1-2.

Balance Table with Statistical Tests for Ranked vs Not Ranked Colleges

	Means			
Variable	**Mean (Ranked)**	**Mean (Not Ranked)**	**P-Value**	**Significance**
Academic Quality	0.4664823	0.5153160	0.4011995	
Athletic Quality	0.5510138	0.4241706	0.0251229	*
Near Big Market	0.7000000	0.3600000	0.0005256	***

The balance table compares the ranked colleges and not ranked colleges across three key covariates: academic quality, athletic quality, and proximity to a big market. The results indicate that academic quality is similar between the two groups, with no statistically significant difference ($p = .401$). However, athletic quality is significantly higher for ranked colleges compared to not ranked colleges ($p = .025$), and proximity to a big market is also significantly greater for ranked colleges ($p < 0.001$). These results indicate that ranked colleges differ from not ranked colleges in terms of their athletic quality and geographic location, while academic quality does not differ meaningfully between the two.

3.

The balance table clearly indicates that there is non-random selection into who was ranked, as demonstrated by significant differences in Athletic Quality and proximity to a Big Market between ranked and not ranked colleges. It makes sense that there is non-random selection into the "Top Basketball Program", as various relevant factors should be considered when selecting participating universities for such program.

Propensity score methods are most credible when researchers include all the variables that the agents who assign the treatment consider during their decision-making process. In this context, the large discrepancy between the ranked and not ranked colleges in terms of athletic quality and proximity to a big market strongly suggest these characteristics may have been important factors in the committee's ranking decisions. Thus, including these variables in the propensity score model ensures that the comparison between ranked and not ranked colleges is appropriately adjusted for these factors, strengthening the causal inference.

However, one limitation in this setting is that there may be unobserved factors influencing the ranking decision that were not included in the propensity score model, such as the general reputation of college or historical athletic performance. If these variables are not accounted for, the propensity score model may still suffer from residual confounding. Therefore, while the inclusion of observed variables like athletic quality and proximity to a big market increases credibility, there remains a risk of residual confounding.

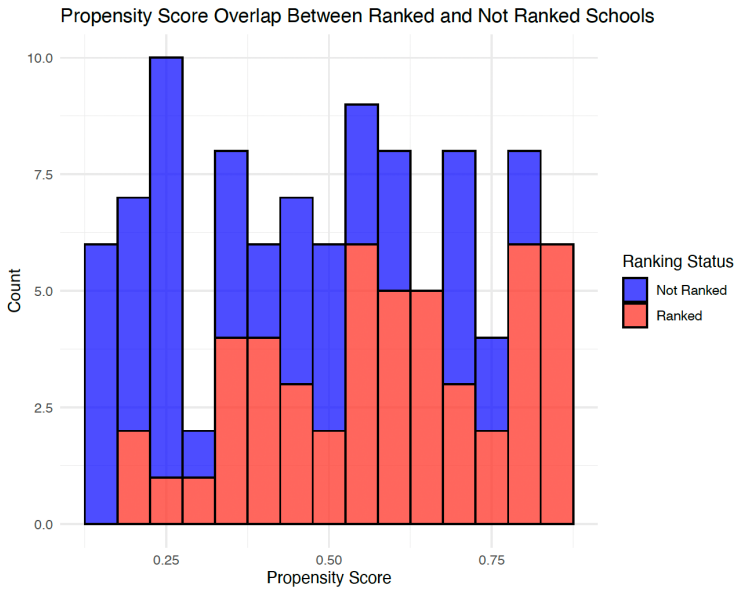
4.

Logistic Regression Results

	Dependent variable:
	Ranked in 2017
Academic Quality	-0.884
	(0.780)
Athletic Quality	1.964**
	(0.806)
Near Big Market	1.615***
	(0.459)
Constant	-1.378**
	(0.645)
Observations	100
Log Likelihood	-59.554
Akaike Inf. Crit.	127.107
Note:	*p<0.1; **p<0.05; ***p<0.01

The result of the logistic regression indicates that athletic quality and proximity of big market are useful predictors of selection into the "Top Basketball Program". This is in line with our earlier analysis based on the comparison between the ranked and not ranked colleges in terms of athletic quality and proximity to a big market that these characteristics may have been strongly considered in the selection process.

5.



Based on my observation, I would define the region of no-overlap as propensity score >= 0.30 & propensity score <= 0.90.

6-7.

Treatment Effect of Being Ranked on Alumni Donations

	Dependent variable:
	Alumni Donations (in 1,000s)
Ranked (2017)	500.517***
	(0.248)
Academic Quality	99.289***
	(0.819)
Athletic Quality	50.783***
	(1.753)
Near Big Market	1,000.517***
	(1.467)
factor(block)2	0.172
	(0.574)
factor(block)3	-0.385
	(0.932)
factor(block)4	-0.124
	(1.237)
factor(block)5	-0.254
	(1.631)
factor(block)6	-0.911
	(2.123)
Constant	-0.529
	(0.811)
Observations	77
R^2	1.000
Adjusted R^2	1.000
Residual Std. Error	0.965 (df = 67)
F Statistic	2,841,061.000*** (df = 9; 67)
Note:	*p<0.1; **p<0.05; ***p<0.01

Robust standard errors are reported in parentheses. The dependent variable is alumni donations in 1,000s.

The regression analysis examines the causal effect of being ranked as a "Top Basketball Program" on alumni donations in the following year. The results indicate that being ranked significantly increases alumni donations by an average of $500,517, holding all other factors constant ($p < 0.01$). The block variables, which account for blocking by propensity score, are not significant, suggesting that residual differences across blocks do not meaningfully influence the results. This indicates that after controlling for observed covariates such as academic and athletic quality, and proximity to a big market, there is no additional systematic variation between blocks

affecting alumni donations. The non-significance of block fixed effects indicates that the treatment effect of being ranked is robust and consistent across different blocks, further validating the model's ability to isolate the causal impact of ranking. Overall, the findings demonstrate that being included in the ranking substantially does impact alumni giving.