Assignment 3

1.a) Is there an electoral advantage of incumbency in the United States House of Representatives, and how can we measure it?

1.b) When measuring the incumbency advantage one could be fooled to think that simply running a regression of election on the categorical variable of incumbency would yield a quantifiable measure for the incumbency effect. Nonetheless, one could argue that ceteris is not truly paribus in this example, as the incumbent has already won an election where he wasn’t an incumbent, meaning that there are factors that have made him successful in the recent past, and it would only be logical to assume that he would get better every time he runs for office again. Therefore, the reason why the incumbents might be winning could be just because they’re truly better, and our naïve regression is suffering from omitted variable bias.

1.c) As described in class and by Lee in the paper, the assumption necessary for an RDD model is that treatment be distributed at random or has a significant random component to it for the subjects that are at the threshold for treatment. Therefore, the RDD model proposed for Lee is based on the intuition that in a highly contested election, having the Democrats win is “almost as random” as a flip of a coin, as the agents that define who win are mostly random, such as weather and voter turnout. Consequently, credible estimates can be obtained of an incumbent advantage by comparing the average democratic vote share in year two between districts in which Democrats narrowly won and those in which they narrowly lost in year 1. Nonetheless, Lee explains how issues could arise if some form of systematic fraud was tilting the scales in favor of some party, eliminating the randomness of the highly contested elections. Yet, regardless of fraud, since the RDD model satisfies proposition 3, then it can be tested for its validity.

1.d) The running variable is the Democratic vote share margin in year 1, and the treatment variable is the Democratic vote share margin in year 2.

1.e) The vote share margin in year 2 for the democrats will be affected by the vote share margin in year 1 because having a positive vote share margin in year 1 (aka winning) could possibly bring in investors, higher donations, and other factors that could aid campaigning for year two and ultimately raise the vote share margin in year 2.

1.f) Since treatment is assigned exclusively to those that cross the threshold, this is a sharp RDD.

1.g) (0.6) – (0.15) = (0.45)

1.h) Panel b is showing that proposition 3 holds by showing that the variable of “No. of past victories as of year 1” has a smooth relationship with the Democratic vote share margin in year 1.

1.i) From the table we can see that the RDD estimates for causal effects of incumbency on the probability of winning the election on year 1 are the values assigned in row 2. Specifically the parametric fit of 0.611. Therefore, instead of being a coin flip with P = 0.5 for either party, the incumbent party has a probability of winning of 0.611

This value passes the balance check as we can see that it follows a smooth path as we reduce the bandwidth and that all predetermined characteristics (all other rows) are balanced (the incumbency effect becomes statistically insignificant) in a neighborhood of the discontinuity threshold.