PS2 - 2nd Half

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Questão 01

Neste problema, vamos quantificar o impacto dinâmico da COVID-19 em mulheres casadas nas taxas de trabalho trimestrais. Usando os dados contidos no csv.

As variáveis que encontramos são:

- *newid* que captura um identificador da mulher na pesquisa;
- *time* que captura o trimestre da pesquisa;
- *eda* que captura a idade
- *dent2-dent32* detonota um estado-especifíco dummy
- *dchild2_12* indica a presença de uma criança na família com idade menor de 12 anos
- *edu* captura a educação da mulher
- *inac* um indicador de inatividade
- *unemp* é um indicador de desemprego
- *formal_new* um indicador de emprego formal
- *informal_new* um indicador de emprego informal

$$Y_{ist} = \sum_{j \in [-3,-2] \cup [0,7]} \alpha_j D_{it}^j + \beta X_{it} + \eta_s + \varepsilon_{ist}$$

Letra a)

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Running event-study for: unemp


OLS estimation, Dep. Var.: unemp
Observations: 444,494
Fixed-effects: state_id: 31
Standard-errors: Clustered (state_id)
            Estimate Std. Error    t value   Pr(>|t|)
eventf::-3  0.000425 0.00057860   0.734991 4.6805e-01
eventf::-2  0.000946 0.00060273   1.569122 1.2711e-01
eventf::0  -0.000074 0.00042851  -0.173341 8.6355e-01
eventf::1   0.003029 0.00063982   4.734328 4.9283e-05 ***
eventf::2   0.002068 0.00064630   3.199127 3.2459e-03 **
eventf::3   0.000757 0.00088236   0.857684 3.9787e-01
eventf::4   0.002244 0.00065460   3.427389 1.7897e-03 **
eventf::5   0.001542 0.00057507   2.682099 1.1781e-02 *
eventf::6   0.000238 0.00068099   0.349847 7.2890e-01
eventf::7  -0.001168 0.00067858  -1.721520 9.5455e-02 .
eda        -0.000393 0.00002426 -16.210387  < 2.2e-16 ***
edu         0.000052 0.00015177   0.342145 7.3463e-01
edusq       0.000019 0.00000960   2.026030 5.1735e-02 .
dchild2_12 -0.000599 0.00034681  -1.725754 9.4680e-02 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.093682     Adj. R2: 0.003938
                 Within R2: 0.002984
Running event-study for: inact


OLS estimation, Dep. Var.: inact
Observations: 444,494
Fixed-effects: state_id: 31
Standard-errors: Clustered (state_id)
            Estimate Std. Error   t value   Pr(>|t|)
eventf::-3  0.005409   0.003151   1.71638 9.6402e-02 .
eventf::-2  0.004458   0.002878   1.54908 1.3185e-01
eventf::0   0.004472   0.002349   1.90378 6.6570e-02 .
eventf::1   0.066694   0.005567  11.97948 5.8240e-13 ***
eventf::2   0.042843   0.004316   9.92765 5.4168e-11 ***
eventf::3   0.050056   0.004225  11.84741 7.6777e-13 ***
eventf::4   0.027908   0.004581   6.09206 1.0782e-06 ***
eventf::5   0.035205   0.004552   7.73461 1.2513e-08 ***
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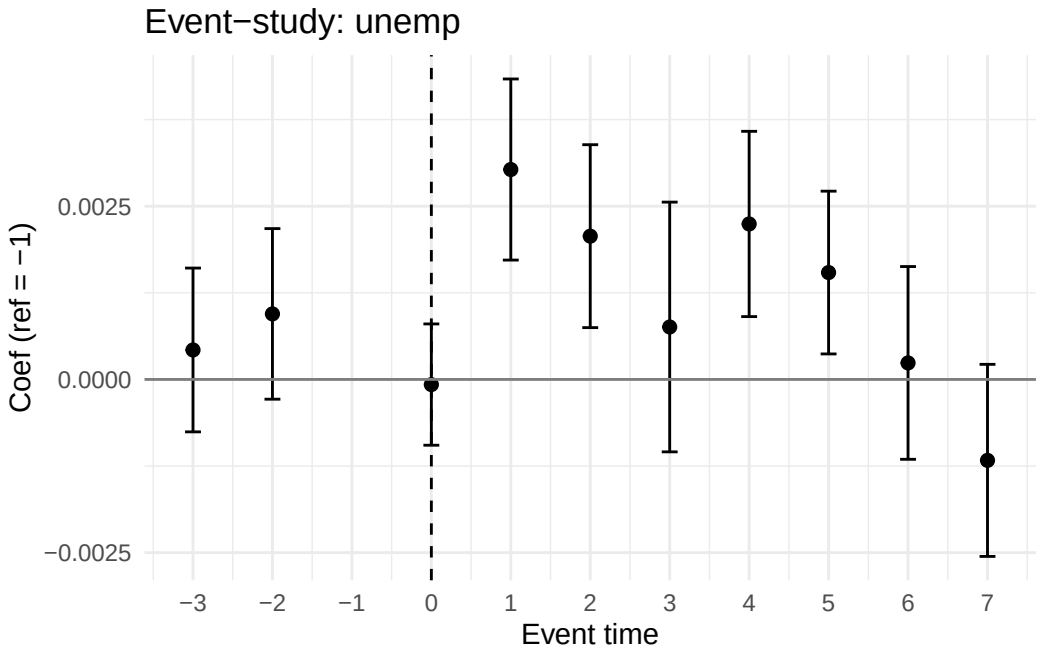
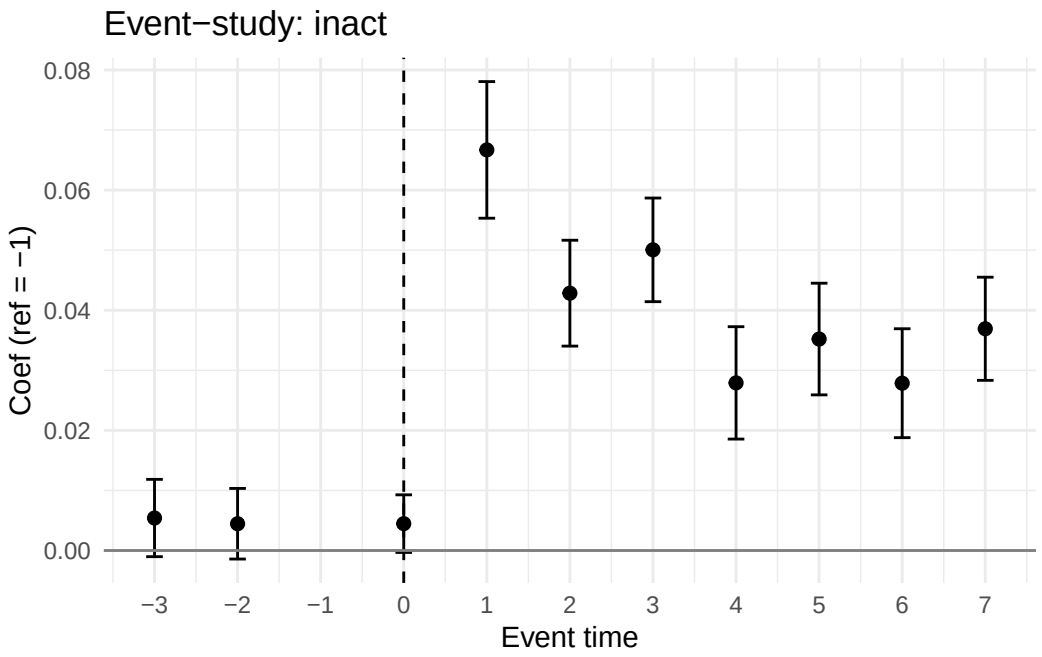
eventf::6   0.027854   0.004440   6.27359 6.5064e-07 ***
eventf::7   0.036915   0.004204   8.78155 8.6100e-10 ***
eda         0.004809   0.000312  15.42035 8.3914e-16 ***
edu         0.014206   0.001617   8.78513 8.5336e-10 ***
edusq      -0.001687   0.000065 -25.96915  < 2.2e-16 ***
dchild2_12  0.035912   0.003597   9.98313 4.7586e-11 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.482386     Adj. R2: 0.06147
                 Within R2: 0.053045
Running event-study for: formal_new

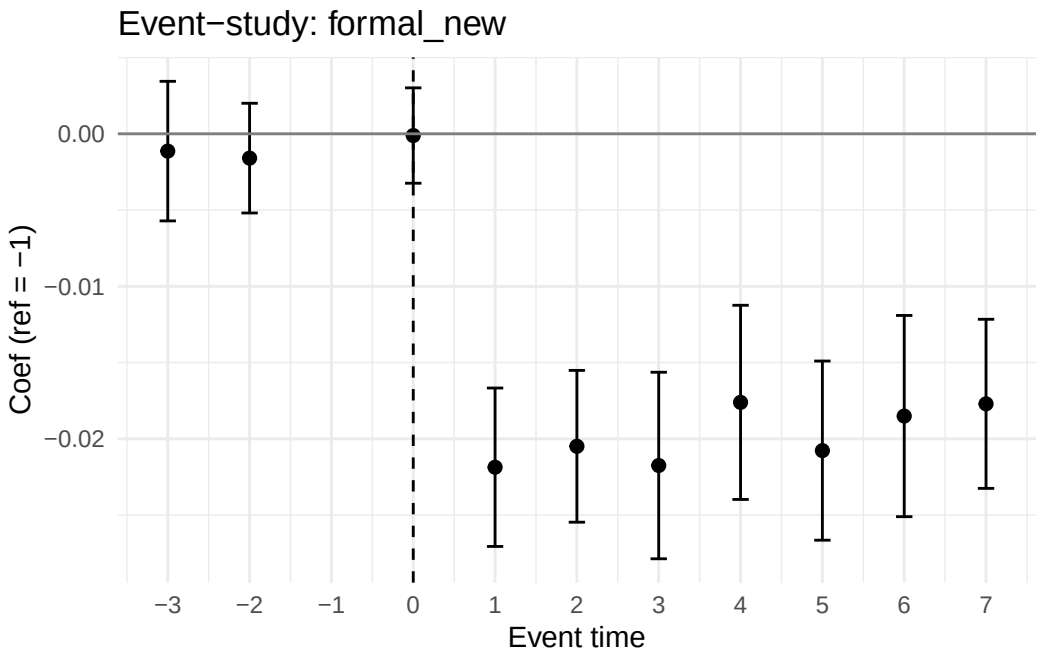

OLS estimation, Dep. Var.: formal_new
Observations: 444,494
Fixed-effects: state_id: 31
Standard-errors: Clustered (state_id)
            Estimate Std. Error    t value   Pr(>|t|)
eventf::-3 -0.001135   0.002240  -0.506580 6.1615e-01
eventf::-2 -0.001595   0.001761  -0.905575 3.7238e-01
eventf::0  -0.000114   0.001531  -0.074355 9.4122e-01
eventf::1  -0.021861   0.002543  -8.595447 1.3713e-09 ***
eventf::2  -0.020488   0.002437  -8.408536 2.1985e-09 ***
eventf::3  -0.021747   0.002994  -7.263597 4.3614e-08 ***
eventf::4  -0.017607   0.003116  -5.649889 3.7229e-06 ***
eventf::5  -0.020771   0.002876  -7.222315 4.8717e-08 ***
eventf::6  -0.018506   0.003229  -5.730565 2.9673e-06 ***
eventf::7  -0.017703   0.002714  -6.522159 3.2720e-07 ***
eda        -0.001852   0.000331  -5.589119 4.4175e-06 ***
edu        -0.018786   0.001467 -12.804700 1.0837e-13 ***
edusq       0.002548   0.000100  25.569640  < 2.2e-16 ***
dchild2_12 -0.024759   0.002531  -9.780727 7.6482e-11 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.375471     Adj. R2: 0.164847
                 Within R2: 0.14765
Running event-study for: informal_new

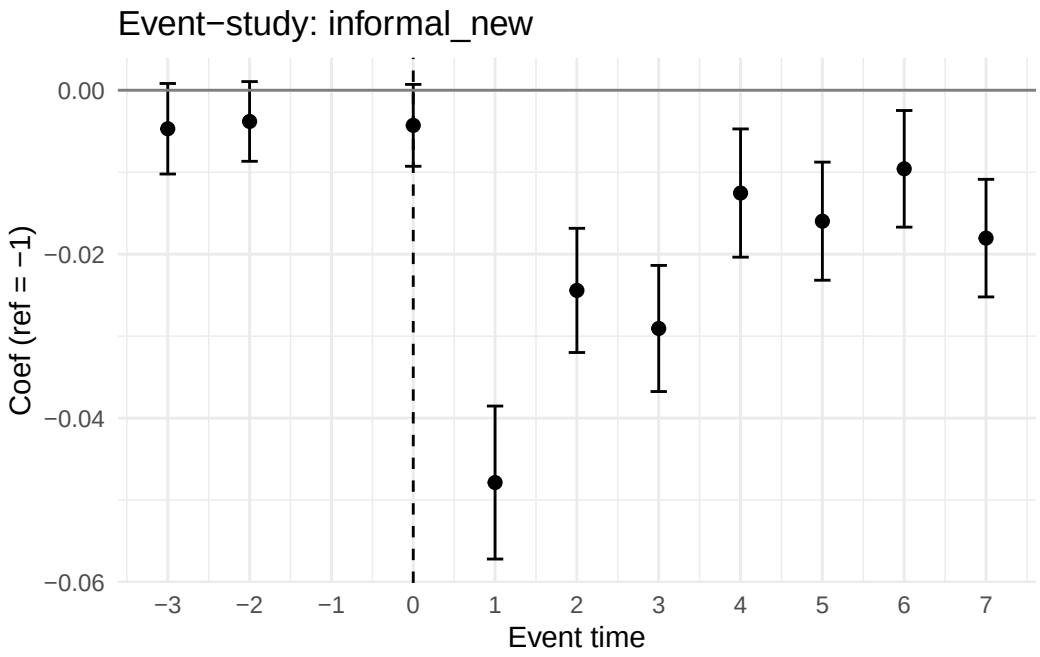

OLS estimation, Dep. Var.: informal_new
Observations: 444,494
Fixed-effects: state_id: 31
Standard-errors: Clustered (state_id)
            Estimate Std. Error   t value   Pr(>|t|)
```

```
eventf::-3 -0.004699   0.002704  -1.73768 9.2524e-02 .
eventf::-2 -0.003809   0.002381  -1.60001 1.2008e-01
eventf::0  -0.004284   0.002445  -1.75231 8.9938e-02 .
eventf::1  -0.047862   0.004570 -10.47351 1.5408e-11 ***
eventf::2  -0.024423   0.003709  -6.58403 2.7598e-07 ***
eventf::3  -0.029065   0.003768  -7.71398 1.3209e-08 ***
eventf::4  -0.012544   0.003831  -3.27439 2.6715e-03 **
eventf::5  -0.015977   0.003528  -4.52876 8.7820e-05 ***
eventf::6  -0.009586   0.003484  -2.75160 9.9611e-03 **
eventf::7  -0.018044   0.003512  -5.13767 1.5792e-05 ***
eda        -0.002564   0.000233 -10.98296 4.9320e-12 ***
edu         0.004529   0.001672   2.70836 1.1060e-02 *
edusq      -0.000880   0.000075 -11.72146 1.0012e-12 ***
dchild2_12 -0.010554   0.003010  -3.50597 1.4536e-03 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
RMSE: 0.413785     Adj. R2: 0.035701
                 Within R2: 0.0219
```




Event−study: inact
Coef (ref = −1)
0.08
0.06
0.04
0.02
0.00
−3
−2
−1
0
1
2
3
4
5
6
7
Event time


Event−study: formal_new
Coef (ref = −1)
0.00
−0.01
−0.02
−3
−2
−1
0
1
2
3
4
5
6
7
Event time


Event−study: informal_new
0.00
−0.02
−0.04
−0.06
Coef (ref = −1)
−3
−2
−1
0
1
2
3
4
5
6
7
Event time