

محسن حسینی، ۴۰۳۲۰۹۹۰۲

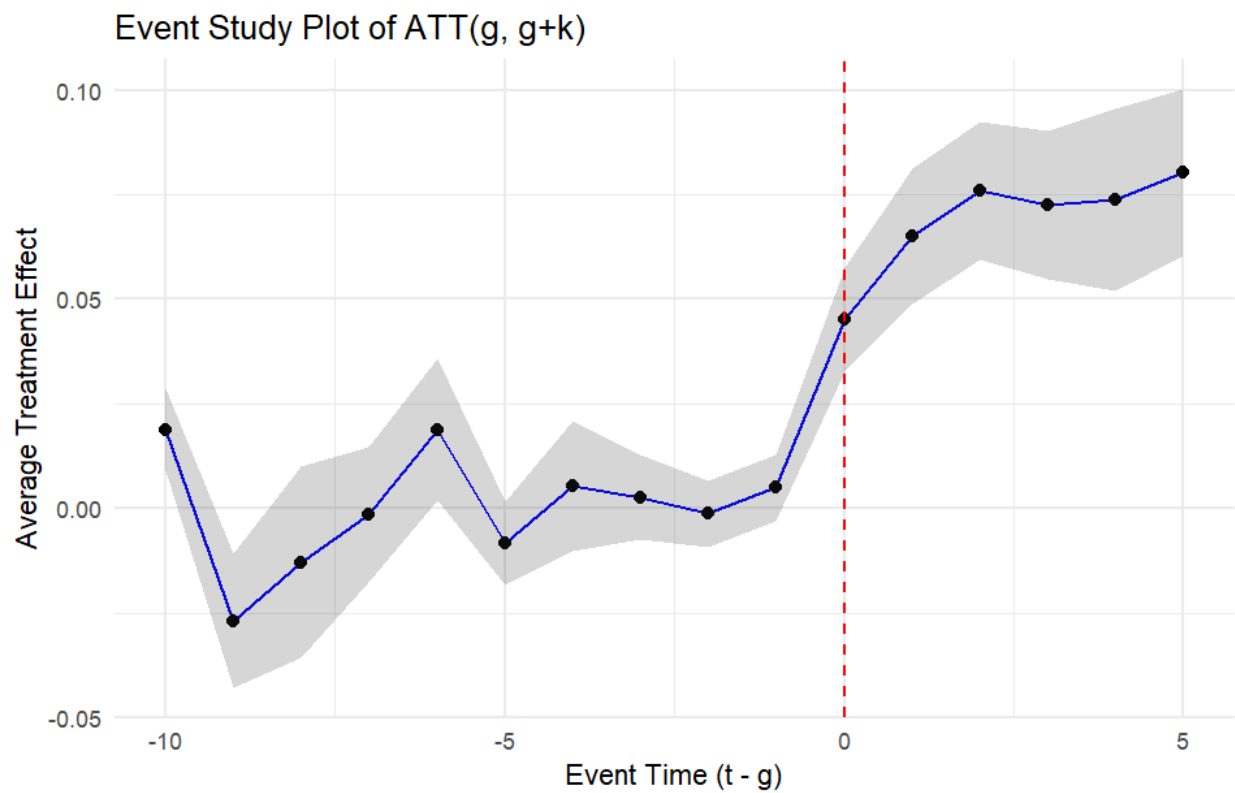
تمرین سری ۶

سوال یک

بخش سه:

	D	year		mean_dins
1	0	2013	[2013]	0.628
2	0	2014	[2014]	0.673
3	1	2013	[2013]	0.662
4	1	2014	[2014]	0.754

بخش چهار



بخش پنج

```
OLS estimation, Dep. Var.: dins
Observations: 552
Fixed-effects: stfips: 46, year: 12
Standard-errors: Clustered (stfips)
    Estimate Std. Error t value   Pr(>|t|)
D 0.070321   0.007401 9.50152 2.5169e-12 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.021082      Adj. R2: 0.93835
                within R2: 0.426746
```

```
[1] "From Callaway:"
> mean(att$att)
[1] 0.0735354
> mean(att$se)
[1] 0.009346191
>
[1] "TWFE:"
> ols_result[["coefficients"]][["D"]]
[1] 0.07032067
> ols_result[["se"]]
[1] 0.007400994
```

بخش شش

	type	weight	avg_est
1	Earlier vs Later Treated	0.14911	0.06983
2	Later vs Earlier Treated	0.05827	0.04486
3	Treated vs Untreated	0.79262	0.07228

```
[1] "From Callaway:"
> mean(att_treat$att)
[1] 0.07926593
> mean(att_treat$se)
[1] 0.01318506
>
[1] "TWFE:"
> ols_result_treated[["coefficients"]][["D"]]
[1] 0.06281731
> ols_result_treated[["se"]][["D"]]
[1] 0.00765281
```

	type	weight	avg_est
1	Earlier vs Later Treated	0.71902	0.06983
2	Later vs Earlier Treated	0.28098	0.04486

```
[1] "From Callaway:"
> mean(att2$att)
[1] 0.1035354
> mean(att2$se)
[1] 0.009416247

[1] "TWFE:"
> ols_result2[["coefficients"]][["D"]]
[1] 0.08927005
> ols_result2[["se"]][["D"]]
[1] 0.007804685
```

	type	weight	avg_est
1	Earlier vs Later Treated	0.14911	0.08196
2	Later vs Earlier Treated	0.05827	0.02751
3	Treated vs Untreated	0.79262	0.09518

سوال دو

بخش یک

```
OLS estimation, Dep. Var.: dins
Observations: 216
Fixed-effects: stfips: 27, year: 8
Standard-errors: Clustered (stfips)

      Estimate Std. Error   t value   Pr(>|t|)
D2008  0.008508   0.021250   0.400359 6.9216e-01
D2009 -0.004962   0.024445  -0.202994 8.4072e-01
D2010 -0.005251   0.017410  -0.301623 7.6534e-01
D2011  0.014523   0.005858   2.479250 1.9972e-02 *
D2012  0.021543   0.019891   1.083089 2.8871e-01
D2014  0.059588   0.021119   2.821586 9.0345e-03 **
D2015  0.070783   0.015341   4.614062 9.3101e-05 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.01859    Adj. R2: 0.937881
                within R2: 0.245713
```

بخش سه

