Homework Four Submission 1

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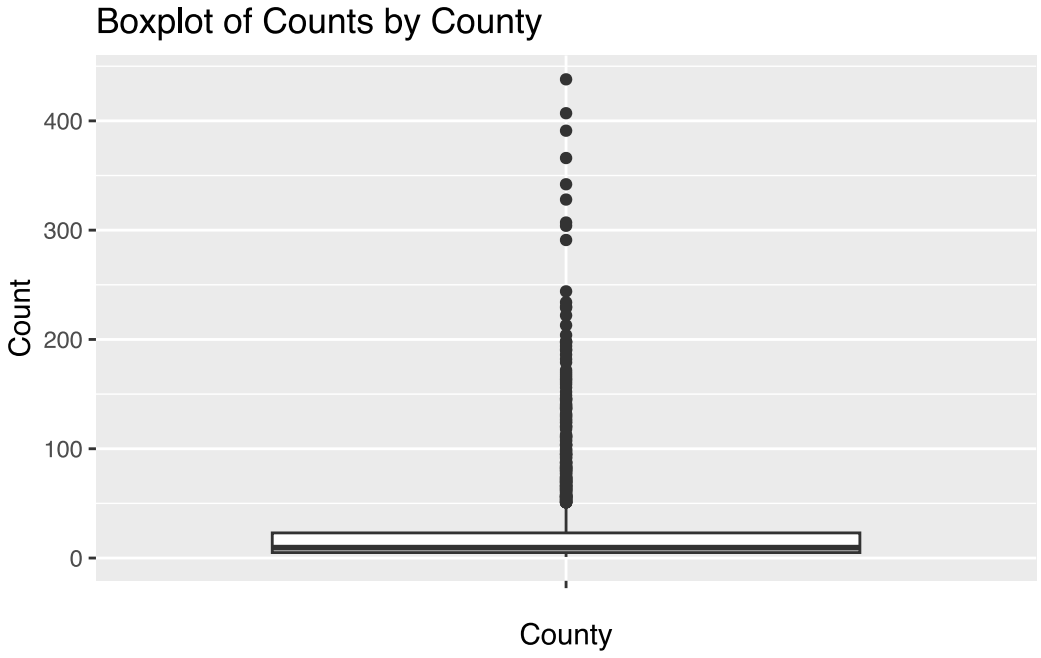
This is my first submission of the fourth homework for Econ 470.

Link to Github

https://github.com/safiaread/homework_4

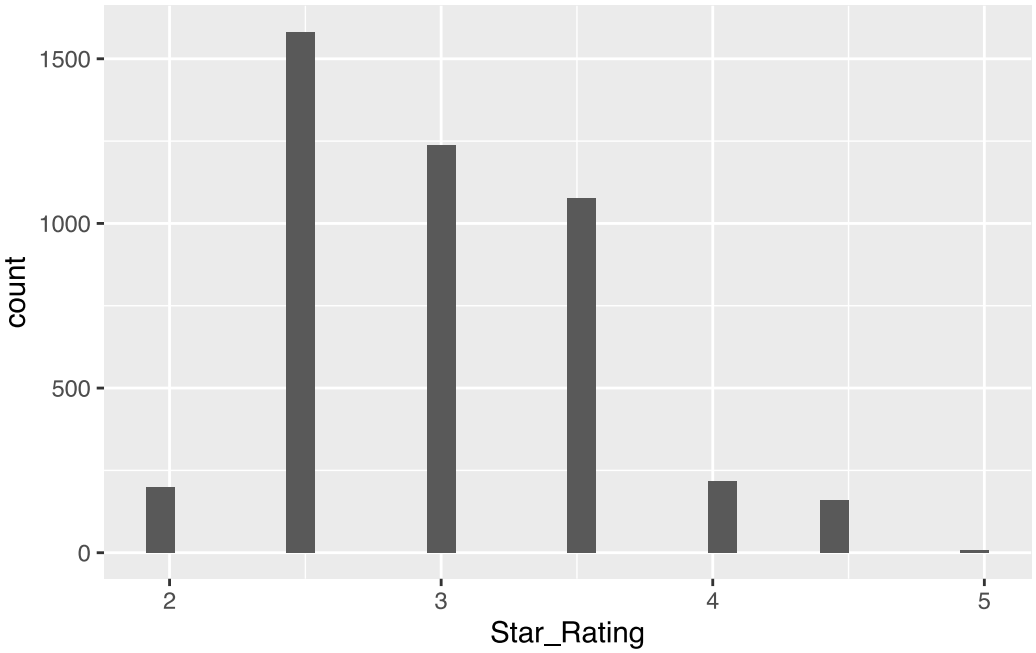
Question 1 It looks like the number of plans is pretty low.



Question 2 The star ratings have increased generally.

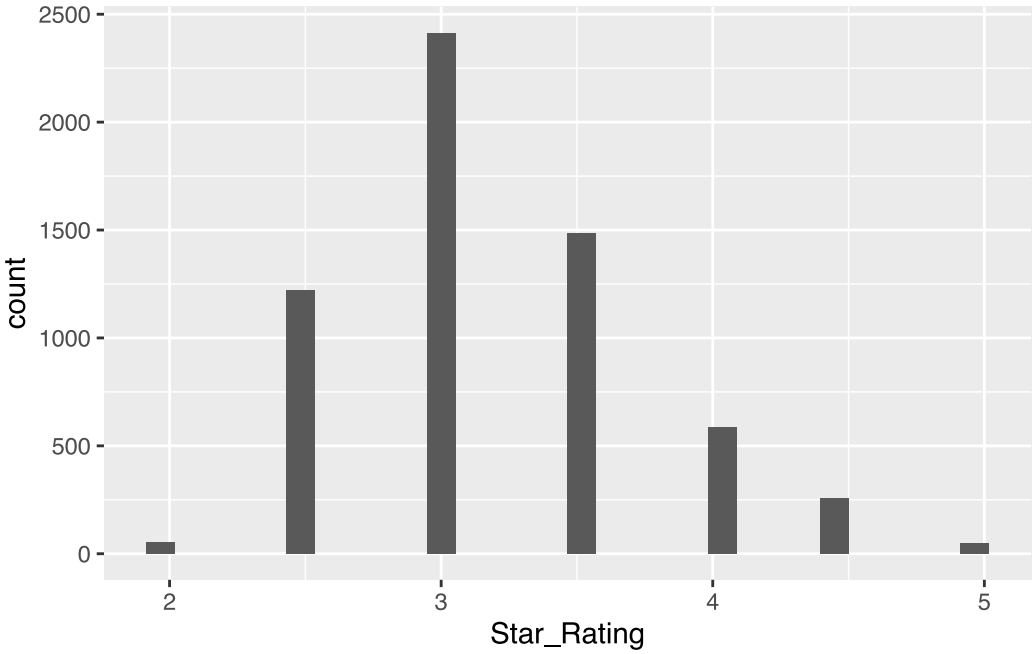
```
`stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```

```
Warning: Removed 1574 rows containing non-finite values (`stat_bin()`).
```



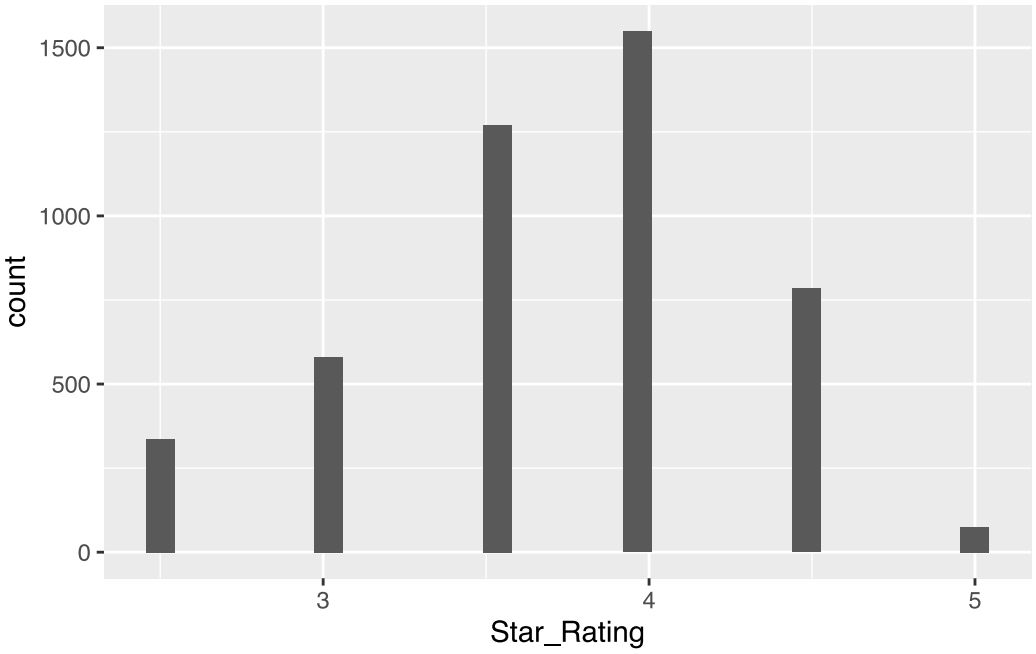

```
`stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```

```
Warning: Removed 741 rows containing non-finite values (`stat_bin()`).
```



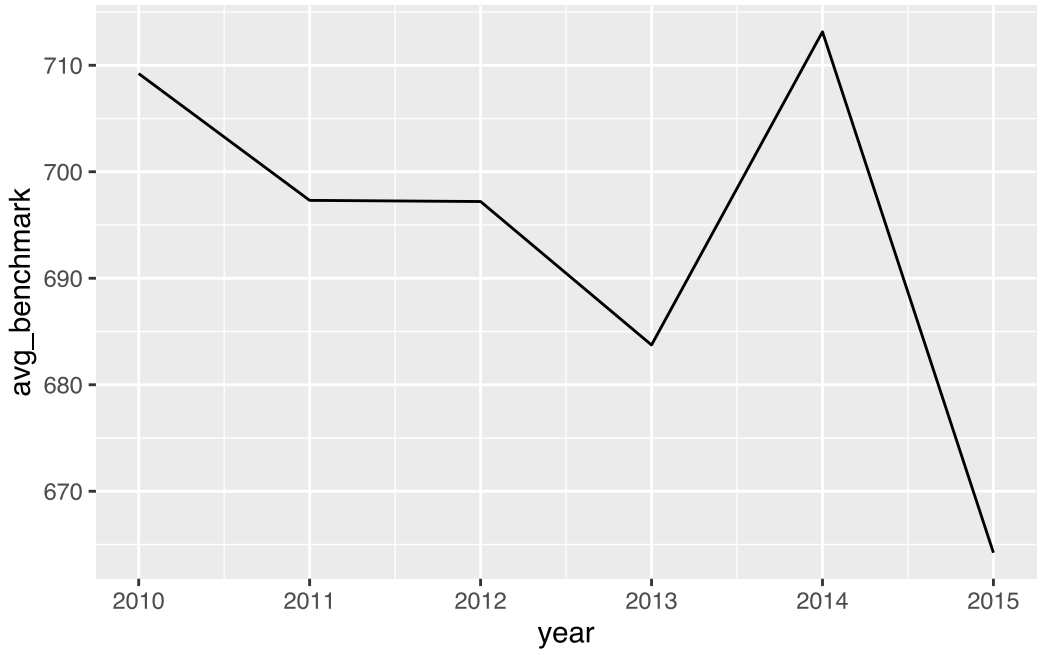
```
`stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```

```
Warning: Removed 1013 rows containing non-finite values (`stat_bin()`).
```



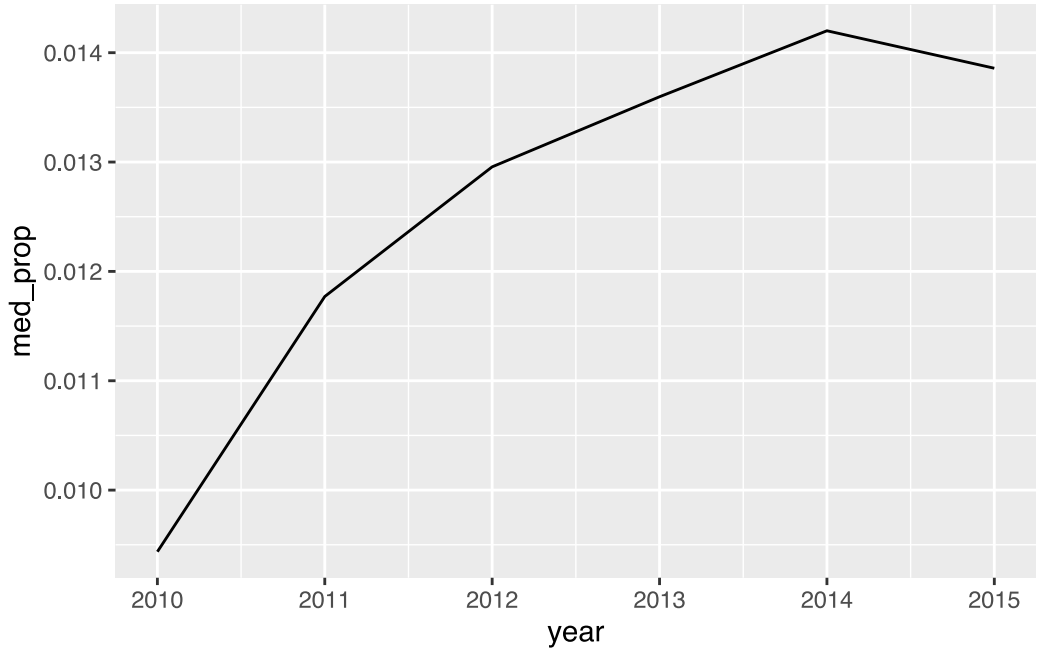
Question 3

The average benchmark has fallen according to this graph, but I think the variable calculation is off.



Question 4

Medicare Advantage has increased in popularity over time. I would expect that to correlate with increased benchmark payments.



Question 5

```
# A tibble: 1 × 6
  raw_rating three three_five  four four_five  five
       <dbl> <dbl>      <dbl> <dbl>     <dbl> <dbl>
1        NaN 12499       8968  4782       433 30556
```

Question 6

```
  bandwidth    estimates
1       0.2 -0.005785624
2     0.125 -0.002637563
3     0.125 -0.002451985
```

```
  bandwidth   estimates
1       0.2 0.005789696
2     0.125 0.011044429
3     0.125 0.008110902
```

Question 7

The data is sensitive to the bandwidth.

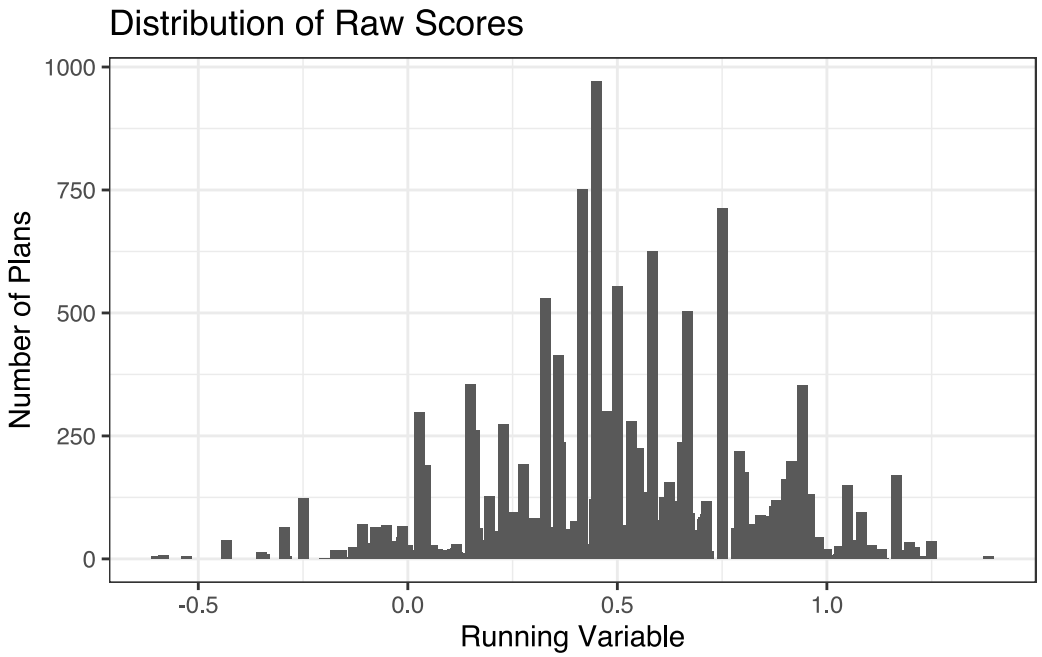
```
  bandwidth    estimates
1       0.1  0.005789696
2      0.12 -0.006775940
3      0.13 -0.002452122
4      0.14 -0.003655426
5      0.15 -0.001978533
```

```
  bandwidth    estimates
1       0.1  0.005789696
2      0.12 -0.002491729
3      0.13  0.002894928
4      0.14  0.008110902
5      0.15  0.016141565
```

Question 8

It looks like the data is clustered aaround the threshold.

```
Warning: `position_stack()` requires non-overlapping x intervals
```



Question 9

I don't know which variable is the HMOs and I can't get the love plot to work.

match.dat <- matchit(treat~partd, data=data.rd1 %>% filter(window2==TRUE, !is.na(treat), !is.-na(premium_partc), !is.na(ma_rate)), method=NULL, distance="mahalanobis") love.plot(match.-dat, abs=TRUE)

```
Warning: Unknown or uninitialised column: `partd`.
```

```
NULL
```

Question 10 I thik increasing star rating will cause enrollments to go up because people will be more confident in the quality.