

# Homework 5

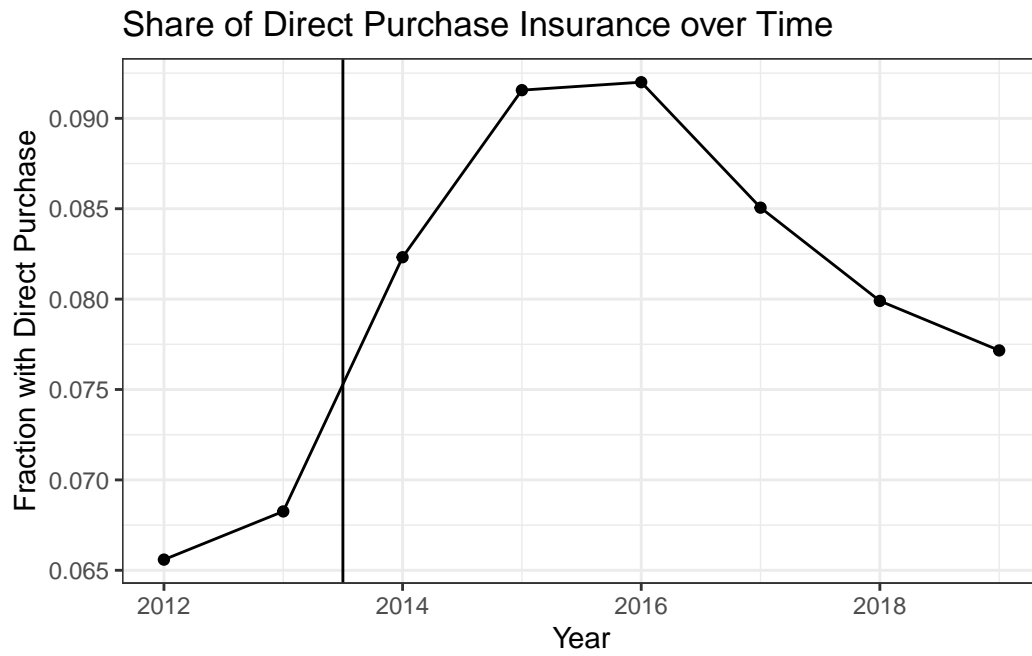
ECON 470, Spring 2025

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Submission 2, you can find my code [here](#).

**Question 1:**

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

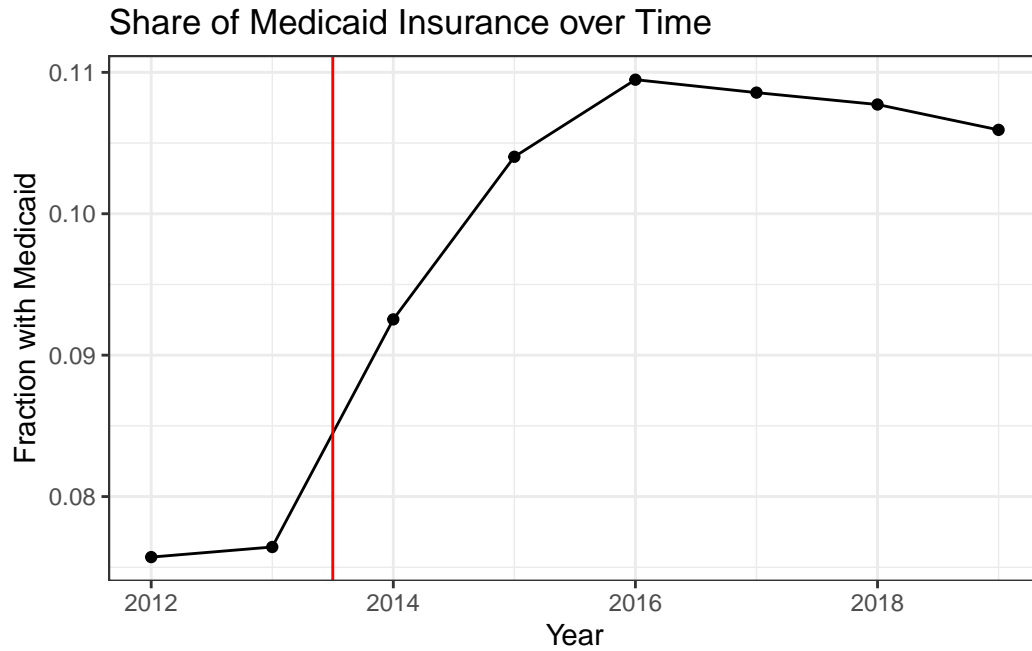


**Question 2:**

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?

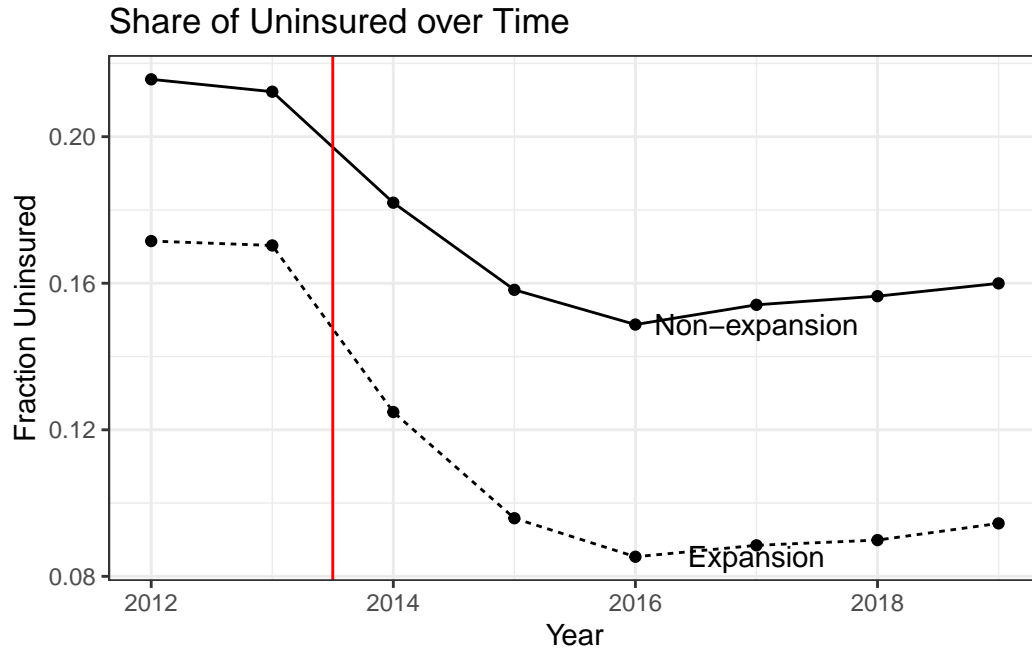
### Question 3:

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?



#### Question 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.



## Estimating ATEs

### Question 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.

Table 1: DD Table for Medicaid Expansion

Group	Pre	Post
Non-expansion	0.22	0.16
Expansion	0.17	0.10

**Question 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.

	(1)
(Intercept)	0.214
	(0.007)
Post 2014	-0.054
	(0.008)
Expand	-0.043
	(0.009)
Post 2014:Expand	-0.020
	(0.010)
Num.Obs.	344
R2	0.508
RMSE	0.04

### Question 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.

	Standard DD	TWFE
(Intercept)	0.214	
	(0.007)	
Post 2014	-0.054	
	(0.008)	
Expand	-0.043	
	(0.009)	
Post 2014:Expand	-0.020	
	(0.010)	
post::TRUE:expand_ever		-0.020
		(0.007)
Num.Obs.	344	344
R2	0.508	0.952
R2 Within		0.106
RMSE	0.04	0.01
Std.Errors		by: State



**Question 8:**

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

	Standard DD	TWFE	Time-varying Treatment
(Intercept)	0.214		
	(0.007)		
Post 2014	-0.054		
	(0.008)		
Expand	-0.043		
	(0.009)		
Post 2014:Expand	-0.020		
	(0.010)		
post::TRUE:expand_ever		-0.020	
		(0.007)	
Post x Expand			-0.023
			(0.005)
Num.Obs.	344	344	400
R2	0.508	0.952	0.950
R2 Within		0.106	0.155
RMSE	0.04	0.01	0.01
Std.Errors		by: State	by: State

**Question 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.

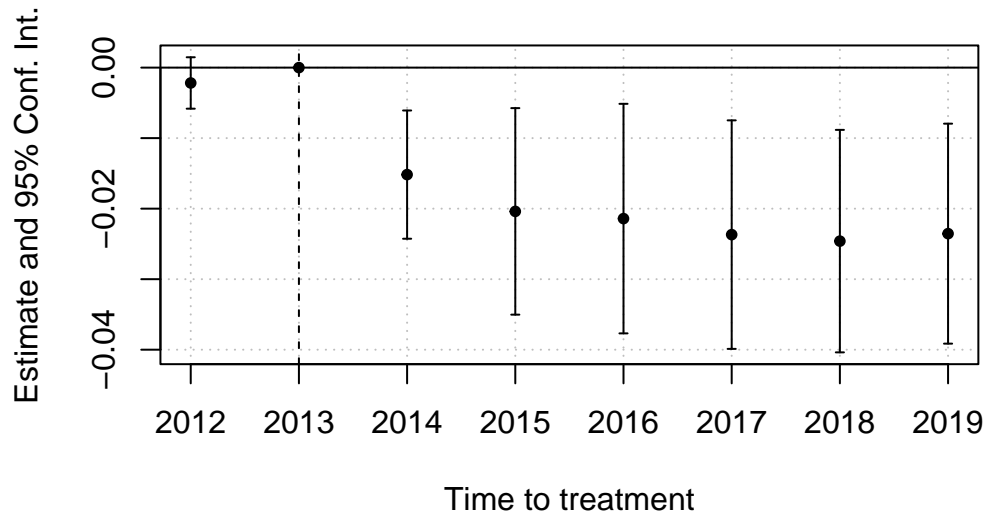


Figure 1: Event Study with Common Treatment Time

**Question 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.

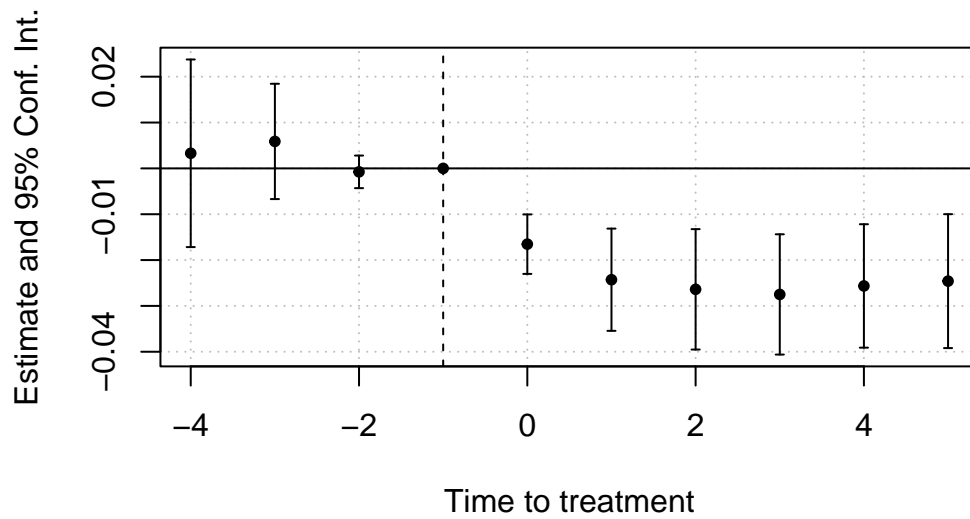


Figure 2: Event Study with Staggered Treatment