Homework 4

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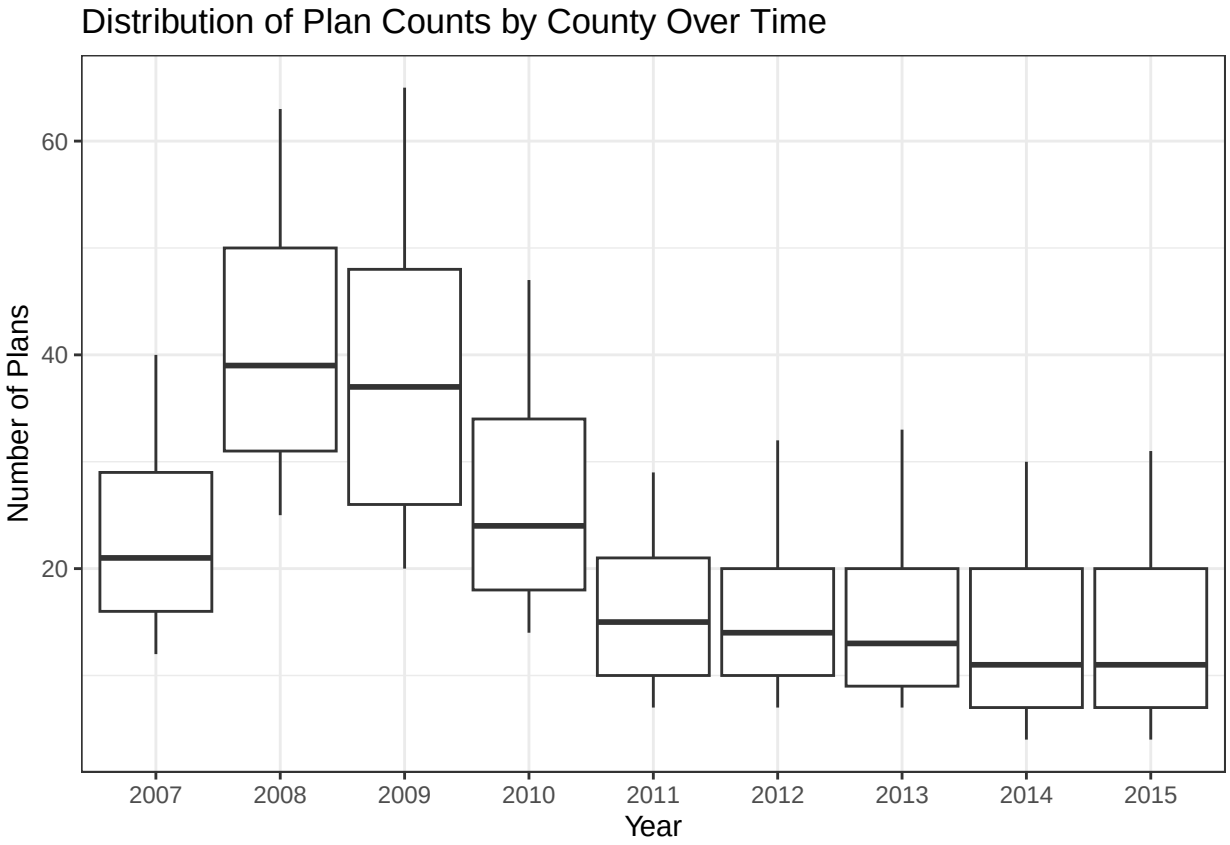
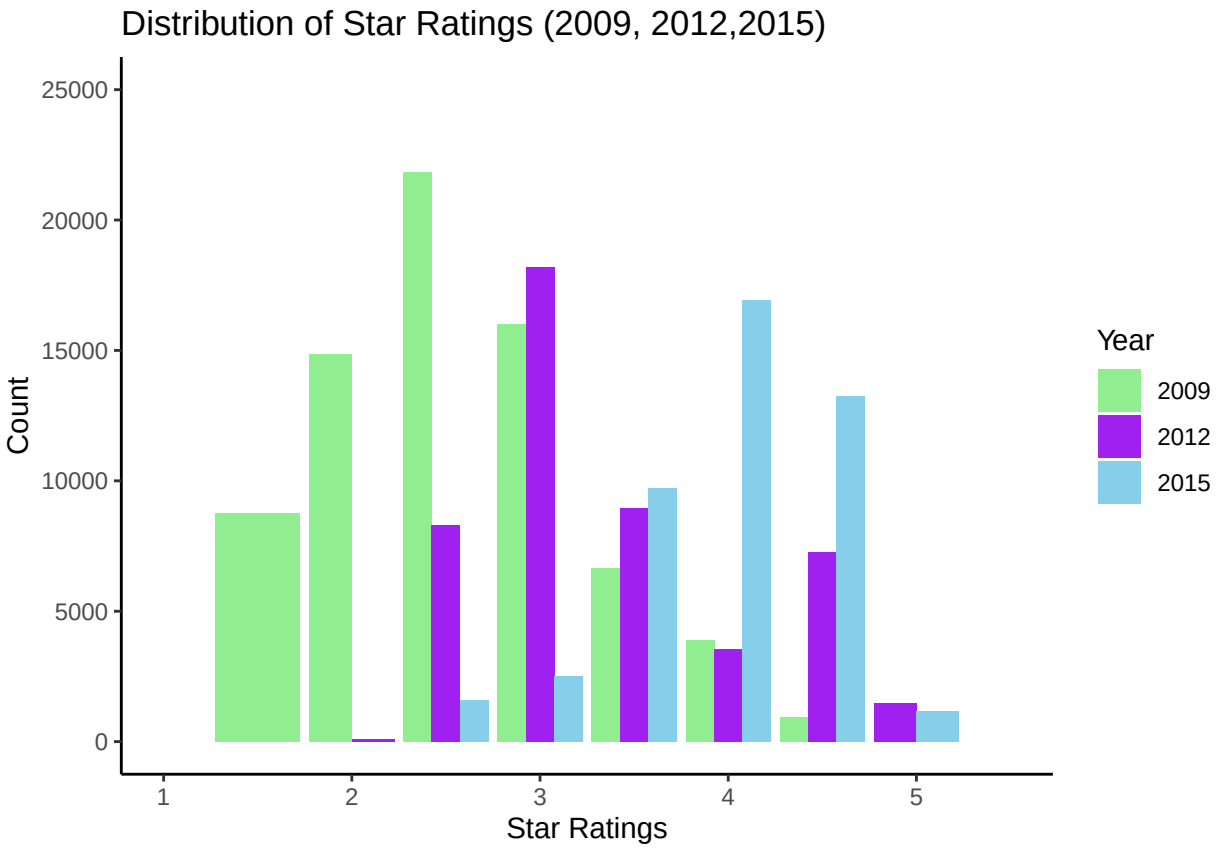
Question 1



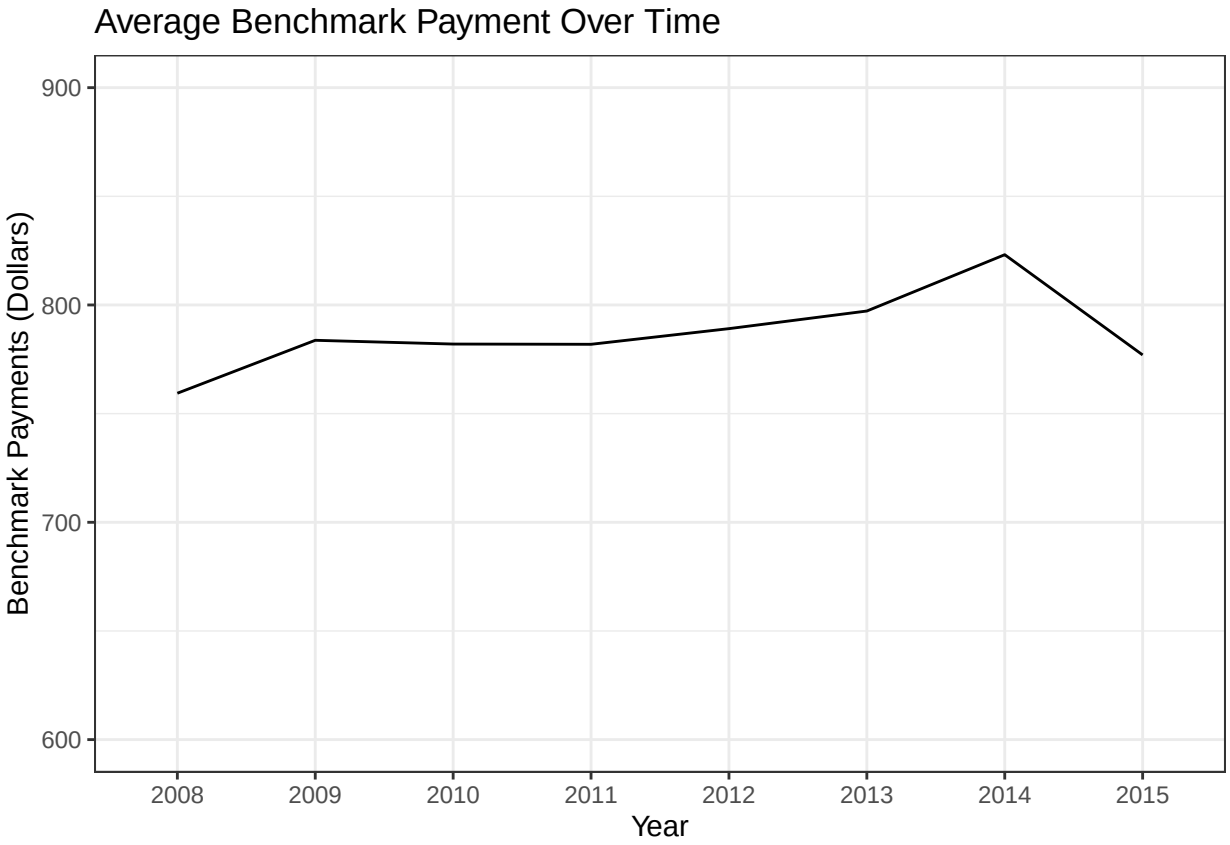
These ranges of plan counts seems a little low per county; I assumed each county would have 20-50 plans to choose from, on average.

Question 2



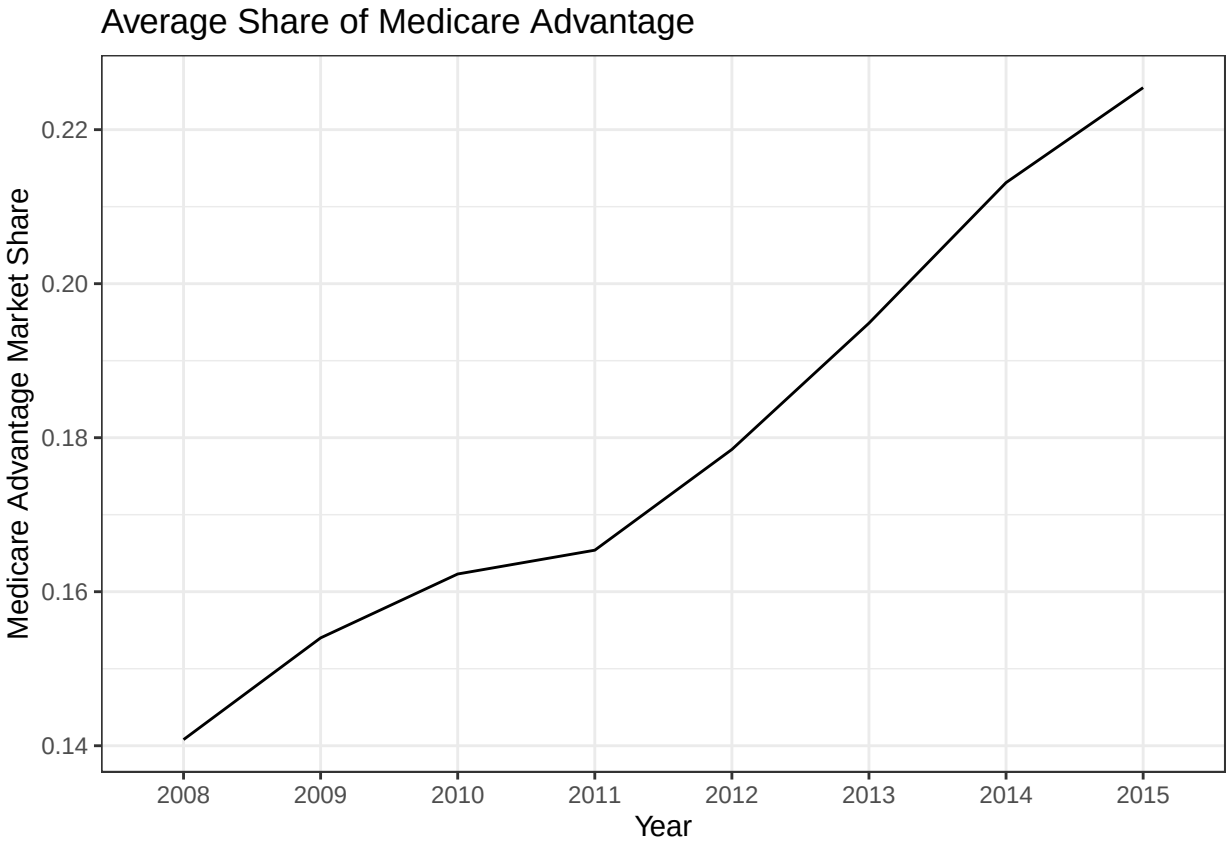
Over time, the distribution of higher star ratings (ratings of 4-5) has increased. Over the years, there is a lower frequency of low ratings and a higher frequency of high ratings (years 2012 and 2015 compared to 2009).

Question 3



Over the years, the average benchmark payment has risen by ~50 dollars and then dipped by ~30 dollars, overall decreasing to ~$780.

Question 4



The share of Medicare Advantage has increased in popularity, gradually increasing its market share from 2008 to 2015 by ~8%. This trend correlates with the increase in benchmark payments, until the 2014-2015 year, where there is an inverse correlation.

Question 5

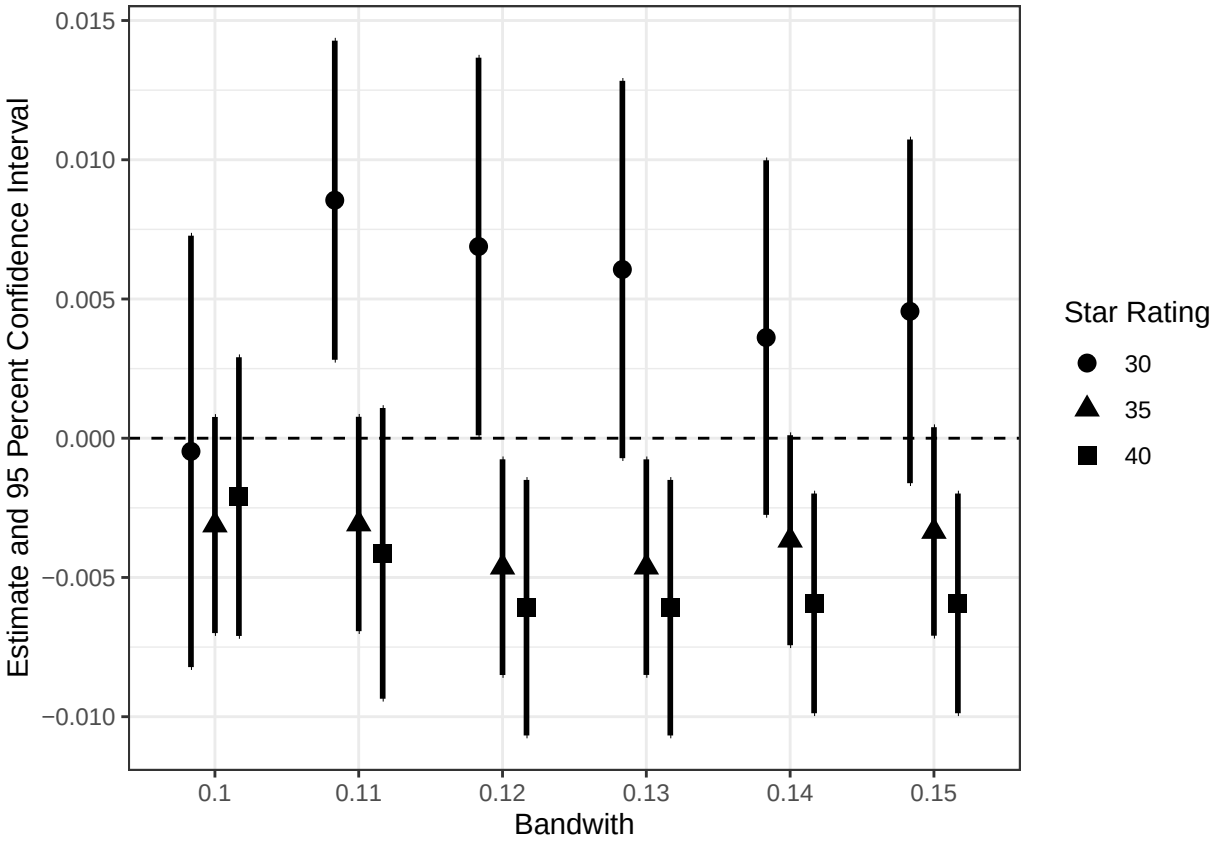
Star_Rating	rounded
3.0	2278
3.5	1157
4.0	767
4.5	0

Question 6

Table 1: Estimates

	Star 3.0	Star 3.5	Star 4.0	Star 4.5
Treatment	0.006	−0.005	−0.006	0.003
	(0.003)	(0.002)	(0.002)	(0.002)
score	−0.051	0.039	0.061	−0.070
	(0.018)	(0.015)	(0.014)	(0.020)
N	1953	1578	1286	573
R^2	0.01	0.00	0.02	0.02

Question 7



The findings are very sensitive to the choice of bandwidth. Even incremental changes in bandwidth result in large changes to the star rating effect on enrollments.

As you increase the bandwidth it decreases sensitivity thats why it is optimal to have a more narrow bandwidth

Question 8

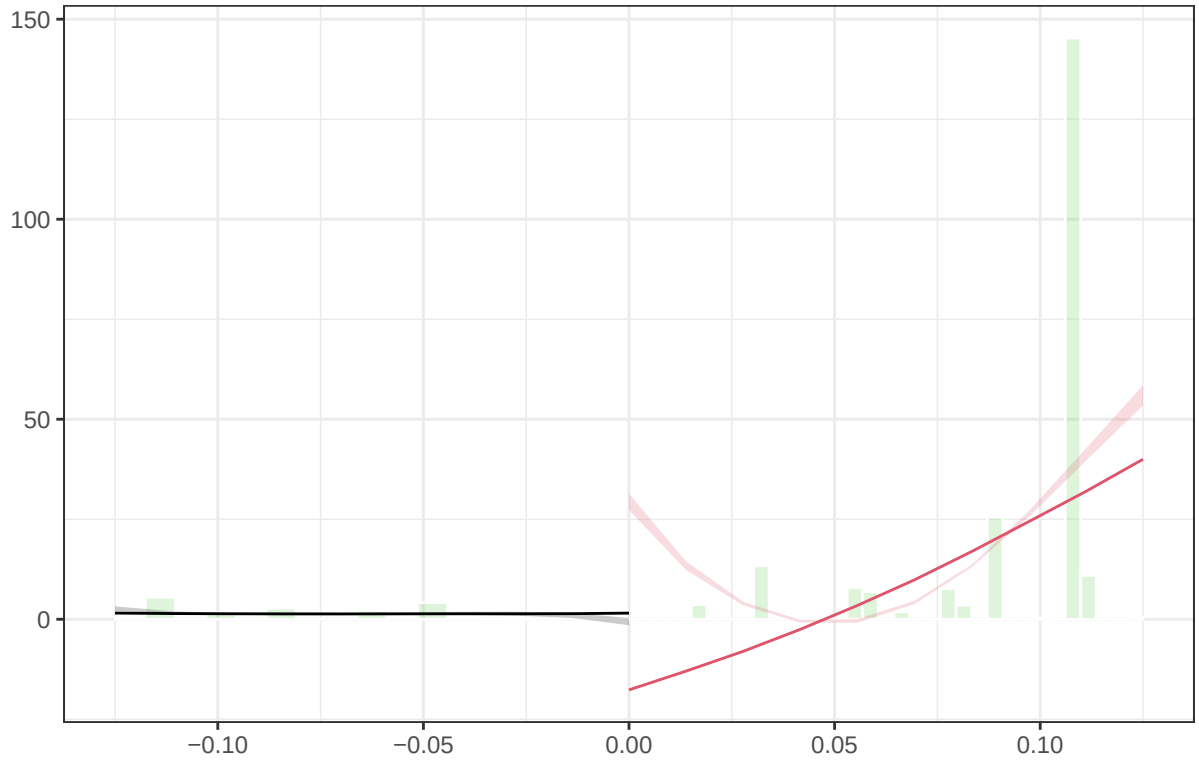


Figure 1: Density Plot for 2.5 v. 3-star rating

The distribution of the running variable before and after the relevant threshold values seems to not change drastically. It was a lor wider before, but I do not believe contracts appear to manipulate the running variable.

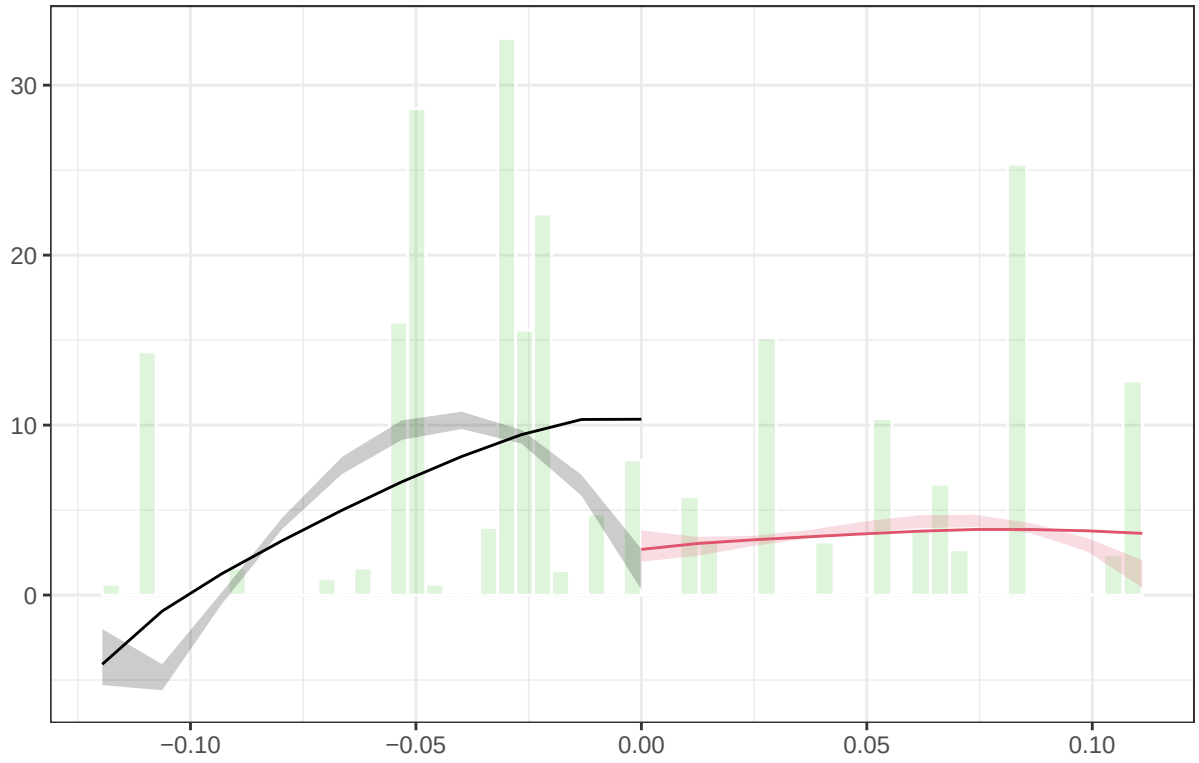


Figure 2: Density Plot for 3.0 v. 3.5-star rating

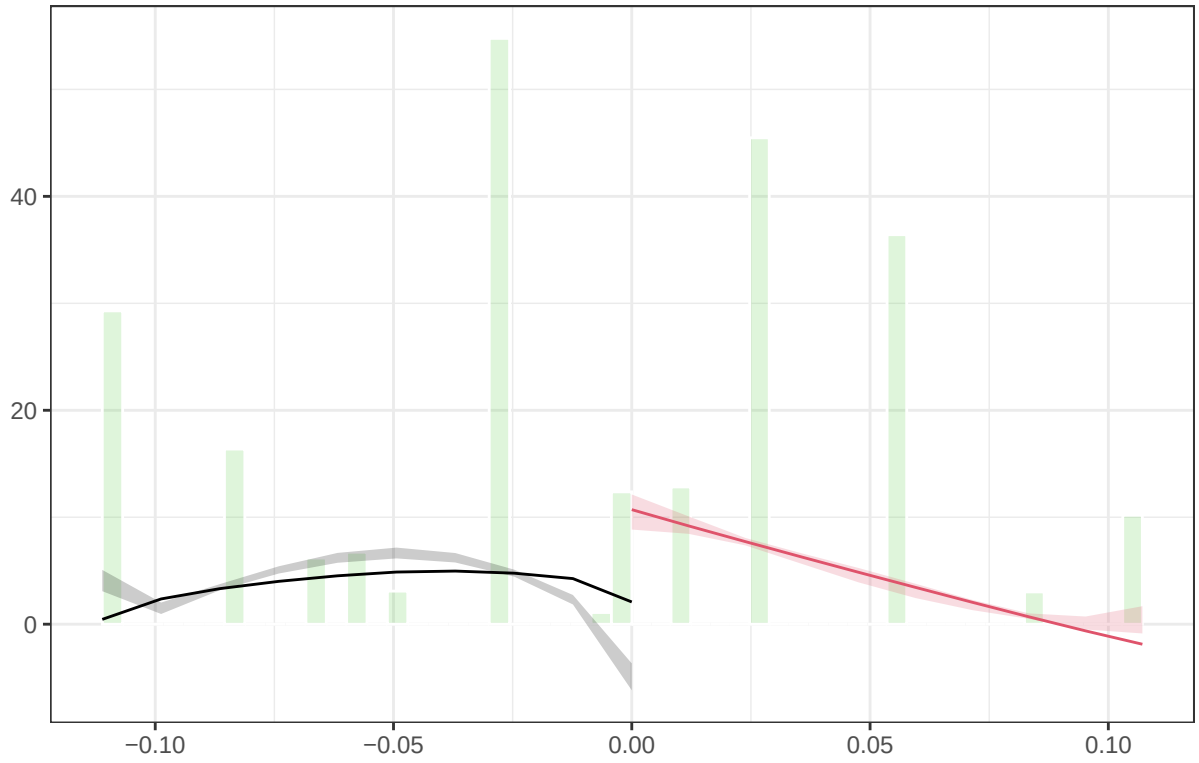
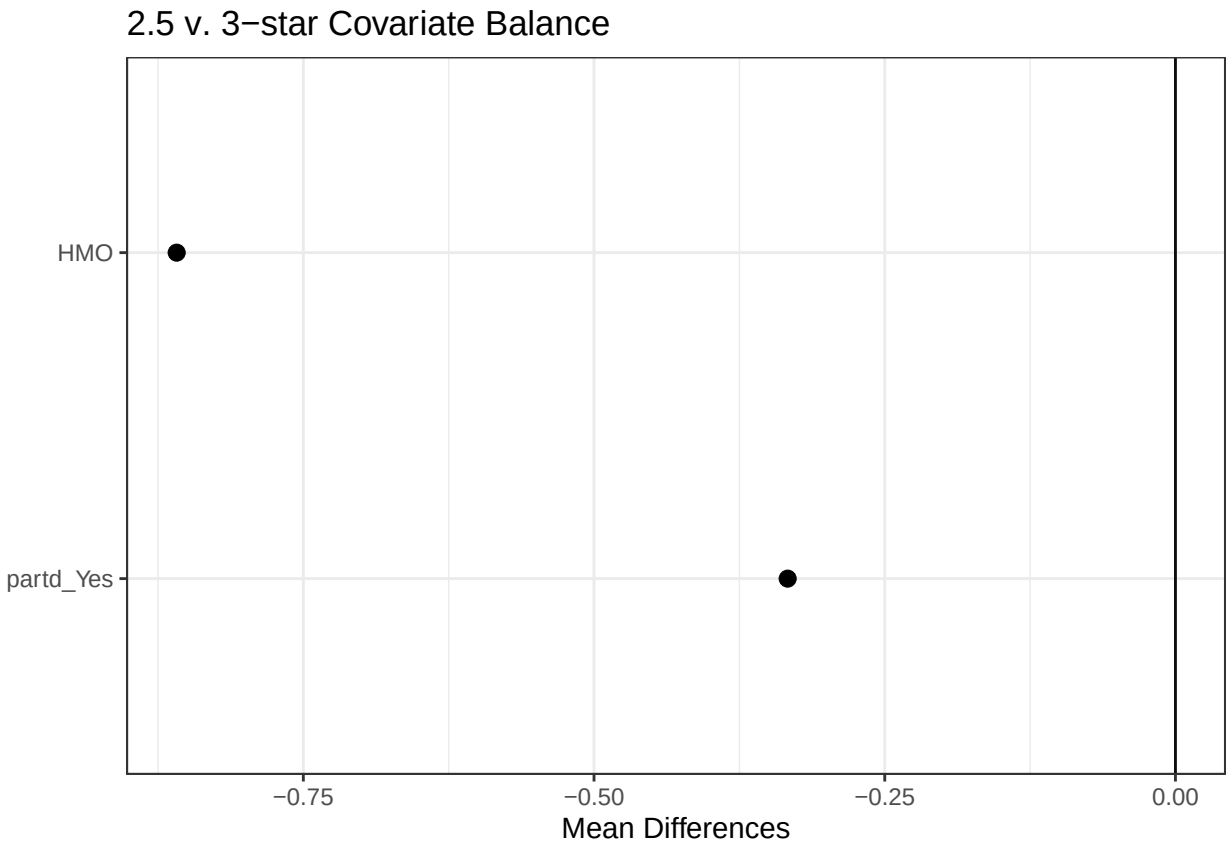
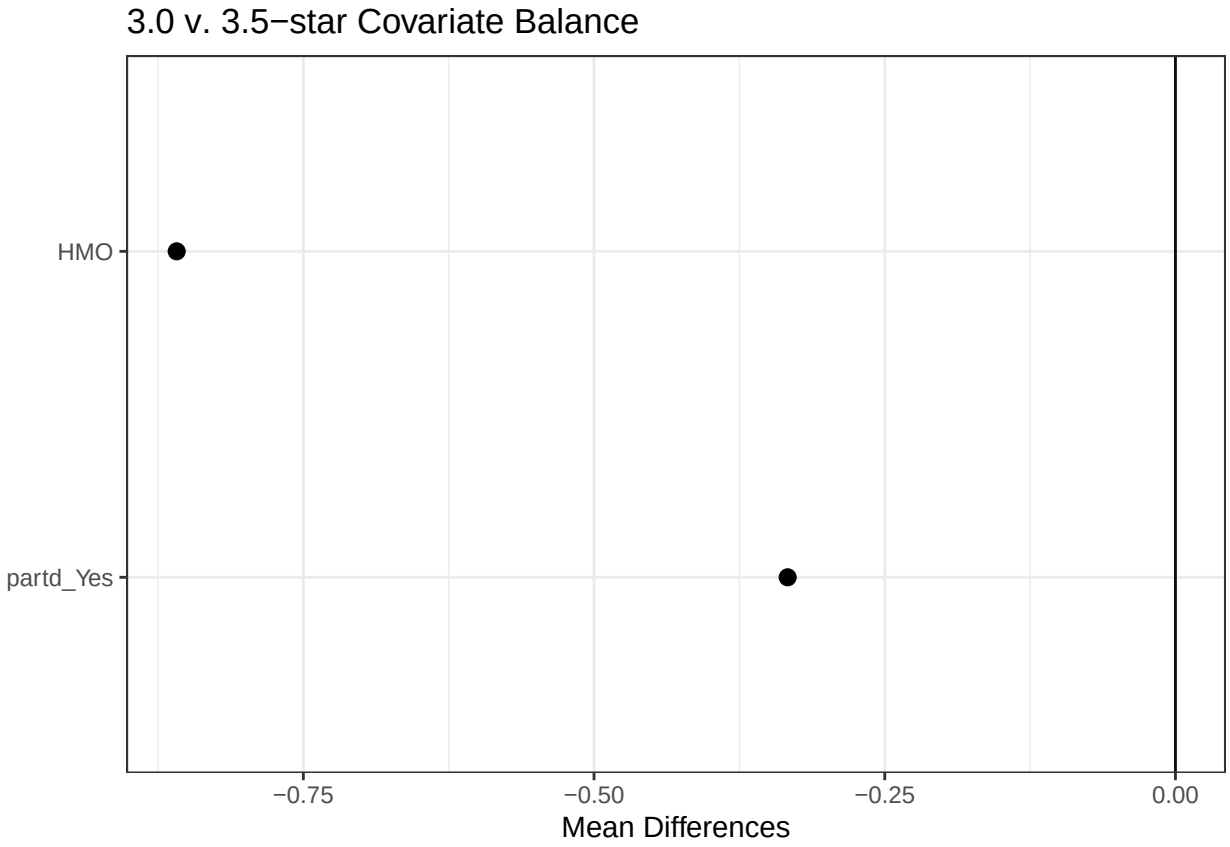
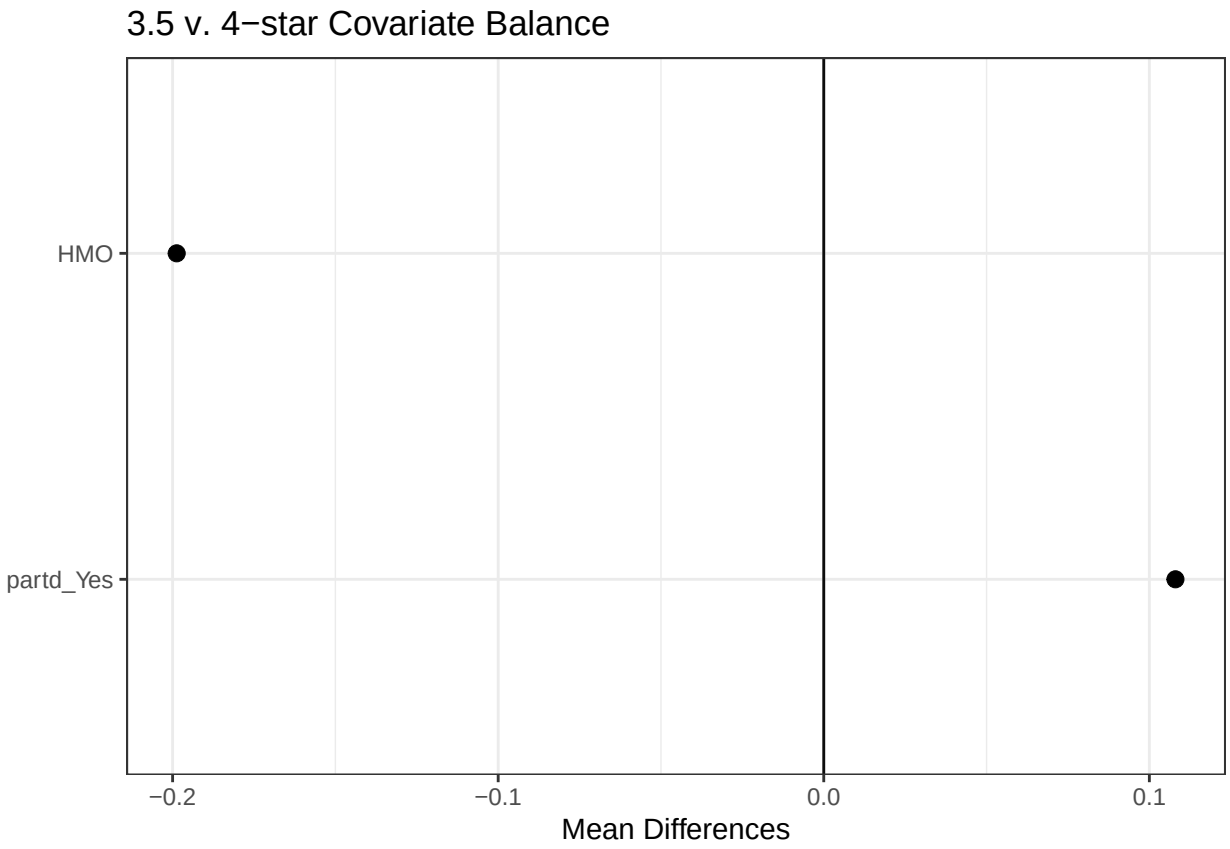


Figure 3: Density Plot for 3.5 v. 4-star rating

Question 9


2.5 v. 3−star Covariate Balance
HMO
partd_Yes
−0.75
−0.50
−0.25
0.00
Mean Differences


3.0 v. 3.5−star Covariate Balance
HMO
partd_Yes
−0.75
−0.50
−0.25
0.00
Mean Differences


3.5 v. 4−star Covariate Balance
HMO
partd_Yes
−0.2
−0.1
0.0
0.1
Mean Differences

Question 10

With the results in ATE 1-4, I find that increasing star ratings overall lead to increases in enrollment.