Homework 5

Research in Health Economics, Spring 2024
https://github.com/riadharnidharka/Econ470HW5

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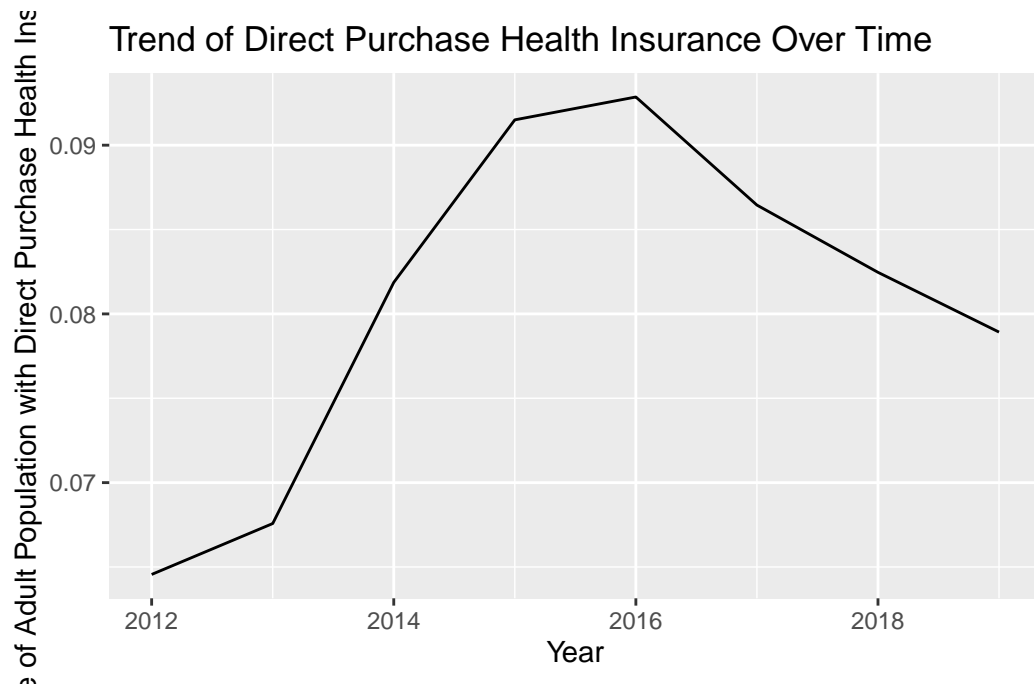

Figure 1: Population with Direct Purchase Health Insurance

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?

Direct purchase of health insurance has decreased starting in 2016 steadily. Some policies that may have contributed to this decrease include the expansion of Medicaid, which would allow more people to opt for Medicaid coverage rather than direct purchase of insurance. The Affordable Care Act reforms also may have contributed because they can make various plans look more or less attractive. Specifically, attempts to restrict the ACA by the Trump Administration such as not enforcing failure to pay the individual mandate have contributed to this decrease.

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

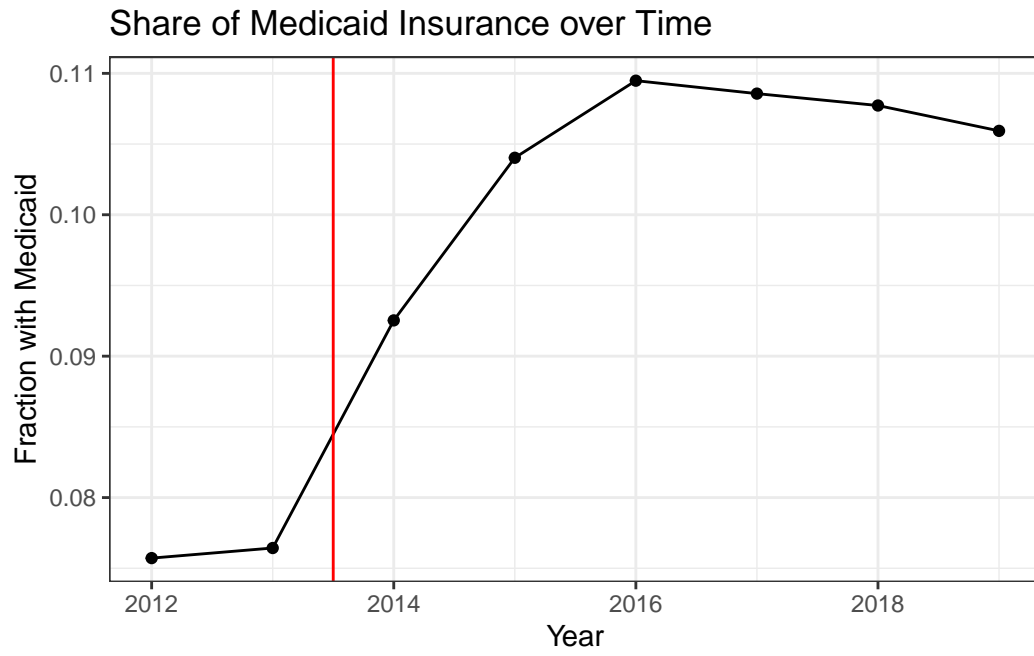## Share of Medicaid Insurance over Time

Figure 2: Population 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.
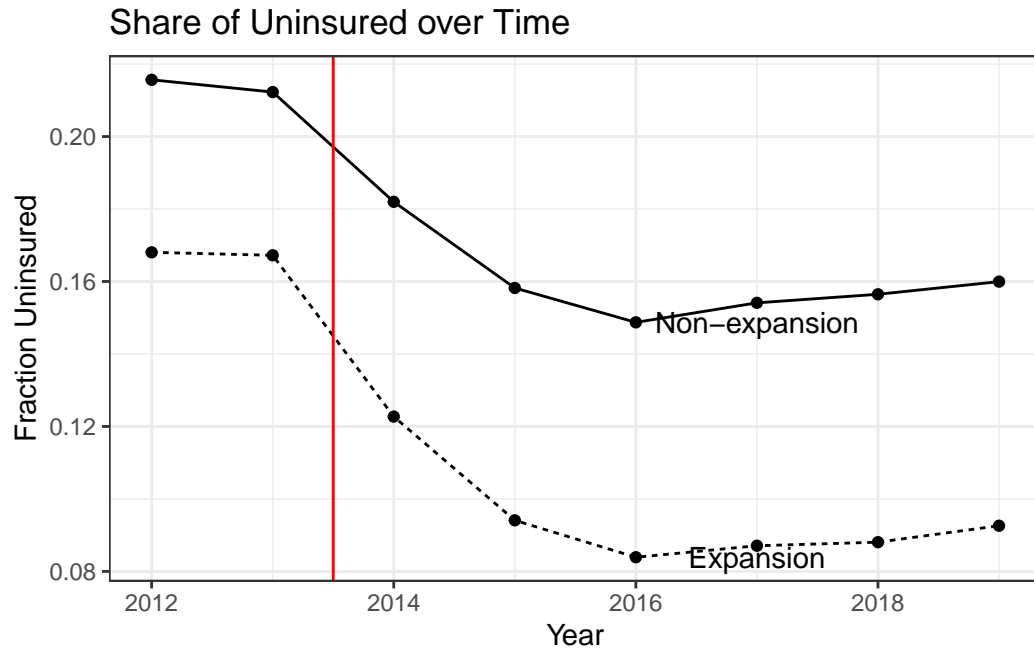

Figure 3: Uninsured Population

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

[!h]

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: Question 6

	DD (2014)
postTRUE	-0.054
	(0.008)
expand_everTRUE	-0.046
	(0.009)
postTRUE $\times$ expand_everTRUE	-0.019
	(0.010)

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
postTRUE	-0.054	
	(-0.003)	
expand_everTRUE	-0.046	
	(-0.016)	
treat	-0.019	-0.019
	(0.007)	(0.007)

Note: My answers for 7 and 8 are slightly different than the answer key because of a different number of observations.

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
postTRUE	-0.054	
	(0.003)	
expand_everTRUE	-0.040	
	(0.015)	
treat	-0.017	-0.017
	(0.006)	(0.006)

My results are similar for the coefficient estimates for postTRUE and expand_everTRUE amongst both tables, but there are slight differences in the standard errors. The coefficient estimate for treat is the same for both tables. The slight differences may be due to the inclusion of all states in the second table.

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.
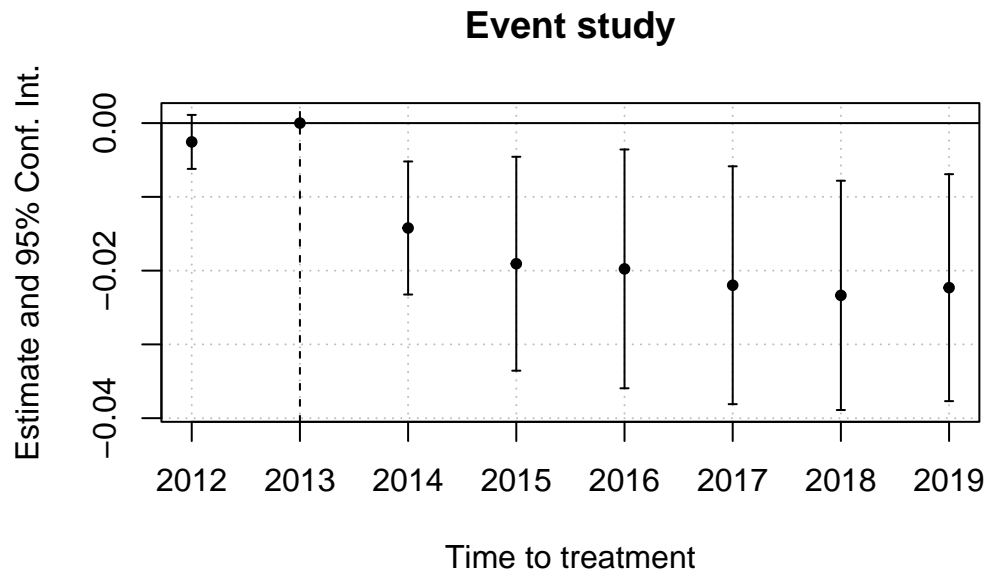
Event study

Figure 4: Event Study

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.
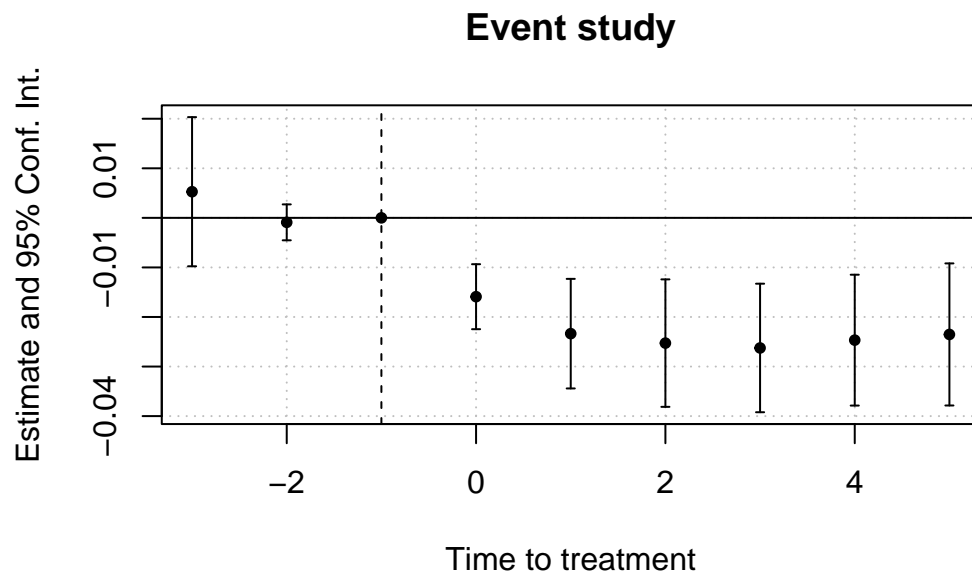
Event study

Time to treatment

Figure 5: Event Study 2