Manning Worthley
Econ 6217
Assignment 5

Problem 1

Difference in Difference Estimation

Model	Coefficient	Standard Error	T-Statistic	P-value
y81	49385.15	4666.491	10.58	0
nearinc	-18824.37	5617.353	-3.35	0.001
y81nearinc	-21131.76	8591.559	-2.46	0.014
_cons	82517.23	3141.95	26.26	0

Comments:

The difference in difference effect is -21131.76 with statistical significance below the 2% confindence level.

Problem 2

Average Treatment Estimates per Model

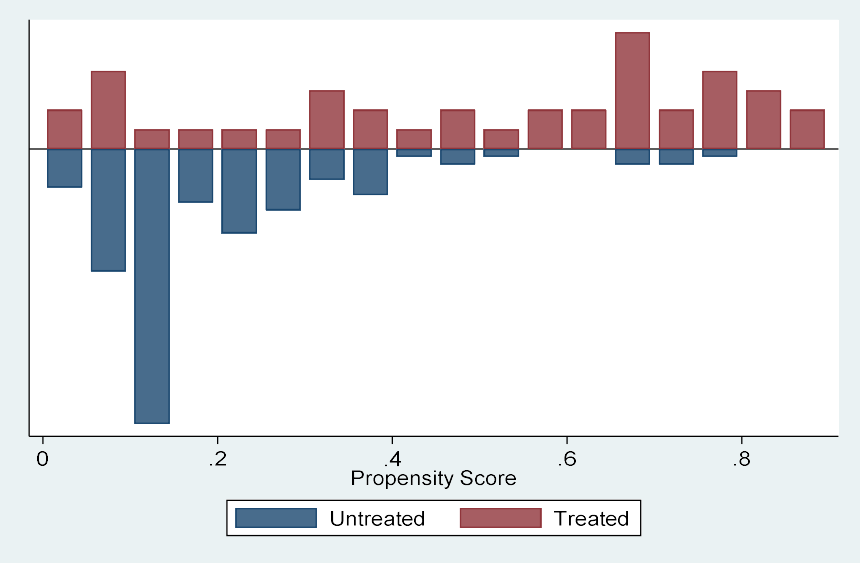
Model	ATT	T-Statistic
Nearest 1	316.38	0.02
Nearest 5	-2400.82	-0.19
Nearest 10	-12925.56	-1.2
Radius 0.1	-4748.56	-0.4
Radius 0.2	-6144.15	-0.56
Radius 0.5	-6144.15	-0.56

Comments:

Overall, there is limited statistical significance with the estimates and most of the average treatment effects are negative. Interestingly, the nearest neighbor estimated average treatment effect is positive which is counter-intuitive. Prices should in theory decrease.

Problem 3

Overlap Chart



Model	Rubin's B	Rubin's R
Nearest 1	99.2*	1.59
Nearest 5	48.5*	0.74
Nearest 10	59.4*	1.08
Radius 0.1	37.0*	1.16
Radius 0.2	35.3*	1.05
Radius 0.5	78.8*	2.01*

Comments:

As indicated by the asterisks for the Rubin's B & R indexes, all models would not be considered sufficiently balanced. Also evident is the lack of overlap in observations with higher propensity scores as depicted by the above chart. There are limited untreated observations in the upper end of the prepensity score spetrum.

Problem 4

Comments:

In this analysis of the effect of home prices on vacinity to an incinerator, the propensity matching models evaluated appear to not be adequetely balanced and lack overlap. The difference in difference model appears supperior to the propensity matching model.