

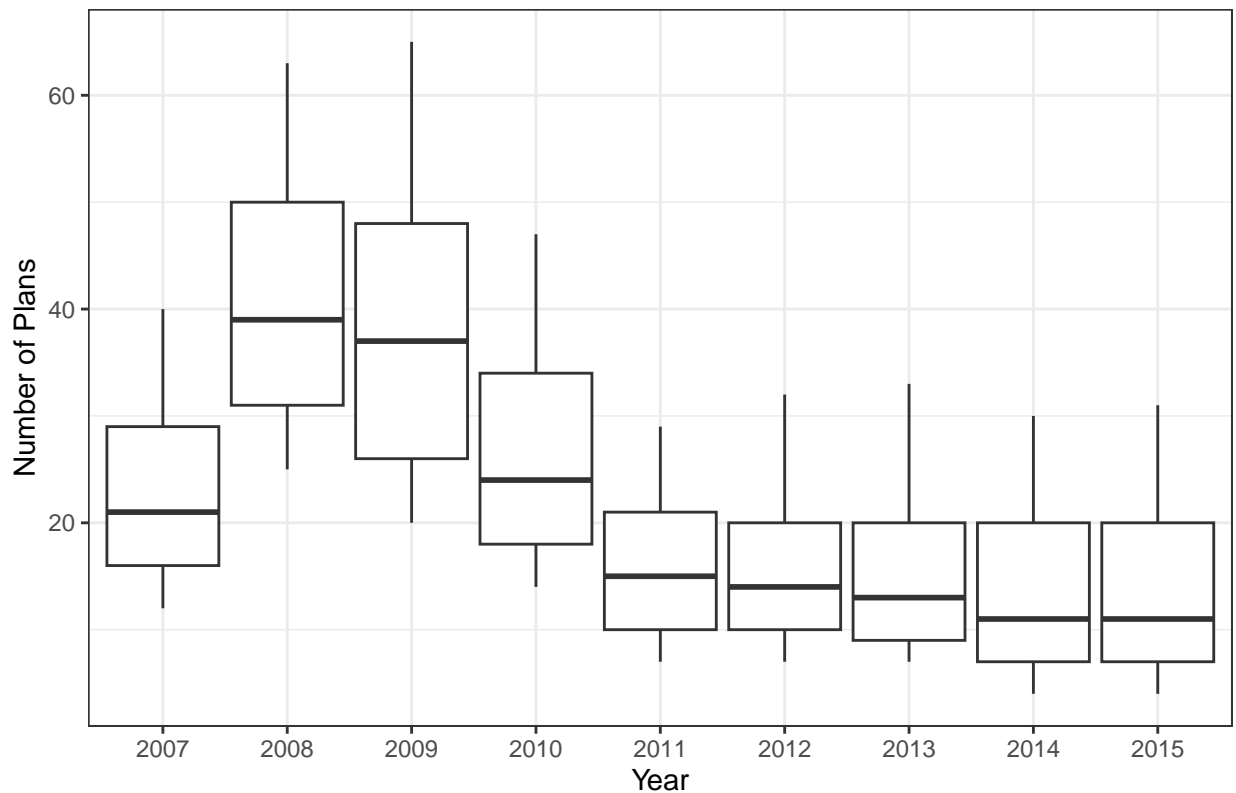
Joseph-J-hwk4-2

Justin Joseph

2023-04-05

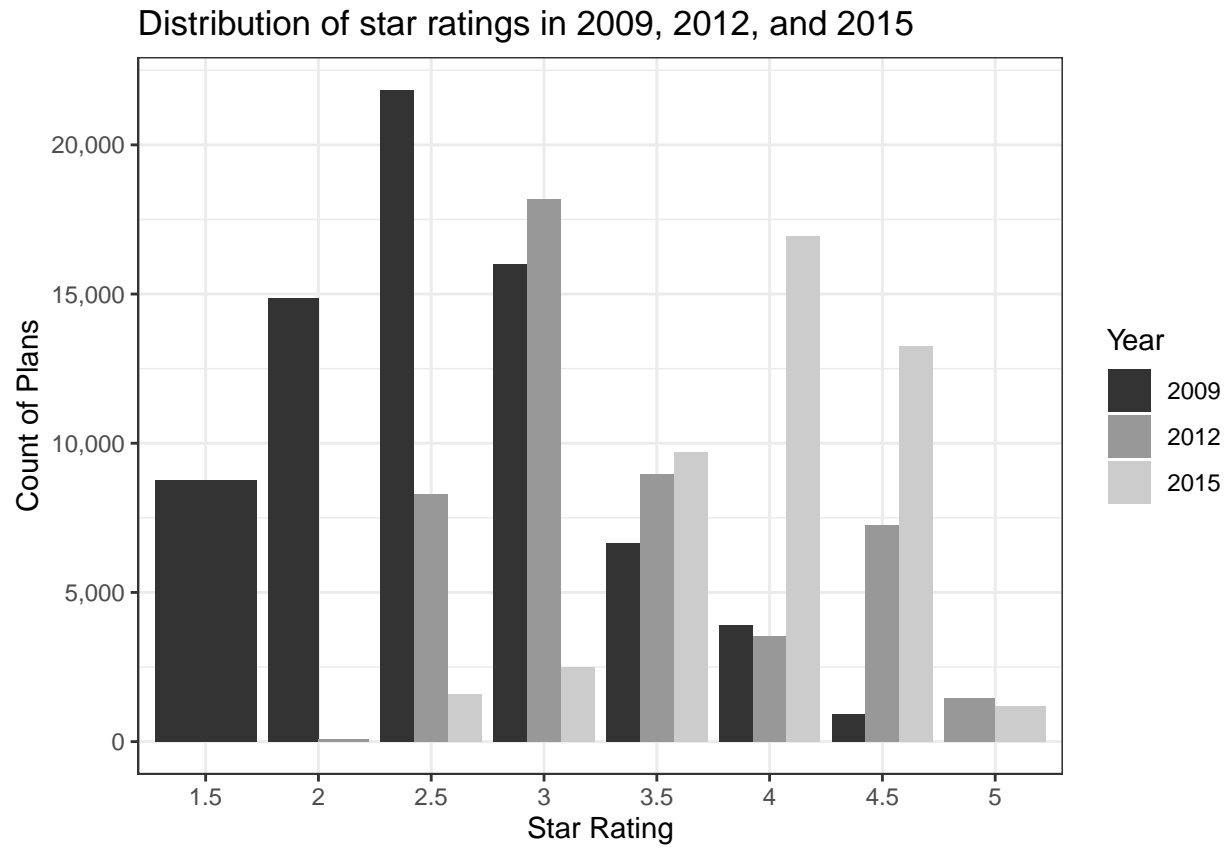
0.0.1 1.

Plan Counts by county from 2007–2015



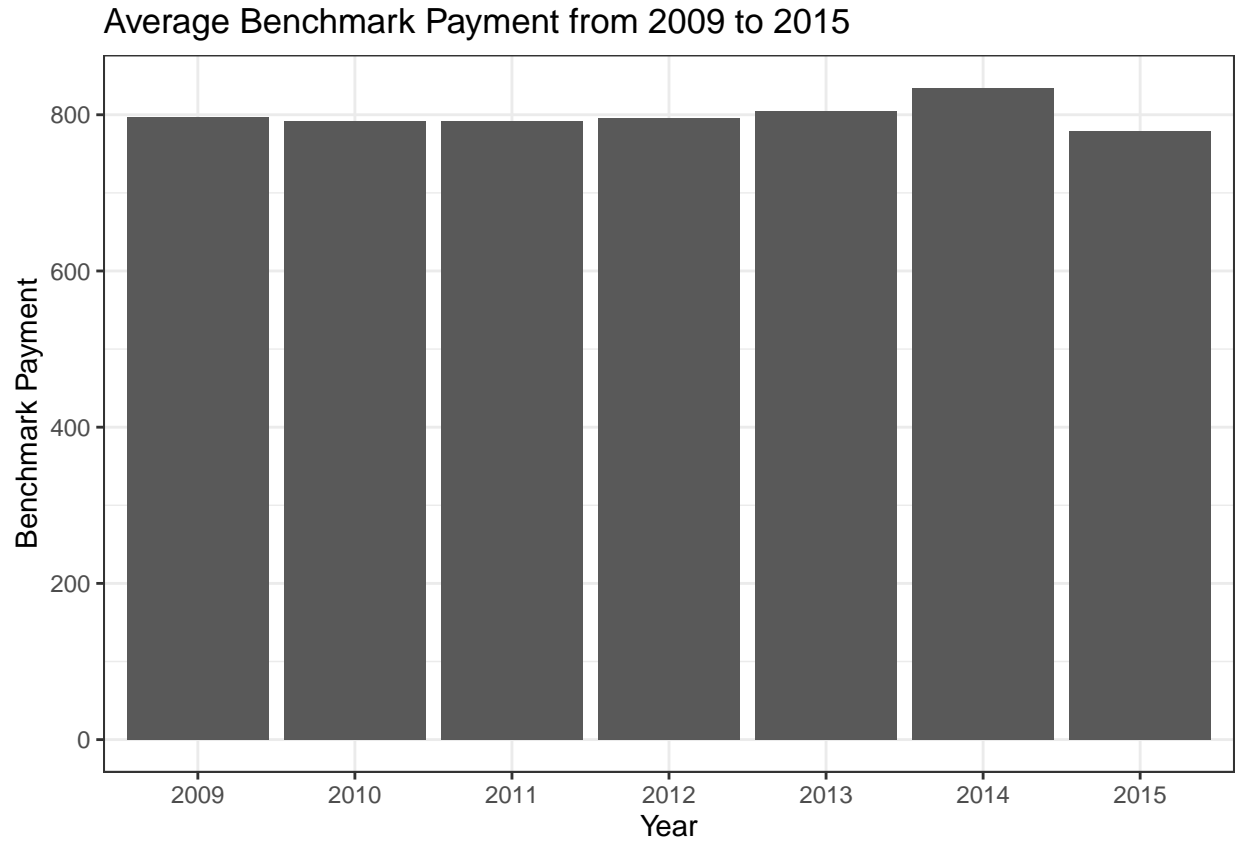
Since this data show the average number of plans by county for each year this is a good amount of plans. on average between 2011 -2015 the median number of plans range from 16-10 this is a sizeable number of different plans one can choose from thus provides enough diversity and competition in the market however anything below 5 could potentially be too little

0.0.2 2.



The distrubtion of higher star rating plans increase as time goes on and there is a decrease in low star plans as time increases.

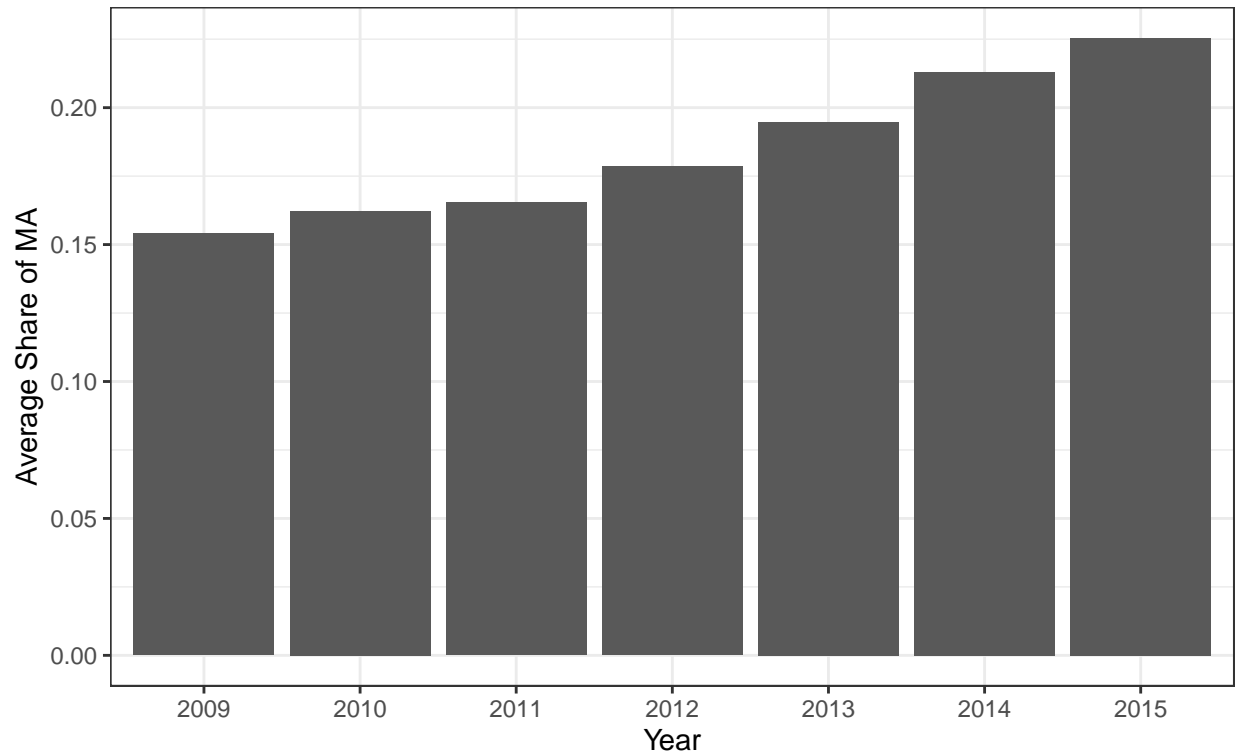
0.0.3 3.



The average benchmark payment between 2009 and 2015 showed no great changes over time where the average payment was around 800 dollars.

0.0.4 4.

Average share of Medicare Advantage
(relative to all Medicare eligibles) over time from 2009 through 2015



Medicare advantage has increase in popularity between 2009 to 2015 because the average share of enrollees in MA increase from .15 to a little under .22, this is a sizable increase in market pentration and thus shows increase in popularity.

0.0.5 5.

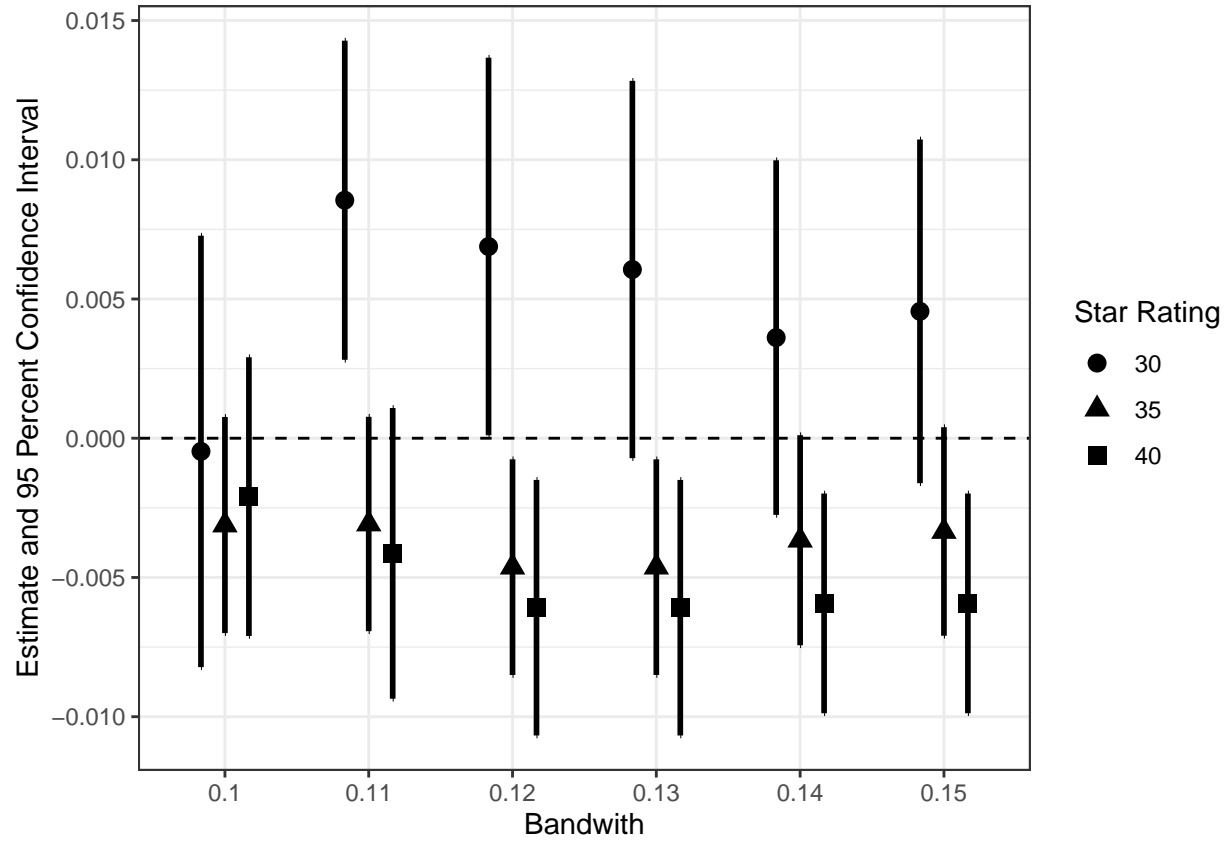
```
## # A tibble: 4 x 2
##   Star_Rating rounded
##   <dbl>    <dbl>
## 1      3      2278
## 2     3.5     1157
## 3      4       767
## 4     4.5        0
```

0.0.6 6.

Table 1: Estimates

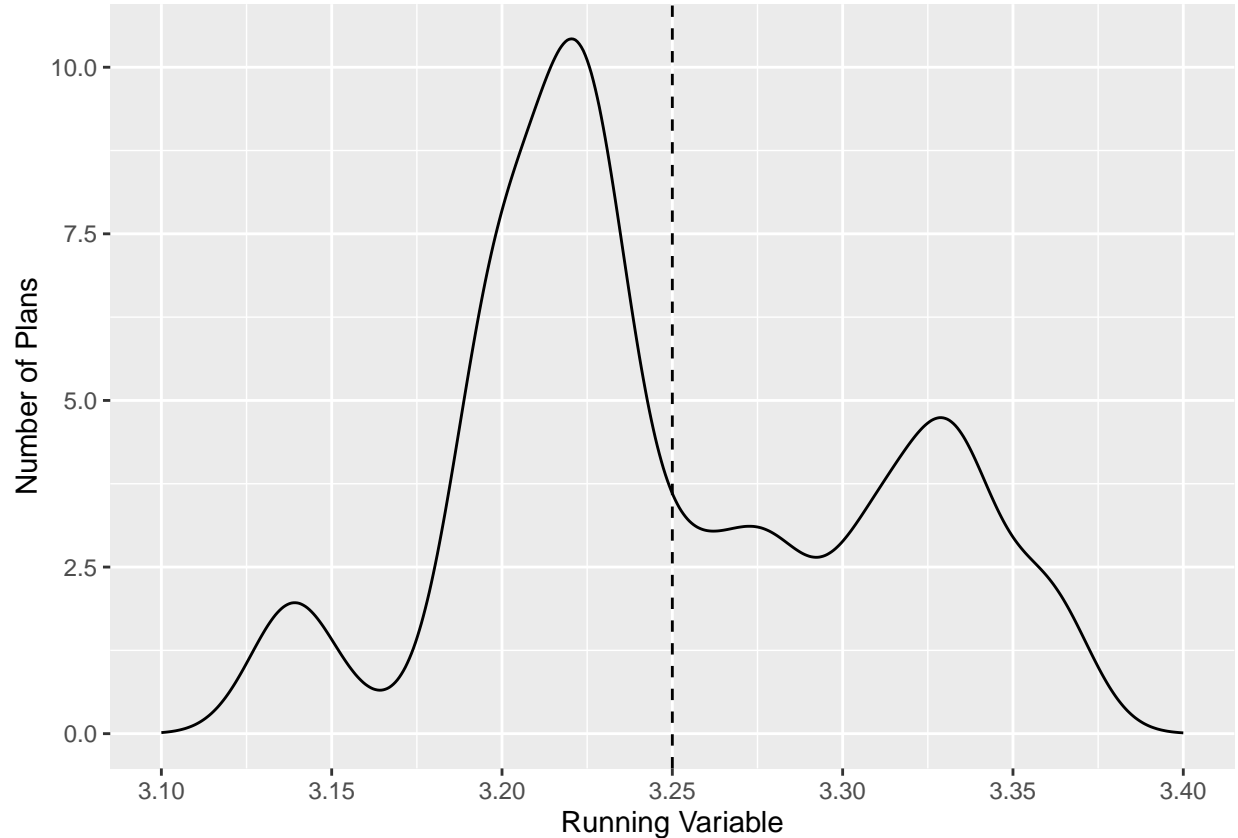
| | Star 3.0 | Star 3.5 | Star 4.0 | Star 4.5 |
|----------------|-------------------|-------------------|-------------------|-------------------|
| Treatment | 0.006 (0.003) | −0.005 (0.002) | −0.006 (0.002) | 0.003 (0.002) |
| Score | −0.051 (0.018) | 0.039 (0.015) | 0.061 (0.014) | −0.070 (0.020)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

0.0.7 7.



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

0.0.8 8.



So we see here that a majority of the contracts are centered around 2.16 and 2.45 not very much data around our threshold of 2.5.

0.0.9 9.

Table 2: Counts and proportion of plans with PartD equal to 'Yes'

| Rating Category | Total Count | PartD Yes Count | PartD Yes Proportion |
|-----------------|-------------|-----------------|----------------------|
| Below 2.25 | 3037 | 1560 | 0.5136648 |
| Above 2.5 | 6923 | 5968 | 0.8620540 |

Here we see there is a potential difference in plan characteristics above and below the threshold where plans above the star rating of 2.25 have a high proportion of partD compared to a smaller number of plans below 2.25.

0.0.10 10.

Overall, increasing star rating has a direct effect on increasing enrollment. Across all of our models we see an average coefficient to be around 600. thus for every increase in star rating there is about 600 individuals who are now enrolled