

Homework 5

ECON 470, Spring 2025

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Here is a link to my repository: {https://github.com/mollyjc02/Homework_5.git}

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

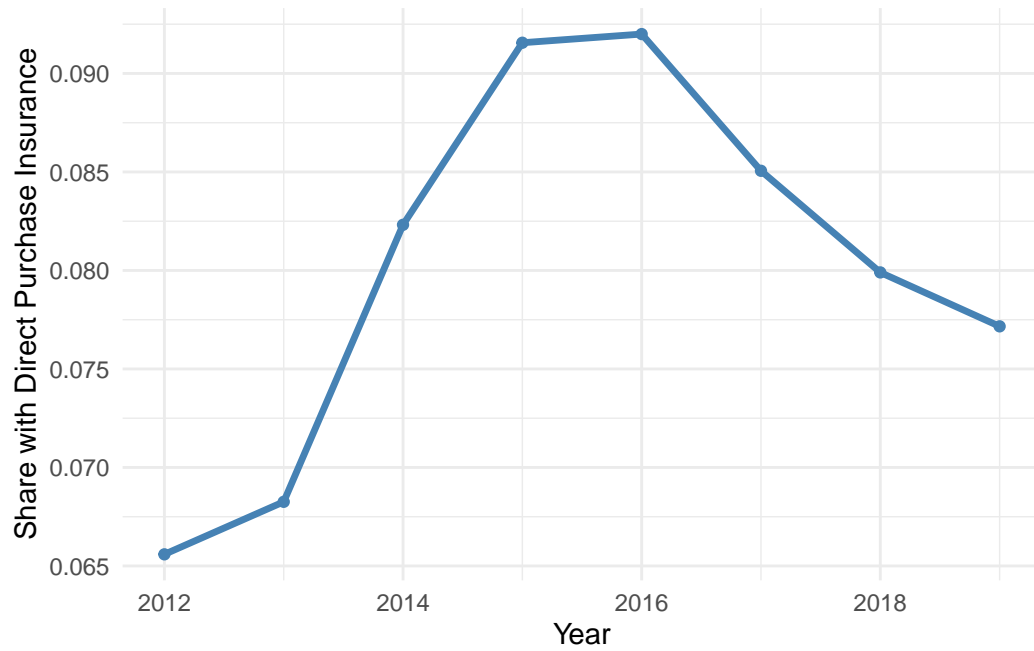


Figure 1: Share of Individuals with Direct Purchase

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 decline in direct purchase health insurance in later years (2017-18) is likely largely attributable to federal efforts to weaken the Affordable Care Act (ACA). Two major policy actions that could have contributed to this trend include: 1) the federal government reducing funding for marketing efforts that helped consumers sign up for coverage, and 2) the administration announced it would no longer enforce penalties for failing to comply with the individual mandate. These changes reduced both the visibility and the incentives for individuals to maintain direct purchase insurance, leading to lower enrollment rates.

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

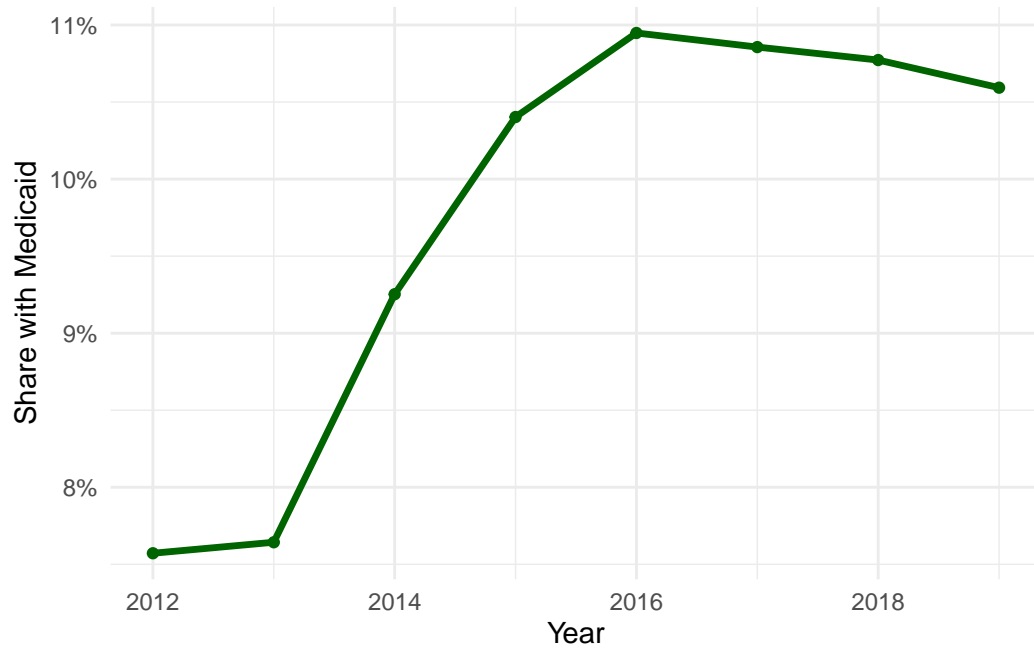


Figure 2: Share of Individuals with Medicaid

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.

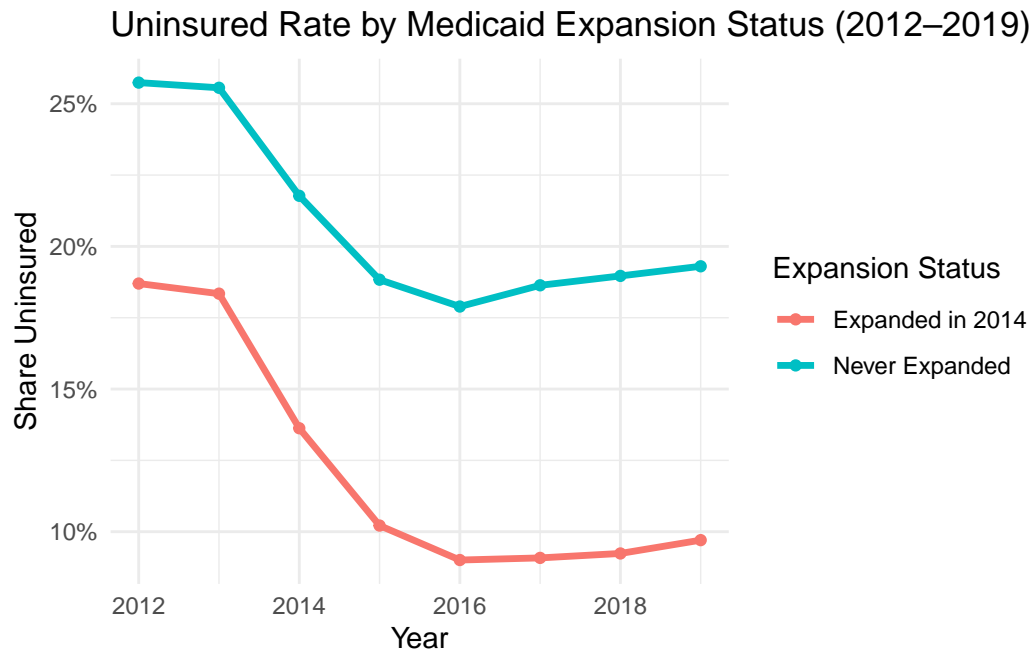


Figure 3: Average Uninsured by Medicaid Expansion

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	2012	2015	diff
Expansion	0.187	0.102	-0.085
Non-Expansion	0.257	0.188	-0.069

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 2: DD Estimates for Medicaid Expansion

	(1)
(Intercept)	0.223 (0.009)
post	-0.057 (0.011)
expand_ever	-0.052 (0.011)
Post x Expand	-0.018 (0.013)
Num.Obs.	288
R2	0.510
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.

Table 3: DD Estimates for Medicaid Expansion with TWFE

	Standard DD	TWFE
(Intercept)	0.223 (0.009)	
post	−0.057 (0.011)	
expand_ever	−0.052 (0.011)	
Post x Expand	−0.018 (0.013)	−0.018 (0.008)
Num.Obs.	288	288
R2	0.510	0.950
R2 Within		0.063
RMSE	0.04	0.01
Std.Errors		by: State

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)	0.223 (0.009)		
post	−0.057 (0.011)		
expand_ever	−0.052 (0.011)		
Post x Expand	−0.018 (0.013)	−0.018 (0.008)	−0.023 (0.005)
Num.Obs.	288	288	400
R2	0.510	0.950	0.950
R2 Within		0.063	0.155
RMSE	0.04	0.01	0.01
Std.Errors		by: State	by: State

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.

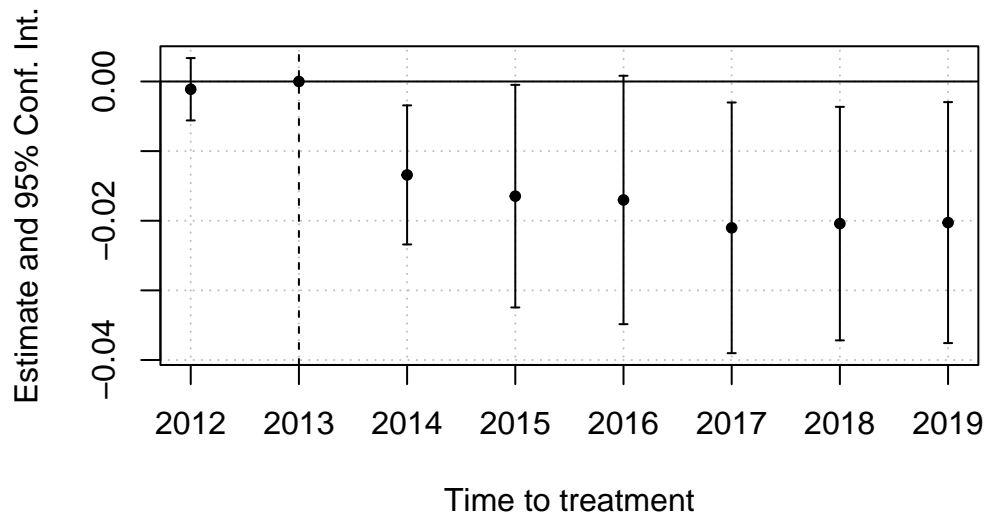


Figure 4: Event Study with Common Treatment Time

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.

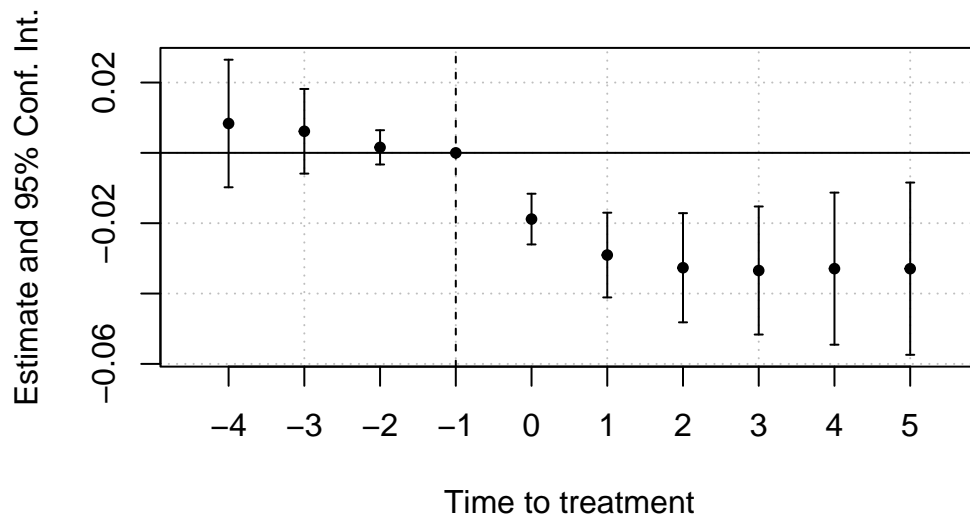


Figure 5: Event Study with Staggered Treatment