Assignment 3

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Response

As shown in Table 1, being ranked is not randomly determined. Significant differences exist between ranked and unranked schools regarding their proximity to large metropolitan areas and the quality of their athletic programs. Specifically, ranked schools, on average, have better athletic programs and are located closer to large metropolitan areas. This pattern reflects the committee's consideration of a school's athletic program quality and location in their ranking decisions. These qualities may be strongly associated with schools' alumni donation amounts. Therefore, to isolate the causal effect of being ranked on alumni donation amounts, we need to compare schools with similar probabilities of being ranked.

We sorted schools based on their propensity scores and then divided them into groups of four according to their order. In Table 2, we present the results for models both with and without propensity score matching, controlling for block fixed effects. The results remain robust across the two models: being ranked can lead to a 130% increase in schools' alumni donations.

Table 1: Balance Table

	Control	Treatment	Difference
Near.Big.Market	0.360	0.700	-0.340***
Athletic.Quality	0.424	0.551	-0.127**
Academic.Quality	0.515	0.466	0.049

Notes: This table compares ranked and unranked schools across three dimensions: academic quality, athletic program quality, and proximity to large metropolitan areas.* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

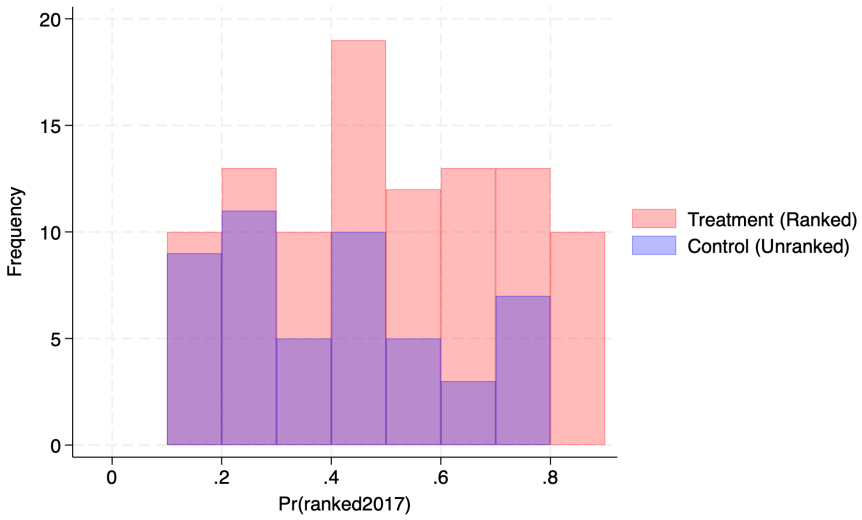

Figure 1: Overlap in Propensity Score Between Ranked and Unranked schools

Notes: This graph illustrates the propensity score distributions for ranked and unranked schools. The overlap between the two distributions represents the range of propensity scores where both treated and control schools are observed.

Table 2: The Effect of Being Ranked on Alumni Donations

	Alumni Donations in 2018 (Log)	
	(1)	(2)
Being Ranked in 2017	1.259***	1.299***
	(0.113)	(0.131)
Near Large	1.989***	2.086
Metropolitan Areas	(0.110)	(1.488)
Atheltic Program	0.523**	0.535
Quality	(0.186)	(1.808)
Academic Quality	0.918***	0.691
	(0.179)	(0.858)
Observations	100	100
Fixed Effects:		
Block		Yes

Notes: This table presents OLS regression models estimating the causal effect of being ranked as a 'Top Basketball Program' in 2017 on alumni donations in 2018. Model 1 controls for the school's academic quality, athletic program quality, and proximity to large metropolitan areas. Model 2 expands on this by incorporating block fixed effects, which are based on each school's propensity score calculated using characteristics such as academic quality, athletic program quality, and proximity to large metropolitan areas.
Standard errors are in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$