates and specifications designed to verify the robustness of the main results regarding the effects of participation in pro bono work, with the first row reproducing the baseline OLS estimates from Table 3 to facilitate comparisons. Each cell of Table 4 reports a unique estimate of the effect of pro bono work on the likelihood of passing the bar exam on the first attempt.

One possible concern with the baseline estimates is that the linear probability model does not recognize that the outcome is binary; OLS may provide poor approximations of the marginal effects in this case, since the fitted values (predicted probabilities) are not restricted to fall in the 0-1 interval. Accordingly, we estimate a logit model analog to equation (1). The logit model's average partial effects (APE), which are directly comparable to the OLS estimates and are reported in the second row of Table 4, are quite similar. This suggests that the main result is not driven by imposing a linear function form in equation 1.

[Table 4 about here.]

The larger concern, however, is whether the OLS estimates can be given a causal interpretation. These estimates are only as good as the quality of the observed covariates, but they also rely on two additional, less obvious assumptions: (i) the functional form of those covariates is correct (e.g., relevant nonlinearities and interaction terms are properly controlled for) and (ii) there is common support, or overlap, between participants and non-participants. These two assumptions can be probed using propensity score matching (PSM) techniques (Murnane and Willett, 2010). Intuitively, the idea is to predict pro bono participation using a flexible logistic regression and then use those predicted probabilities of participation, or propensity scores, to (i) probe the common support assumption and (ii) match observationally similar participants and non-participants.

The distributions of participant and non-participant propensity scores are reported in Figure 1, which shows a large interval of common support with only one or two individuals missing a match at either end of the distribution. We trim those “unmatchable” observations from the sample and re-estimate the baseline model on this trimmed sample in the third row of Table 4. The results for students in Tier 3 and 4 law schools in column 4 are nearly identical to the baseline estimates, which is unsurprising since only a handful of students were dropped from the sample, though the full sample estimate is notably smaller and loses statistical significance. The next two rows re-estimate the baseline model on the full and trimmed samples, this time excluding the other ECA variables, and again find qualitatively similar results: in Tier 3 and Tier 4 law schools, there is a statistically significant pro bono penalty of about six percentage points. The rationale for this exercise is that participation in pro bono work could be correlated with other forms of ECA participation.

[Figure 1 about here.]

The final two rows of Table 4 report PSM estimates. Both impose a caliper restriction, which means that matches are only made within a pre-determined range of propensity scores. The first set of estimates uses a caliper of 0.10 and matches each participant to their nearest non-participant neighbor. The second set of estimates uses a caliper of 0.20 and matches each participant to their five nearest neighbors. There is an efficiency-robustness trade-off here, as more matches increases efficiency, but also by definition includes some worse matches, possibly introducing bias. It is therefore reassuring that the two PSM estimates are quite similar to one another, and to the OLS estimates. Specifically, the PSM estimates suggest a pro bono participation penalty in Tier 3 and 4 law schools of about five percentage points, and again both are statistically significant. Because these are a bit smaller than the OLS estimates, we will take these as the preferred estimates in the interest of being conservative.

Of course, all of the estimates discussed to this point are only valid under a selection-on-observables assumption. If there were selection into pro bono participation along unobserved dimensions, then both the OLS and PSM estimates could be biased. To allay this concern

we rely on intuitive arguments about partial identification (Oster, 2019; Altonji, Elder and Taber, 2005). The idea in this emerging literature is that whenever there is selection into treatment on observable characteristics, there will also be some similar selection (in terms of size and direction) into treatment on unobserved characteristics as well. Then, making different assumptions about the amount of selection on unobservables will yield bounds for plausible estimates. The OLS estimate represents one extreme bound, as it literally assumes zero selection on unobservables. However, we can quantify the degree and direction of selection on observables and then assume that there is *at most* the same amount of selection on unobservables (Oster, 2019; Altonji, Elder and Taber, 2005). Doing so yields extreme, worst-case scenario estimates that serve as the second bound. Together with the OLS estimate, these bounds identify the range in which the true causal effect falls, hence the term partial identification.

The bound for our baseline estimate of the effect of pro bono work reported in column 4 of Table 3 is large and *negative*, which indicates there is positive selection into pro bono work. This means that the true penalty is likely even larger than what we identify in Tables 3 and 4. This positive, or at least non-negative, selection can be visualized by regressing the pro bono indicator on undergraduate GPA. Figure 2 does so for the full sample, separately by gender, after adjusting for race. The regression lines for both men and women are slightly upward sloping; the female slope coefficient is statistically significantly different from zero, the male slope coefficient is not. Because our main finding is in Tier 3 and 4 law schools we replicate this exercise for that subsample, as reported in figure 3. Here, the best fit lines are slightly downward sloping, though neither slope is statistically significantly different from zero. All of this suggests that if anything, the OLS and PSM estimates are actually conservative, and the true penalties may in fact be larger.

[Figure 2 about here.]

[Figure 3 about here.]

4.4 Heterogeneity

Having documented statistically and practically significant, arguably causal, negative effects of pro bono work while in law school on the chances of passing the bar on the first attempt, at least in Tier 3 and 4 law schools, we now turn to some heterogeneity analyses to see if this penalty applies equally to all students. Here, we simply re-estimate equation (1) for white, Black, male, and female students in these law schools.⁵ These estimates are reported in Table 5. The penalty for Black students is twice as large as for white students, but it is imprecisely estimated, likely due to the small sample size; as a result, the Black and white effects themselves are not significantly different from one another. Still, it is a practically significant difference that could be due to differences by race on the intensive margin (e.g., the amount, or type, of pro bono work performed), which we do not observe in the AJD.⁶ Alternatively, it could be that the time spent on pro bono work interacts differently with the other challenges and obstacles that many Black law students face (Birdsall, Gershenson and Zuniga, 2020; Taylor, 2018).

There is also a notable difference by gender, as nearly the entire pro bono penalty is experienced by women; the penalty for women is more than 11 percentage points while that for men is only 0.03 and statistically indistinguishable from zero. Like the racial differences, this could be driven by women doing more, or different types, of pro bono work than men; it could also be a result of the general challenges many women experience in law school (Herden, 1994). In sum, the pro bono penalty is greatest for some of the most marginalized law students: Black and female students in Tier 3 and 4 law schools.

[Table 5 about here.]

⁵Regression-based Chow tests suggest that the education production function should be estimated separately for white and Black students, though not necessarily for male and female students.

⁶Guilmette et al. (2019), for instance, finds that there are returns on the intensive margin of ECA participation as well as on the extensive margin.

5 Decomposing Demographic Gaps in Bar Success

The analyses presented in section 4 suggest that there are nontrivial penalties of participation in pro bono work during law school, particularly for Black and female students in lower-ranked law schools. These demographic groups also have higher pro bono participation rates and lower Bar-exam pass rates than white and male students, on average, which raises the question of how much of the disparity in bar success is due to participation in pro bono work during law school. More generally, how much of the demographic disparities in Bar success can be explained by observed differences in the background and behaviors of students? In this section we address these questions using decomposition methods that are now popular in labor economics (Elder, Goddeeris and Haider, 2010; Fortin, Lemieux and Firpo, 2011). Intuitively, these methods use regression analyses to determine the fraction of the gap that is due to observable differences between groups (with the remainder being the residual, or unexplained, portion of the gap).

Because the outcome of interest is binary (passing on the first attempt), we follow Fairlie (2005) in using a logit analog to the traditional Oaxaca-Blinder decomposition.⁷ Table 6 reports estimates from four different specifications using Fairlie’s (2005) decomposition method. The Fairlie decomposition of the Black-white gap is reported in Table 6. In the full sample the raw gap is 0.146, or about 15 percentage points. Column 1 reports coefficient estimates based on the pooled sample, which indicate that overall, observable differences between Black and white students explain about 22% of the racial gap in bar success. The specific factors that play large roles here include pro bono work (5.2%), law school rank (3.5%), and law school GPA (10.7%).

In column 2 we rerun this analysis using the Tier 3 and Tier 4 sample only, as this is where the effect of pro bono work was most pronounced. Here, the raw gap is 10 percentage points and about 9% of it is explained by observable differences by race. However, racial

⁷Specifically, we use the fairlie Stata package (Jann, 2006).

differences in pro bono participation explain about 20% of the gap⁸. This suggests that a voluntary ECA, pro bono work, actively contributes to racial disparities in bar success rates.

[Table 6 about here.]

Table 7 conducts the same nonlinear decomposition of the male-female gap in first-time bar pass rates. The raw gap itself is much smaller than the Black-white gap: it is about 2 percentage points, both overall and in Tier 3 and 4 law schools. Here, observable differences between genders explain 72% of the gap in the full sample and 44% of the gap in the Tier 3 and 4 sample. Differences in pro bono work explain 6 to 8% of the gap, though this contribution is not statistically significant. Still, it suggests that, like in the case of racial disparities in bar success, participation in pro bono work contributes to gender gaps in first-time bar pass rates.

[Table 7 about here.]

6 Conclusion

This study uses nationally representative data from the After the JD (AJD) dataset to investigate the effect of participation in extracurricular activities (ECA) while in law school on first-time Bar exam takers' success rates. By and large, we find little evidence that ECA play a key role in influencing bar exam success or in explaining demographic disparities in bar pass rates. However, there is one notable exception: participation in pro bono work while in law school, particularly for students in Tier 3 and Tier 4 law schools, significantly hinders bar exam success. Specifically, we find that in these lower-ranked law schools participation in pro bono work during law school reduces the chances of passing the bar exam on the first attempt by about five percentage points, or 6%. This is a conservative, arguably causal

⁸The contribution of a single observed characteristic can be, and is in this instance, larger than the sum of the contribution of all observed characteristics because some observed characteristics favor Black students and contribute a “negatively” to the gap. Specifically, see the contribution of undergraduate GPA, which is higher for Black than white students in Tier 3 and Tier 4 law schools.

estimate that, if anything, might understate the penalty associated with pro bono work. This penalty is about twice as large for women and Black students and could explain as much as 20% of the racial gap and 6% of the gender gap in bar success rates.

We cannot say why exactly these penalties occur or why they are larger for certain groups of students. A likely reason is that the work done in pro bono positions is not directly relevant to bar exam preparation and, moreover, may displace time and energy from bar exam preparation. As for the heterogeneous effects, it could be that women and Black students engage in different types or intensities of pro bono work; unfortunately, all we observe in the AJD is a simple binary indicator for pro bono participation. Future research should investigate the channels through which these penalties operate.

Nonetheless, these results suggest that a cultural and institutional norm in many law schools and legal communities—students’ participation in pro bono legal work—might hinder diversity and inclusion efforts in the legal field. This is a delicate issue, as the American Bar Association (ABA) itself requires that law schools provide pro bono work opportunities to students, and the culture and expectation of lawyers performing pro bono work for the public good and for those who cannot afford legal representation is a noble, defining trait of the profession. At the very least, it is imperative that law school faculty, mentors, and advisors have candid discussions with students who are (or who are considering) performing pro bono work while in law school about the potential trade-offs associated with such work. This is particularly true for the students most at risk of experiencing the pro bono penalty: students in lower-ranked schools and Black and female students. Even the most altruistic student must realize that they can do more good over the course of a long career than during their time as a student, and if ensuring that they pass the bar exam and get to experience that long career requires foregoing some pro bono work early on, so be it.

References

- Altonji, Joseph G., Todd E. Elder, and Christopher R. Taber.** 2005. "Selection on observed and unobserved variables: Assessing the effectiveness of Catholic schools." *Journal of Political Economy*, 113(1): 151–184. Publisher: The University of Chicago Press.
- Birdsall, Chris, Seth Gershenson, and Raymond Zuniga.** 2020. "The effects of demographic mismatch in an elite professional school setting." *Education Finance and Policy*, 15(3): 457–486. Publisher: MIT Press.
- Broh, Beckett A.** 2002. "Linking extracurricular programming to academic achievement: Who benefits and why?" *Sociology of Education*, 69–95.
- Carbonaro, William, and Emily Maloney.** 2019. "Extracurricular activities and student outcomes in elementary and middle school: causal effects or self-selection?" *Socius*, 5: 1–17.
- Cassman, Celestial S.D., and Lisa R. Pruitt.** 2004. "A kinder, gentler law school-Race, ethnicity, gender, and legal education at King Hall." *UC Davis Law Review.*, 38: 1209. Publisher: HeinOnline.
- Crispin, Laura M.** 2017. "Extracurricular participation, "at-risk" status, and the high school dropout decision." *Education Finance and Policy*, 12(2): 166–196.
- Cross, Jane E.** 2004. "The bar examination in Black and White: The Black-White bar passage gap and the implications for minority admissions to the legal profession." *National Black Law Journal*, 18: 63. Publisher: HeinOnline.
- Dinovitzer, Ronit, Nancy Reichman, and Joyce Sterling.** 2009. "The differential valuation of women's work: A new look at the gender gap in lawyers' incomes." *Social Forces*, 88(2): 819–864. Publisher: The University of North Carolina Press.

- Elder, Todd E., John H. Goddeeris, and Steven J. Haider.** 2010. “Unexplained gaps and Oaxaca–Blinder decompositions.” *Labour Economics*, 17(1): 284–290.
- Fairlie, Robert W.** 2005. “An extension of the Blinder-Oaxaca decomposition technique to logit and probit models.” *Journal of Economic and Social Measurement*, 30(4): 305–316. Publisher: IOS Press.
- Fortin, Nicole, Thomas Lemieux, and Sergio Firpo.** 2011. “Chapter 1 - Decomposition Methods in Economics.” In *Handbook of Labor Economics*. Vol. 4, , ed. Orley Ashenfelter and David Card, 1–102. Elsevier.
- Fowler, Luke, and Chris Birdsall.** 2020. “Are the best and brightest joining the public service?” *Review of Public Personnel Administration*, 40(3): 532–554. Publisher: SAGE Publications Inc.
- Guilmette, Maude, Kathryn Mulvihill, Rosanne Villemaire-Krajden, and Erin T. Barker.** 2019. “Past and present participation in extracurricular activities is associated with adaptive self-regulation of goals, academic success, and emotional wellbeing among university students.” *Learning and Individual Differences*, 73: 8–15.
- Herden, Cheryl M.** 1994. “Women in Legal Education: A Feminist Analysis of Law School.” *Rev. Jur. UPR*, 63: 551.
- Hunt, H David.** 2005. “The effect of extracurricular activities in the educational process: Influence on academic outcomes?” *Sociological Spectrum*, 25(4): 417–445.
- Jackson, C. Kirabo.** 2018. “What do test scores miss? The importance of teacher effects on non–test score outcomes.” *Journal of Political Economy*, 126(5): 2072–2107.
- Jann, Ben.** 2006. “FAIRLIE: Stata module to generate nonlinear decomposition of binary outcome differentials. Statistical Software Components S456727, Boston College Department of Economics.” *Chestnut Hill, MA: Boston College Department of Economics*.

- Kaufman, Keith A., V. Holland LaSalle-Ricci, Carol R. Glass, and Diane B. Arnkoff.** 2007. "Passing the bar exam: Psychological, educational, and demographic predictors of success." *Journal of Legal Education*, 57: 205.
- Laffey, Allison E., and Allison Ng.** 2018. "Diversity and inclusion in the law: Challenges and initiatives." Library Catalog: www.americanbar.org.
- Lain, Erin.** 2016. "Experiences of academically dismissed Black and Latino law students: Stereotype threat, fight or flight coping mechanisms, isolation and feelings of systemic betrayal." *Journal of Law and Education*, 45(3): 279–326. Publisher: Jefferson Law Book Company.
- Mahoney, Joseph L., and Erica Carryl.** 2005. "An ecological analysis of after-school program participation and the development of academic performance and motivational attributes for disadvantaged children." *Child Development*, 76: 811–825.
- Murnane, Richard J., and John B. Willett.** 2010. *Methods matter: Improving causal inference in educational and social science research*. Oxford University Press.
- Oster, Emily.** 2019. "Unobservable selection and coefficient stability: Theory and evidence." *Journal of Business & Economic Statistics*, 37(2): 187–204.
- Pascarella, Ernest T., and Patrick T. Terenzini.** 2005. *How College Affects Students*. San Francisco, CA: Jossey-Bass.
- Rees, Daniel I., and Joseph J. Sabia.** 2010. "Sports participation and academic performance: Evidence from the National Longitudinal Study of Adolescent Health." *Economics of Education Review*, 29(5): 751–759.
- Stevenson, Betsey.** 2010. "Beyond the classroom: Using Title IX to measure the return to high school sports." *The Review of Economics and Statistics*, 92(2): 284–301.

Taylor, Aaron N. 2018. "The marginalization of Black aspiring lawyers." *FIU Law Review*, 13: 489.

Wald, Eli. 2011. "A primer on diversity, discrimination, and equality in the legal profession or who is responsible for pursuing diversity and why." *Georgetown Journal of Legal Ethics*, 24: 1079. Publisher: HeinOnline.

Wightman, Linda F., and Henry Ramsey Jr. 1998. "LSAC National Longitudinal Bar Passage Study." The Law School Admission Council, Newtown, PA.

Yakowitz, Jane. 2010. "Marooned: An empirical investigation of law school graduates who fail the bar exam." *Journal of Legal Education*, 60: 3.

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Table 1: Descriptive Statistics

	All	Top 20	Top 21-100	Tier 3 & 4
1 Bar Attempt	0.90	0.97	0.92	0.85
EC: Political Advocacy	0.12	0.17	0.11	0.12
EC: College Alumni	0.20	0.22	0.21	0.19
EC: ABA Std Div	0.42	0.20	0.44	0.50
EC: Public Int Group	0.20	0.30	0.19	0.16
EC: Pro Bono Work	0.33	0.44	0.34	0.25
EC: Political Party	0.16	0.15	0.15	0.18
EC: Gender Org	0.16	0.14	0.18	0.14
EC: Race Org	0.16	0.21	0.16	0.13
EC: Other Org	0.19	0.24	0.17	0.20
EC: Any	0.81	0.85	0.83	0.78
LS: Part-time Job	0.80	0.69	0.80	0.86
LS: Top 11-20	0.09			
LS: Top 21-100	0.50			
LS: Tier 3	0.17			
LS: Tier 4	0.14			
LS: Unranked	0.02			
3.5 - 3.74 LS GPA	0.08	0.10	0.09	0.07
3.25 - 3.49 LS GPA	0.13	0.16	0.14	0.11
3.0 - 3.24 LS GPA	0.13	0.09	0.14	0.13
Under 3.0 LS GPA	0.13	0.04	0.12	0.20
Missing LS GPA	0.49	0.56	0.48	0.46
3.5 - 3.74 UG GPA	0.13	0.15	0.14	0.11
3.25 - 3.49 UG GPA	0.14	0.10	0.16	0.14
3.0 - 3.24 UG GPA	0.10	0.05	0.10	0.13
Missing UG GPA	0.43	0.46	0.43	0.41
Education Debt	4.75	5.02	4.50	5.10
Credit Card Debt	1.43	1.35	1.44	1.45
White	0.82	0.78	0.81	0.84
Latino	0.04	0.04	0.04	0.03
Black	0.05	0.06	0.05	0.06
Asian	0.06	0.11	0.07	0.03
Other Race	0.04	0.04	0.04	0.03
Female	0.47	0.45	0.47	0.47
Republican	0.32	0.21	0.32	0.37
Parent Lawyer	0.12	0.14	0.13	0.09
Observations	3,564	757	1,662	1,069

Table 2: Descriptive Statistics by Race and Sex

	Black	Asian	Latino	White	Male	Female
1 Bar Attempt	0.77	0.83	0.86	0.92	0.91	0.89
EC: Political Advocacy	0.13	0.14	0.095	0.12	0.12	0.13
EC: College Alumni	0.22	0.21	0.21	0.20	0.19	0.22
EC: ABA Std Div	0.43	0.26	0.43	0.43	0.40	0.44
EC: Public Int Group	0.20	0.24	0.24	0.19	0.15	0.26
EC: Pro Bono Work	0.46	0.41	0.40	0.31	0.30	0.36
EC: Political Party	0.08	0.07	0.15	0.17	0.16	0.16
EC: Gender Org	0.19	0.14	0.22	0.16	0.02	0.32
EC: Race Org	0.84	0.65	0.63	0.05	0.14	0.18
EC: Other Org	0.22	0.15	0.20	0.19	0.20	0.18
EC: Any	0.93	0.87	0.91	0.80	0.78	0.85
LS: Part-time Job	0.83	0.75	0.80	0.80	0.84	0.75
LS: Top 11-20	0.073	0.14	0.11	0.08	0.09	0.08
LS: Top 21-100	0.47	0.52	0.57	0.50	0.50	0.50
LS: Tier 3	0.16	0.09	0.15	0.19	0.16	0.19
LS: Tier 4	0.19	0.07	0.10	0.14	0.16	0.13
LS: Unranked	0.01	0.03	0.02	0.02	0.02	0.02
3.5 - 3.74 LS GPA	0.02	0.09	0.03	0.09	0.08	0.09
3.25 - 3.49 LS GPA	0.06	0.11	0.08	0.15	0.11	0.15
3.0 - 3.24 LS GPA	0.11	0.13	0.17	0.13	0.11	0.14
Under 3.0 LS GPA	0.23	0.09	0.18	0.12	0.13	0.13
Missing LS GPA	0.57	0.58	0.52	0.47	0.54	0.44
3.5 - 3.74 UG GPA	0.09	0.14	0.16	0.13	0.10	0.16
3.25 - 3.49 UG GPA	0.11	0.10	0.20	0.15	0.12	0.16
3.0 - 3.24 UG GPA	0.12	0.05	0.07	0.11	0.10	0.11
Missing UG GPA	0.50	0.49	0.44	0.42	0.50	0.36
Education Debt	5.45	4.35	5.42	4.72	4.7	4.8
Credit Card Debt	1.49	1.38	1.53	1.42	1.43	1.42
Female	0.57	0.51	0.52	0.46		
Republican	0.06	0.16	0.24	0.35	0.39	0.23
Parent Lawyer	0.05	0.04	0.09	0.13	0.12	0.11
Latino					0.03	0.04
Black					0.04	0.07
Asian					0.06	0.07
Other Race					0.04	0.04
Observations	323	317	296	2,555	1,889	1,675

Table 3: Effect of ECA on Passing the Bar on the First Attempt

Law school rank:	All (1)	Top 20 (2)	Top 21-100 (3)	Tier 3-4 (4)
ECA: Political Advocacy	-0.022 (0.02)	0.005 (0.01)	-0.045 (0.03)	-0.001 (0.04)
ECA: College Alumni	0.006 (0.01)	0.010 (0.01)	0.003 (0.02)	0.007 (0.03)
ECA: ABA Student Div.	0.009 (0.01)	0.024* (0.01)	-0.006 (0.01)	0.038 (0.02)
ECA: Public Int Group	0.030** (0.01)	0.034*** (0.01)	0.029 (0.02)	0.034 (0.03)
ECA: Pro Bono Work	-0.028** (0.01)	-0.009 (0.01)	-0.006 (0.02)	-0.077** (0.03)
ECA: Political Party	-0.008 (0.02)	0.009 (0.01)	-0.026 (0.02)	0.003 (0.03)
ECA: Gender Org.	0.007 (0.02)	-0.028 (0.02)	-0.008 (0.02)	0.043 (0.04)
ECA: Race Org.	-0.031 (0.02)	-0.047 (0.03)	-0.060* (0.03)	0.010 (0.05)
ECA: Other Org.	0.007 (0.01)	0.017* (0.01)	0.025 (0.02)	-0.026 (0.03)
Latino	-0.016 (0.03)	-0.065 (0.04)	0.007 (0.04)	-0.002 (0.06)
Black	-0.076** (0.03)	-0.028 (0.04)	-0.057 (0.05)	-0.105 (0.06)
Asian	-0.073** (0.03)	0.035 (0.03)	-0.075* (0.04)	-0.158** (0.07)
Female	-0.013 (0.01)	0.003 (0.01)	-0.025 (0.02)	-0.001 (0.03)
Observations	3,564	757	1,662	1,069

Notes: ECA stands for extracurricular activity. Heteroskedasticity-robust standard errors in parentheses.

OLS estimates of linear probability models where the outcome is a binary indicator for passing the bar exam on the first attempt are reported. These models are based on equation [1](#) and include the full set of controls. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: Bar Success: Sensitivity

	All (1)	Top 20 (2)	Top 21-100 (3)	Tier 3-4 (4)
Baseline OLS	-0.028** (0.01)	-0.009 (0.01)	-0.006 (0.02)	-0.077** (0.03)
Logit Partial Effects	-0.026* (0.01)	-0.003 (0.01)	-0.005 (0.02)	-0.067** (0.03)
Trimmed OLS	-0.017 (0.01)	-0.009 (0.01)	-0.006 (0.02)	-0.076** (0.03)
Pro Bono Only	-0.010 (0.01)	-0.003 (0.01)	-0.007 (0.02)	-0.063** (0.03)
Pro Bono Only Trimmed	-0.010 (0.01)	-0.003 (0.01)	-0.007 (0.02)	-0.062** (0.03)
Caliper 0.1, 1 Match	-0.007 (0.01)	0.005 (0.02)	-0.002 (0.02)	-0.049* (0.03)
Caliper 0.2, 5 matches	-0.014 (0.01)	-0.006 (0.02)	-0.013 (0.02)	-0.052* (0.03)
Observations	3,565	758	1,662	1,069

Notes: The trimmed samples remove three observations from the all law schools sample, one observation from the top 20 law schools sample, and two from the Tier 3-4 sample.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Effect of Pro Bono Work on Passing the Bar on the First Attempt

	β	SE	N
<i>All Law Schools</i>			
Black	-0.047	(0.056)	318
White	-0.029*	(0.014)	2507
Female	-0.023	(0.020)	1644
Male	-0.012	(0.016)	1844
<i>Tier 3 & 4 Law Schools</i>			
Black	-0.172	(0.108)	99
White	-0.088*	(0.037)	820
Female	-0.114*	(0.047)	516
Male	-0.030	(0.042)	553

Notes: Each row reports OLS estimates of the coefficient and standard error (in parentheses) for the pro bono indicator in equation [1](#) for a unique subsample. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6: Decomposition of Black-White Gaps in First-Time Bar Exam Pass Rates

	All (1)		Tier 3-4 (2)	
White Mean	0.921		0.872	
Black Mean	0.775		0.768	
Black-white gap	0.146		0.102	
Contribution	Coefficient	%	Coefficient	%
EC: Pro Bono Work	0.008***	5.24	0.021**	20.18
LS Rank	0.005***	3.47		
ls_gpa	0.016***	10.74	0.020*	20.03
UG GPA	-0.002	-1.70	-0.011	-10.92
Female	0.001	0.64	0.000	0.41
LS: Part-time Job	-0.000	-0.08	-0.000	-0.05
Education Debt	0.003**	1.73	0.001	0.99
Credit Card Debt	-0.000	-0.17	-0.000	-0.29
Parent Lawyer	-0.001	-0.53	-0.000	-0.32
All Included Variables	0.032	21.92	0.009	8.83

Note: Non-linear decompositions based on pooled probit models (Fairlie, 2005). Contribution estimates are mean values of the decomposition using 1,000 pooled subsamples of White, Black, Latino, Asian, or other race respondents. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 7: Non-Linear Decomposition of Male/Female Gaps in First-time Bar Exam Pass Rates

	All (1)		Tier 3-4 (2)	
Male Mean	0.910		0.909	
Female Mean	0.892		0.891	
Male-Female Gap	0.018		0.018	
	Coefficient	%	Coefficient	%
Contributions from racial differences in:				
EC: Pro Bono Work	0.001	8.26	0.001	6.40
LS Rank	0.006**	35.55		
ls_gpa	-0.006**	-33.10	-0.001	-5.46
UG GPA	0.002	13.08	0.003	14.89
Black	0.001	6.71	0.002*	9.78
Latino	0.000	0.49	0.000	0.13
Asian	-0.001	-4.36	-0.000	-2.19
LS: Part-time Job	-0.002	-10.13	-0.004	-23.38
Education Debt	0.000	2.70	0.000	2.03
Credit Card Debt	0.000	0.78	0.000	0.39
Parent Lawyer	0.000	1.28	-0.000	-0.75
All Included Variables	0.013	72.22	0.008	44.44

Note: Non-linear decompositions based on pooled probit models (Fairlie, 2005). Contribution estimates are mean values of the decomposition using 1,000 pooled subsamples of White, Black, Latino, Asian, or other race respondents. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

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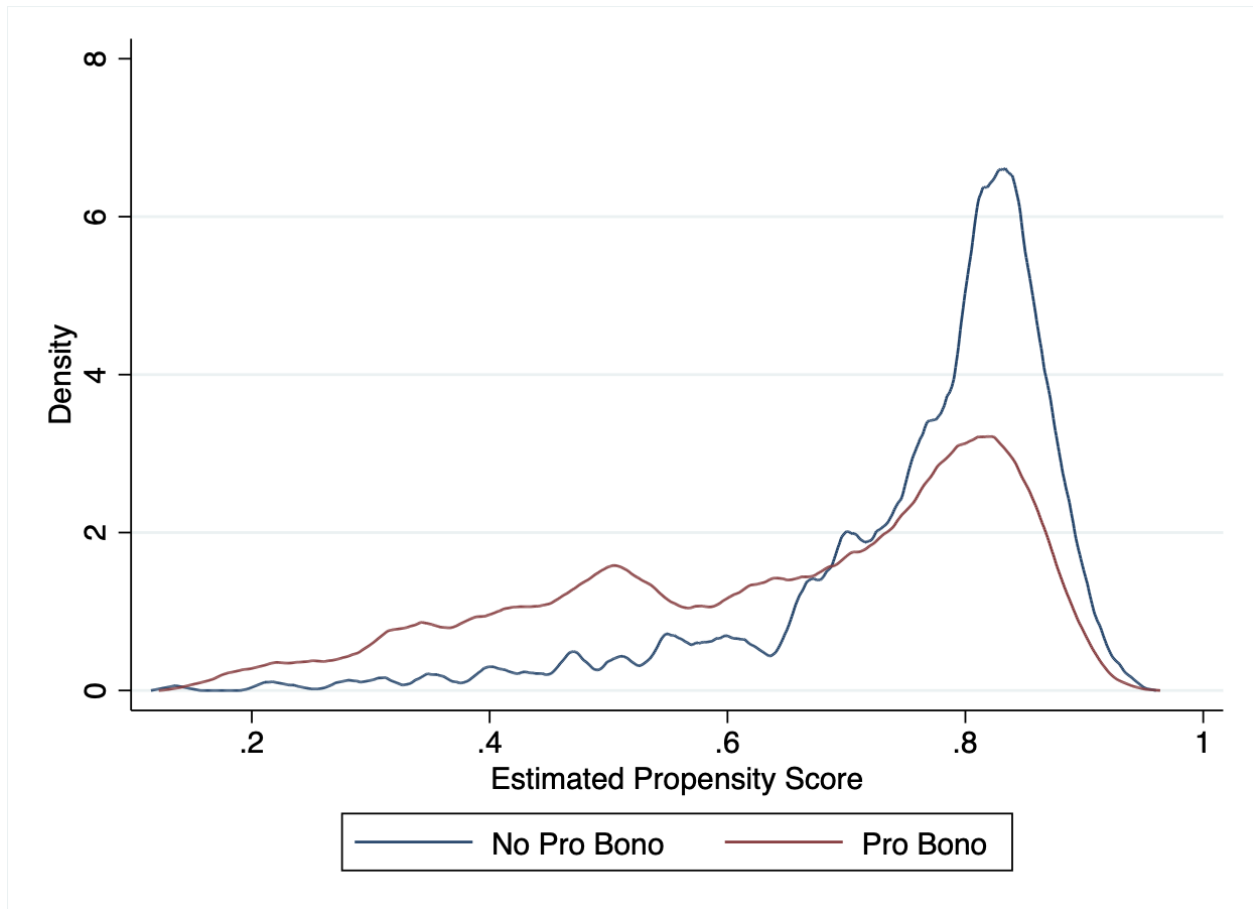


Figure 1: Area of common support for pro bono work in tier 3 and 4 law schools

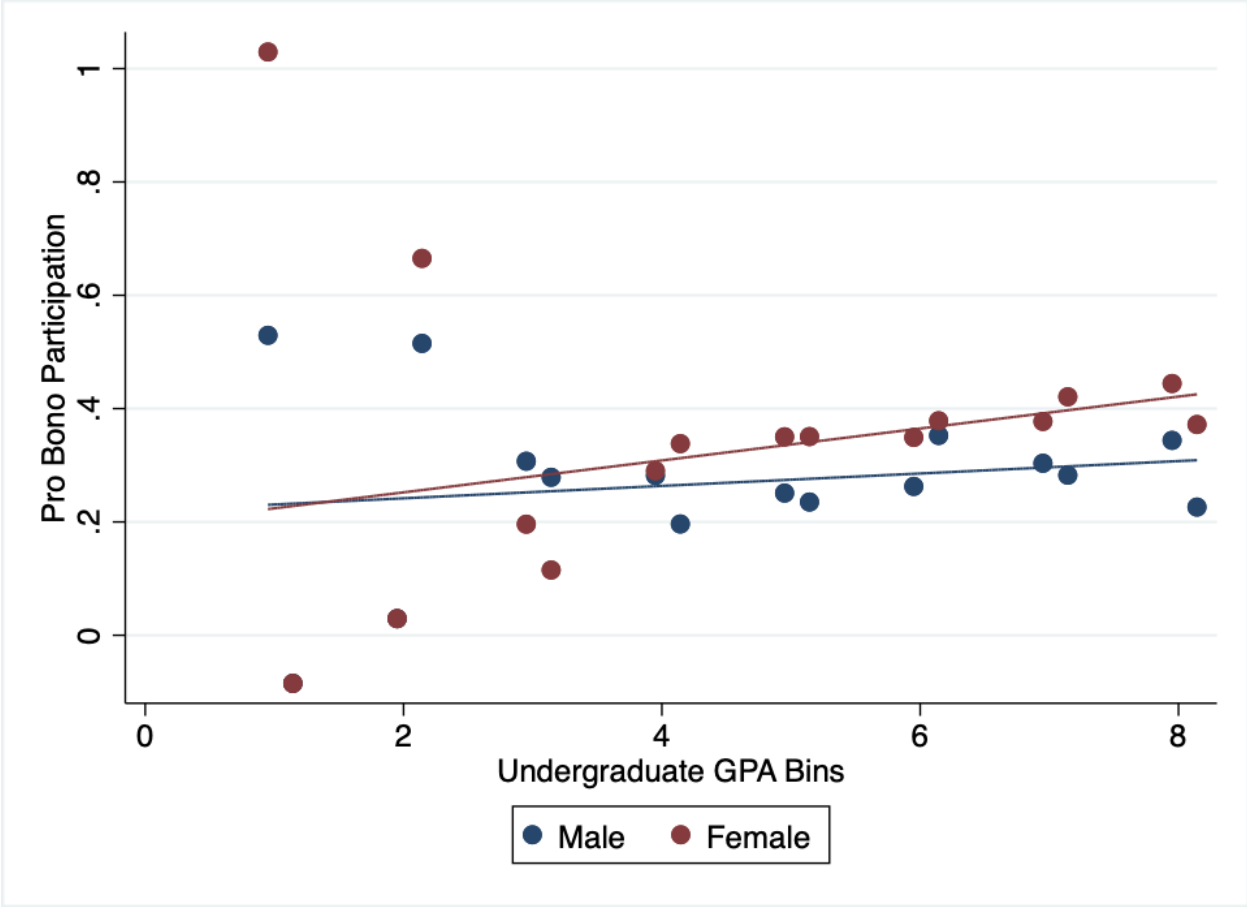


Figure 2: Selection into pro bono work in all law schools

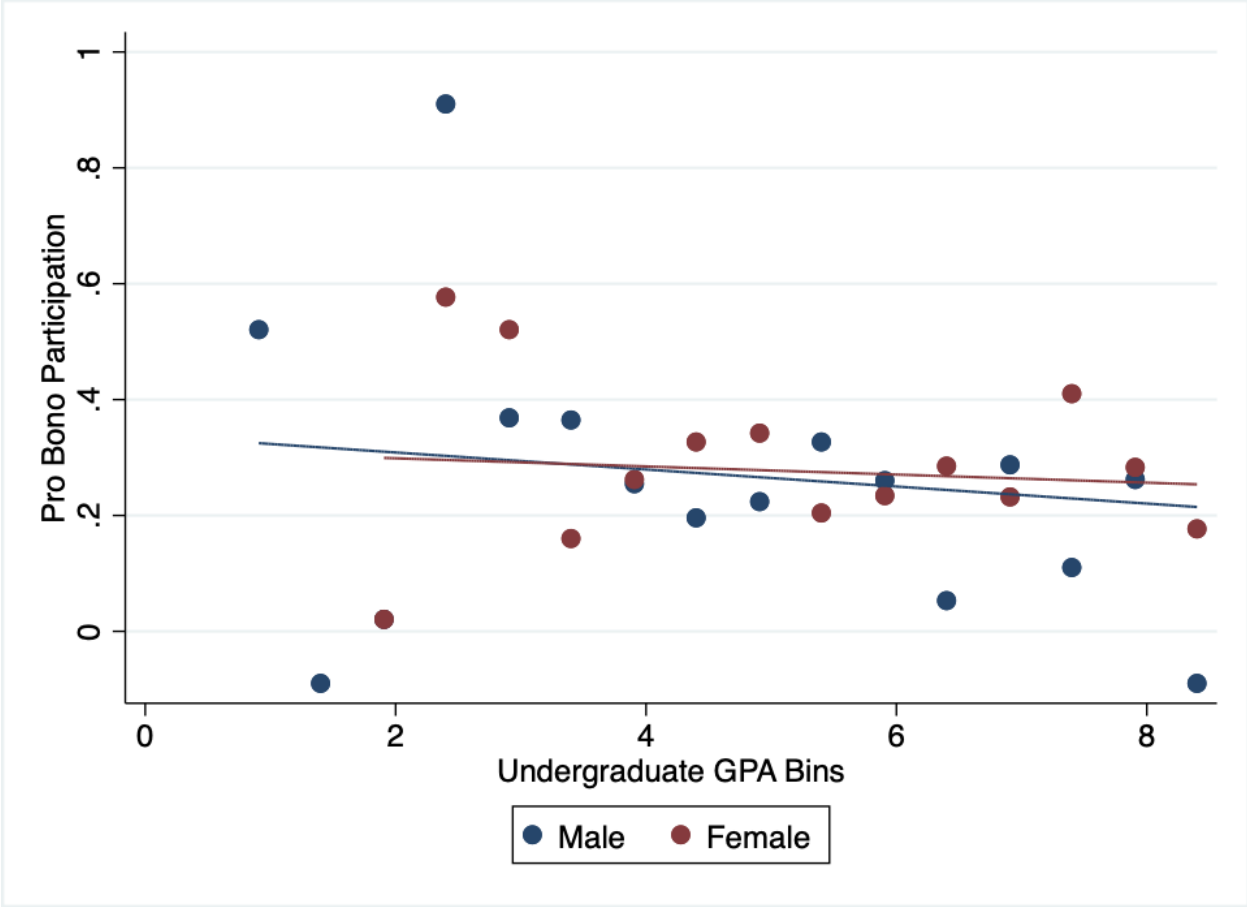


Figure 3: Selection into pro bono work in tier 3 and 4 law schools