

HW5

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Github Repository: <https://github.com/miraclephraim/hw5.git>

Question 1

Plot the share of insured individuals with direct purchase health insurance over time.

Figure 1 displays the share of the adult population directly purchasing their health insurance over time. Rates were greatest from 2013-2015, after which rates decreased. The decreasing trend remained to the end of the study period.

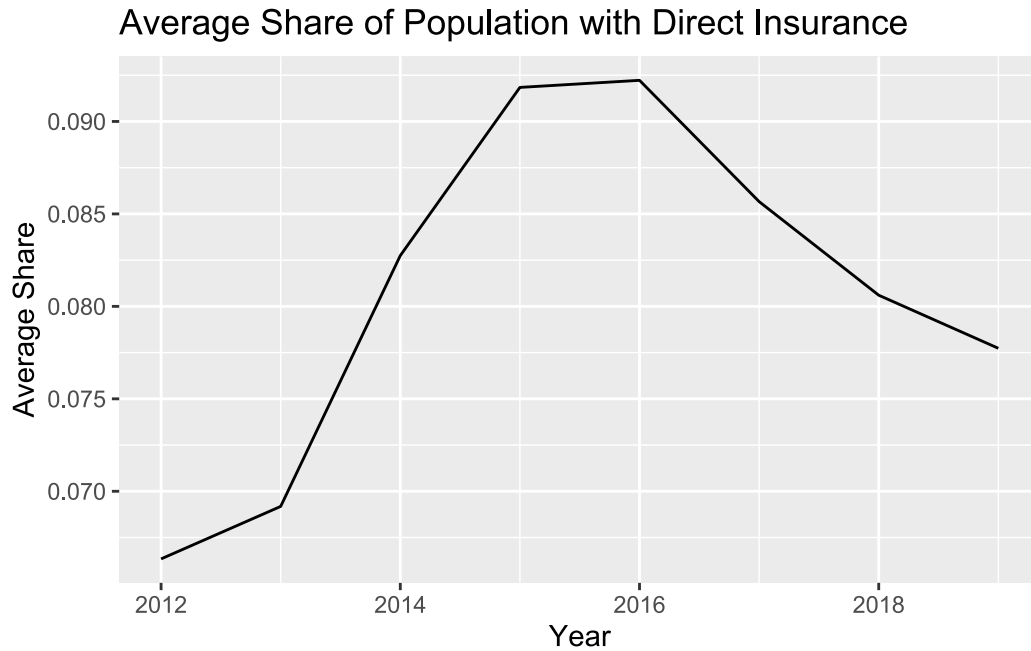


Figure 1: Average Share of Population with Direct Purchase Health Insurance

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?

Following 2016, there is a continuous decrease in the share of the population directly purchasing health insurance, likely due to the ACA. After 2016, the elimination of the penalty on those without health insurance, which likely reduced the incentive to purchase health insurance. In these latter years, the Trump administration ended federal cost-sharing reduction payments, which also de-incentivized direct purchase as premiums increase for those without subsidies (1, 2).

Question 3

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

Figure 2 displays the share of the adult population with Medicaid over time. Rates were greatest from 2013-2016, largely due to the ACA and states' expansion. The share began decreasing post-2016, but at a relatively slow rate.

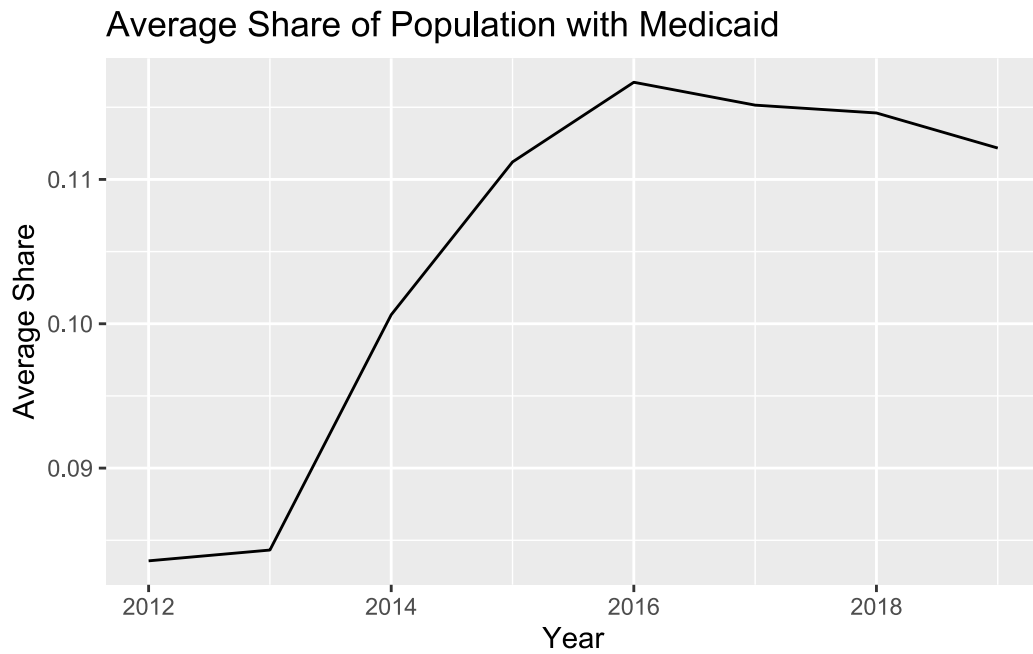


Figure 2: Average Share of Population with Medicaid

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.

Figure 3 displays the share of the adult population, stratified by expansion status as of 2014. While trends are relatively similar in proportions of uninsured, uninsurance rates were consistently greater in non-expansion status as compared to expansion states. This trend remains even before ACA implementation, suggesting other differentiating factors between these groups contributing to observed rates.

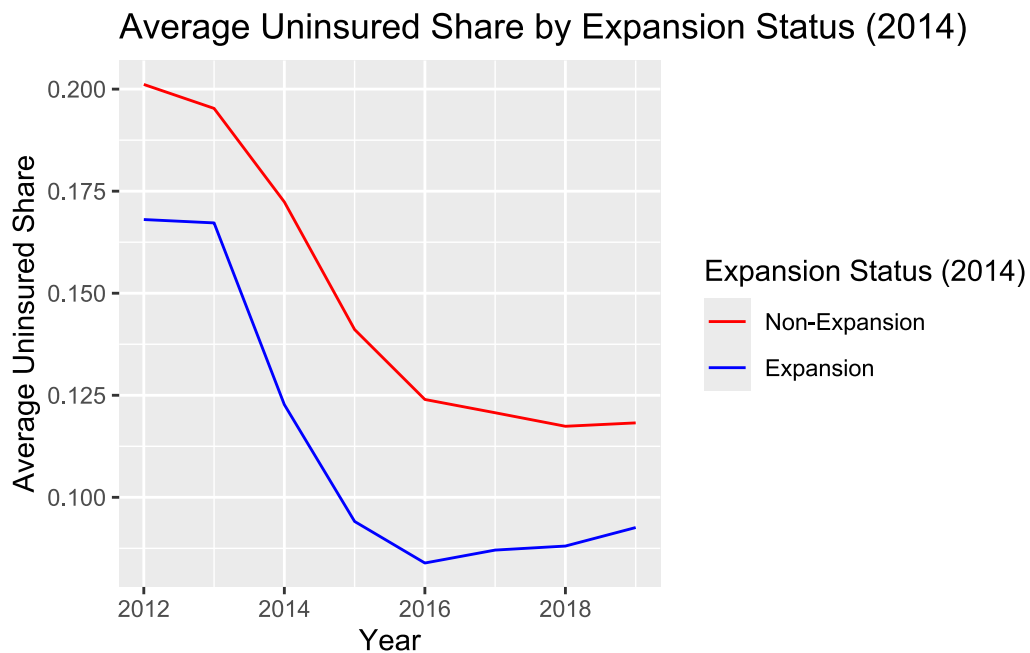


Figure 3: Average Share of Population with No Health Insurance, by State Expansion Status

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.

Group	Pre-Period (2012)	Post-Period (2015)
Expansion States	17.4%	10.3%
Non-Expansion States	21.5%	15.8%

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.

Table 1: DD Estimates for Medicaid Expansion

	DD (2014)
Post 2014	-0.054*** (0.003)
Expand	-0.046** (0.016)
Post 2014:Expand	-0.019** (0.007)

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

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.

Table 2: DD Estimates for Medicaid Expansion with TWFE

	DD	TWFE
(Intercept)	0.214*** (0.011)	
Post 2014	-0.054*** (0.003)	
Expand	-0.046** (0.016)	
Post 2014:Expand	-0.019** (0.007)	
Post x Expand		-0.019* (0.007)
+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001		

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?

Results do vary for the interaction term, depending on when states expanded, due to the differences in reference point.

Table 3: DD Estimates for Medicaid Expansion with Staggered Treatment

	DD	TWFE (2014)	TWFE (all)
Post 2014	-0.054*** (0.003)		
Expand	-0.046** (0.016)		
Post 2014:Expand	-0.019** (0.007)		
Post x Expand		-0.019* (0.007)	-0.024*** (0.006)

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

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.

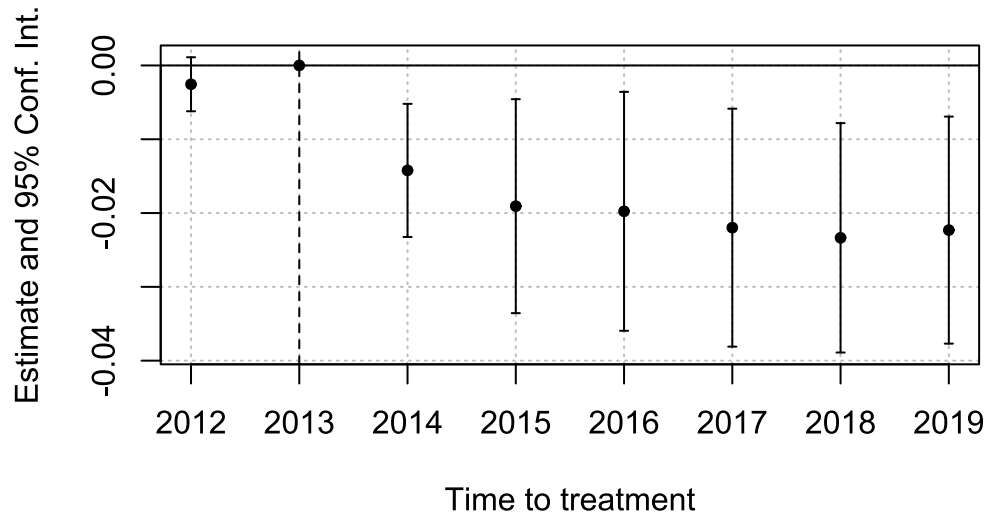


Figure 4: Event Study with Common Treatment Time

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.

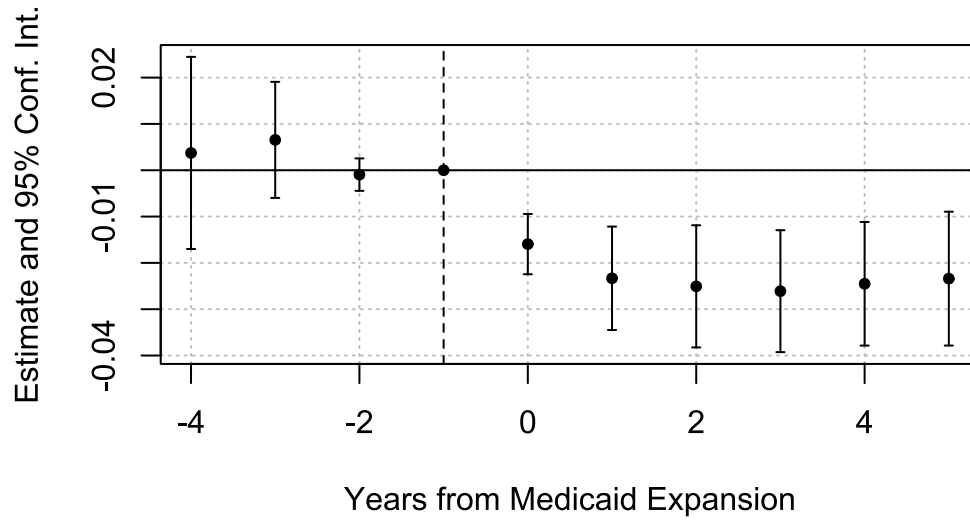


Figure 5: Event Study with Staggered Treatment