Homework 5

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Here is the link to my GitHub Repository:

Here are my answers for Homework 5. I do the coding in a separate `R` script, but here is the cleaned-up version. I run the analysis separately, save the workspace with only the summary stats, figures, and tables that I need, and then load the workspace in the final qmd. My analysis file with answers and code to all the questions is available in the analysis folder.

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

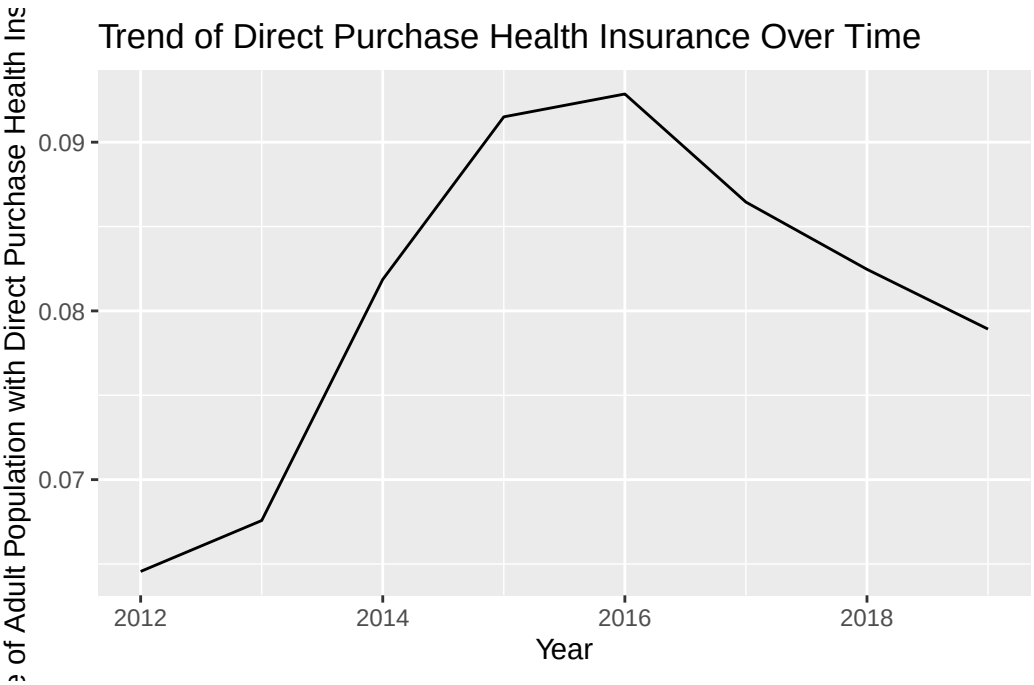

Figure 1: Question 1 Graph

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?

After 2016, it seems that direct purchase health insurance declined.

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

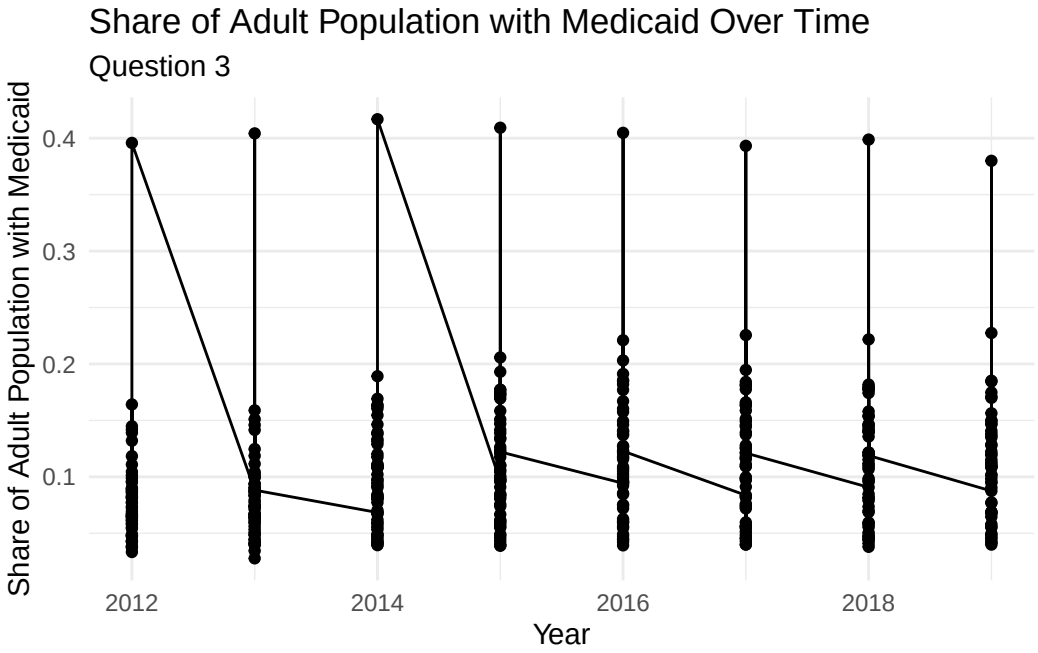

Figure 2: Question 3 Graph

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.

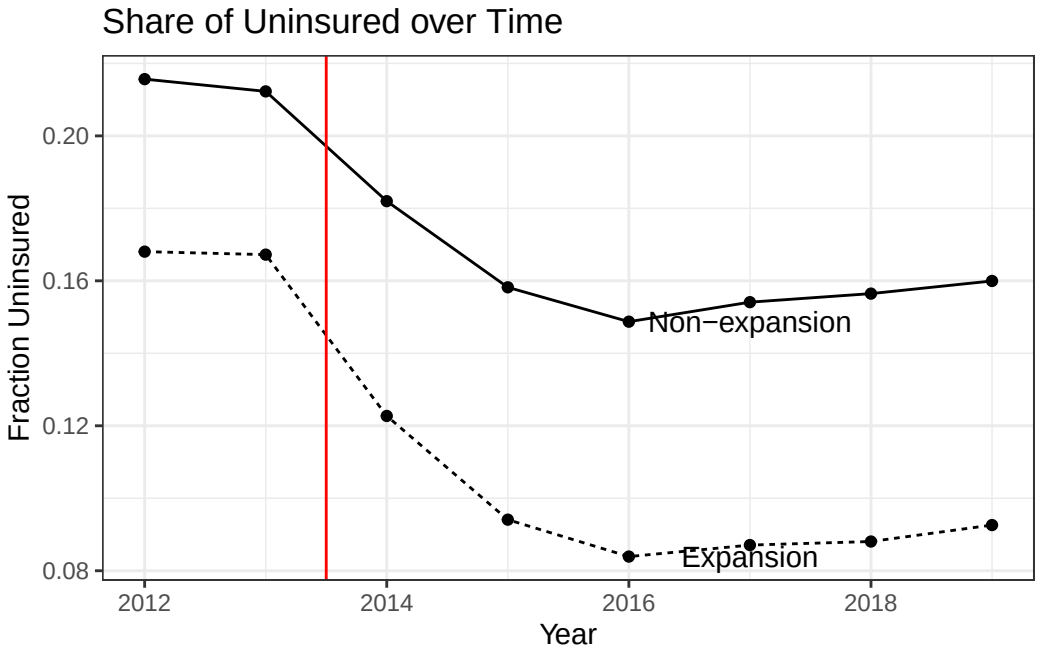

Figure 3: Question 4 Graph

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: Uninsured in 2012 and 2015

expand_ever	avg_diff_uninsured
FALSE	-0.0574455
TRUE	-0.0710971
0	-0.0181021

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.

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.

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

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.

```
$prms
         estimate      ci_low      ci_high estimate_names
2012 -0.002549676 -0.00620864  0.001109289           2012
2013  0.000000000  0.00000000  0.000000000           2013
2014 -0.014222032 -0.02323993 -0.005204130           2014
2015 -0.019066532 -0.03356407 -0.004568998           2015
2016 -0.019764584 -0.03595107 -0.003578099           2016
2017 -0.021979736 -0.03809985 -0.005859617           2017
2018 -0.023354738 -0.03889677 -0.007812704           2018
2019 -0.022310721 -0.03769216 -0.006929284           2019
         estimate_names_raw is_ref    x id            y
2012 year::2012:expand_ever  FALSE 2012  1 -0.002549676
2013 year::2013:expand_ever   TRUE 2013  1  0.000000000
2014 year::2014:expand_ever  FALSE 2014  1 -0.014222032
2015 year::2015:expand_ever  FALSE 2015  1 -0.019066532
2016 year::2016:expand_ever  FALSE 2016  1 -0.019764584
2017 year::2017:expand_ever  FALSE 2017  1 -0.021979736
2018 year::2018:expand_ever  FALSE 2018  1 -0.023354738
2019 year::2019:expand_ever  FALSE 2019  1 -0.022310721

$is_iplot
[1] TRUE

$at
[1] 2012 2013 2014 2015 2016 2017 2018 2019

$labels
[1] 2012 2013 2014 2015 2016 2017 2018 2019
```

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.

```
$prms
        estimate       ci_low      ci_high estimate_names
-3  0.0052773986 -0.009772221  0.020327018             -3
-2 -0.0009035645 -0.004528807  0.002721678             -2
-1  0.0000000000  0.000000000  0.000000000             -1
0  -0.0159056883 -0.022463288 -0.009348089              0
1  -0.0233619575 -0.034416674 -0.012307241              1
2  -0.0252718493 -0.038131161 -0.012412537              2
3  -0.0262515983 -0.039220641 -0.013282555              3
4  -0.0246711317 -0.037870990 -0.011471273              4
5  -0.0235248081 -0.037858803 -0.009190813              5
              estimate_names_raw is_ref  x id             y
-3 time_to_treat::-3:expand_ever  FALSE -3  1  0.0052773986
-2 time_to_treat::-2:expand_ever  FALSE -2  1 -0.0009035645
-1 time_to_treat::-1:expand_ever   TRUE -1  1  0.0000000000
0   time_to_treat::0:expand_ever  FALSE  0  1 -0.0159056883
1   time_to_treat::1:expand_ever  FALSE  1  1 -0.0233619575
2   time_to_treat::2:expand_ever  FALSE  2  1 -0.0252718493
3   time_to_treat::3:expand_ever  FALSE  3  1 -0.0262515983
4   time_to_treat::4:expand_ever  FALSE  4  1 -0.0246711317
5   time_to_treat::5:expand_ever  FALSE  5  1 -0.0235248081

$is_iplot
[1] TRUE

$at
[1] -3 -2 -1  0  1  2  3  4  5

$labels
[1] -3 -2 -1  0  1  2  3  4  5
```