**Homework 3 – A Report on Alumni Donations in 2018 and Being Ranked a Top Basektball School in 2017**

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**Table 1 – Balance Table**

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| --- |
| Control Treatment Difference |
| Alumni.Donations.2018 432.652 1274.458 -841.806\*\*\* |
| Academic.Quality 0.515 0.466 0.049 |
| Athletic.Quality 0.424 0.551 -0.127\*\* |
| Near.Big.Market 0.360 0.700 -0.340\*\*\* |

**Note:** Table 1 shows the balance table for alumni donations in 2018 and covariates. There is a significant difference between treatment and control condition for dependent variable alumni donations in 2018, and for covariates athletic quality and near big market. There is no significant difference for covariate academic quality. Table 1 indicates that there seems to be non-random selection into who was ranked.

#3 To address non-random selection, we want to build a propensity score model and first need to determine and select all variables that the agents who assign treatment scan use in their assignments. In particular, we are looking at cross section data from about 100 top colleges in the year 2017 that are ranked based on their athletic quality, i.e., basketball performance. It therefore seems reasonable that rankers base their rank for 2017 on the athletic quality, rather than academic, into their ranking. For our propensity score model, we therefore need to weigh our model based on athletic quality. Near big market may or may not play a role in ranking, we will examine this by running a multiple regression on rank2017.

**Figure 1 – Stacked Histogram**



**Note:** Figure 1 indicates some evidence of an overlap of propensity score.

**Table 2 – Regression**

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| --- |
| Alumni.Donations.2018 |
| Ranked.2017 |
| 500\*\*\* |
| (.23) |
| Observations |
| 100 |
| *R*2 |
| 1.000 |
| Standard errors in parentheses |
| \* p<0.1, \*\* p<0.05, \*\*\* p<0.01 |
|  |

**Note:** Table 2 contains a regression predicting the amount of alumni donations in 2018 as a function of whether the school was ranked as a top basketball program in 2017 (1 or 0). Standard OLS standard errors are reported. Being ranked as top basketball program in 2017 tends to increase the likelihood of receiving alumni donations in the following year (by 500 percentage). Fixed effects of block and covariates athleticquality, nearbigcity and academicquality are controlled for/ not included in the analysis.