Homework 5

Submission 1

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Link to Github

1. Plot the share of the adult population with direct purchase health insurance over time.

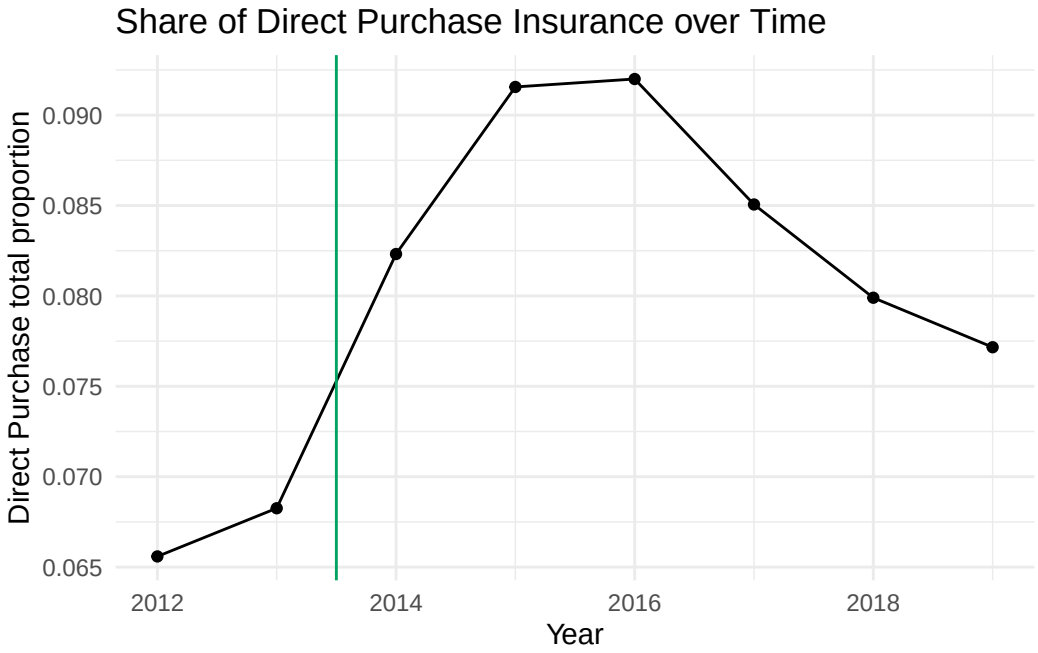

Figure 1: Share of the Adult population with Direct Purchase health insurance over time

2. Discuss the reduction in direct purchase health insurance in later years. Can you list a couple of policies that might have affected the success of the direct purchase insurance market?

The main policy that impacted the reduction in direct purchase health insurance was a real world event! When the ACA was repealed, there is a direct correlation with a steep drop afterwards.

3. Plot the share of the adult population with Medicaid over time.

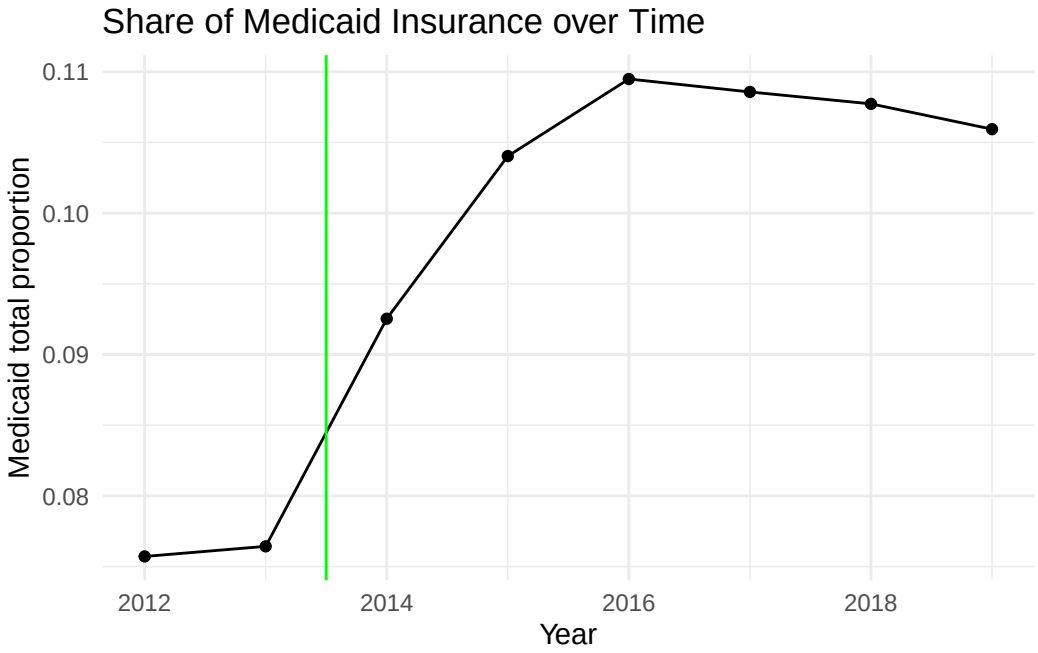

Figure 2: Share of the Adult population with Medicaid over time

4. Plot the share of uninsured over time, separately by states that expanded Medicaid in 2014 versus those that did not. Drop all states that expanded after 2014.

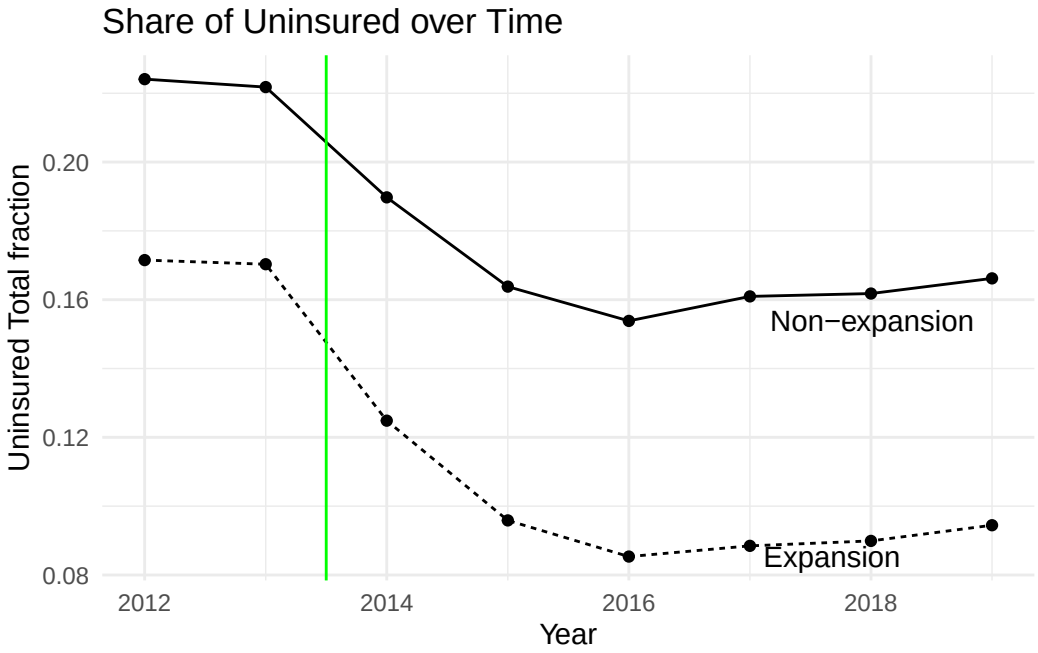

Figure 3: Share of Uninsured over Time

5. Calculate the average percent of uninsured individuals in 2012 and 2015, separately for expansion and non-expansion states. Present your results in a basic 2x2 DD table.

```
# A tibble: 2 x 3
  Group           Pre   Post
  <chr>         <dbl>  <dbl>
1 Non-expansion 0.224 0.164
2 Expansion     0.172 0.0959
```

6. Estimate the effect of Medicaid expansion on the uninsurance rate using a standard DD regression estimator, again focusing only on states that expanded in 2014 versus those that never expanded.

Table 1: Effect of Medicaid Expansion on Uninsurance

	(1)
(Intercept)	0.223
	(0.009)
postTRUE	−0.057
	(0.011)
expand_everTRUE	−0.055
	(0.011)
postTRUE × expand_everTRUE	−0.016
	(0.013)
Num.Obs.	296
R2	0.504
R2 Adj.	0.499
AIC	−1028.3
BIC	−1009.9
Log.Lik.	519.165
F	99.029
RMSE	0.04

7. Include state and year fixed effects in your estimates. Try using the lfe or fixest package to estimate this instead of directly including the fixed effects.

	DD	TWFE
(Intercept)	0.223	
	(0.009)	
postTRUE	−0.057	
	(0.011)	
expand_everTRUE	−0.055	
	(0.011)	
treat	−0.016	−0.016
	(0.013)	(0.008)
Num.Obs.	296	296
R2	0.504	0.950
R2 Adj.	0.499	0.941
R2 Within		0.051
R2 Within Adj.		0.047
AIC	−1028.3	−1625.9
BIC	−1009.9	−1459.8
Log.Lik.	519.165	
F	99.029	
RMSE	0.04	0.01
Std.Errors		by: State
FE: State		X
FE: year		X

8. Repeat the analysis in question 7 but include all states (even those that expanded after 2014). Are your results different? If so, why?

	DD	TWFE
(Intercept)	0.223	
	(0.010)	
postTRUE	−0.057	
	(0.011)	
expand_everTRUE	−0.044	
	(0.011)	
treat	−0.011	−0.011
	(0.013)	(0.006)
Num.Obs.	408	408
R2	0.389	0.943
R2 Adj.	0.385	0.933
R2 Within		0.019
R2 Within Adj.		0.016
AIC	−1376.6	−2235.4
BIC	−1356.6	−1998.7
Log.Lik.	693.317	
F	85.831	
RMSE	0.04	0.01
Std.Errors		by: State
FE: State		X
FE: year		X

They are relatively the same/very similar. Maybe I did it wrong?

9. Provide an "event study" graph showing the effects of Medicaid expansion in each year. Use the specification that includes state and year fixed effects, limited to states that expanded in 2014 or never expanded.

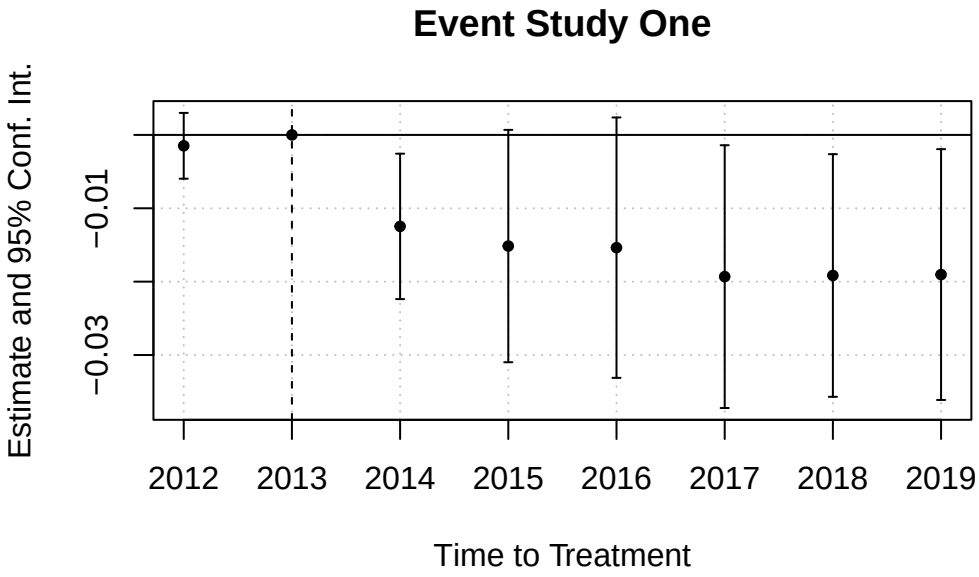

Figure 4: Event Study of Medicaid Expansion (2014)

10. Repeat part 9 but again include states that expanded after 2014. Note: this is tricky…you need to put all states onto "event time" to create this graph.

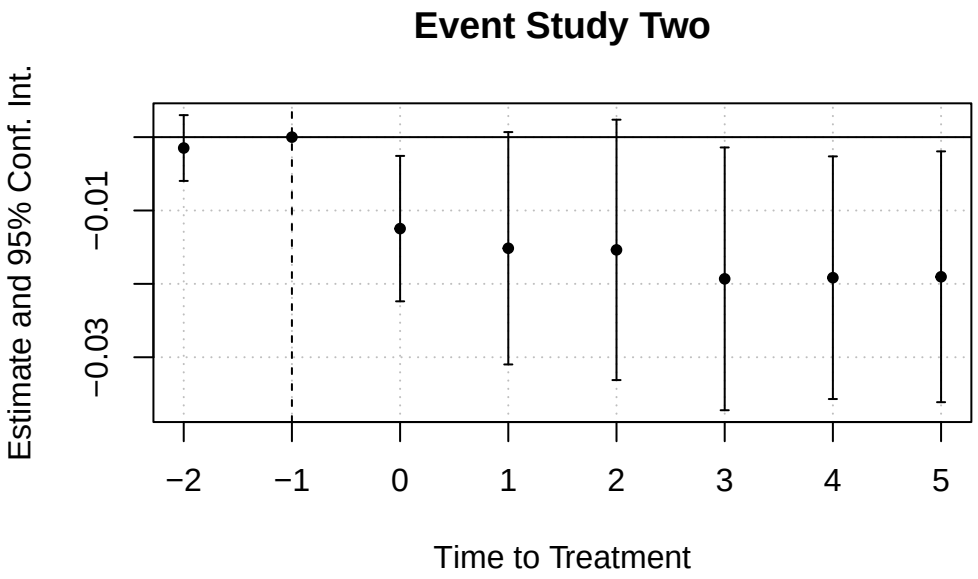

Figure 5: Event Study of Medicaid Expansion over Time