Statistics/Data analysis

```
      name:  <unnamed>
       log:  /home/elven/Documents/College/metrics_project/synth/synth_output.smcl
  log type:  smcl
 opened on:  16 May 2022, 00:32:09

1 .
2 . allsynth dose1pct repvotes2020pct black fullcollege cases_per_capita whiteevangelica
  > l catholic poverty medfamilinc pop0to4pct pop5to9pct pop10to14pct pop15to19pct pop60
  > to64pct pop65to69pct pop70to74pct pop75to79pct pop80to84pct pop85abovepct, trunit(7)
  >  trperiod(40) bcorrect(merge) gapfigure(bcorrect, save(synthcontrolresults_dose1_gph
  > .svg, replace)) keep(synthcontrolresults_dose1, replace) pvalues

  Identifying donor pool...


  Bias-correcting the plain vanilla -synth- estimate for statecode 7

  Synthetic Control Method for Comparative Case Studies

  First Step: Data Setup


  Data Setup successful

                Treated Unit: CO
              Control Units: AL, AZ, DC, FL, GA, IA, ID, IN, KS, MS, MT, ND, NE, NH,
                             OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, WY

           Dependent Variable: dose1pct
  MSPE minimized for periods: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
                             22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
Results obtained for periods: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
                             22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
                             41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59
                             60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76

                 Predictors: repvotes2020pct black fullcollege cases_per_capita
                             whiteevangelical catholic poverty medfamilinc pop0to4pct
                             pop5to9pct pop10to14pct pop15to19pct pop60to64pct
                             pop65to69pct pop70to74pct pop75to79pct pop80to84pct
                             pop85abovepct

Unless period is specified
predictors are averaged over: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
                             22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

  Second Step: Run Optimization


  Optimization done

  Third Step: Obtain Results

  Loss: Root Mean Squared Prediction Error

  ------------------
    RMSPE | 2.067636
  ------------------

  Unit Weights:
```

Co_No	Unit_Weight
AL	**0**
AZ	**0**
DC	**.246**
FL	**0**
GA	**0**
IA	**0**
ID	**0**
IN	**0**
KS	**0**
MS	**0**
MT	**0**
ND	**0**
NE	**0**
NH	**.254**
OK	**0**
PA	**0**
RI	**0**
SC	**0**
SD	**0**
TN	**0**
TX	**.304**
VA	**0**
VT	**0**
WI	**0**
WY	**.196**

Predictor Balance:

	Treated	Synthetic
repvotes2020pct	**42.1467**	**42.35994**
black	**4.635333**	**16.18293**
fullcollege	**41.00235**	**38.40863**
cases_per_capita	**.0402105**	**.0358993**
whiteevangelical	**16.41762**	**13.26409**
catholic	**18.18784**	**20.01272**
poverty	**9.429272**	**11.37261**
medfamilinc	**93187.19**	**93582.95**
pop0to4pct	**5.752328**	**6.025008**
pop5to9pct	**6.012807**	**6.028221**
pop10to14pct	**6.308905**	**5.947039**
pop15to19pct	**6.353192**	**6.219125**
pop60to64pct	**6.057702**	**6.119456**
pop65to69pct	**5.157971**	**5.089638**
pop70to74pct	**3.932786**	**3.94159**
pop75to79pct	**2.469836**	**2.611832**
pop80to84pct	**1.541385**	**1.656124**
pop85abovepct	**1.565145**	**1.793243**

Estimating synthetic controls using in-space placebo treatments for treated unit state
> code == 7. This could take awhile...

1 of 25 (donor pool unit statecode == 2 for treated unit statecode == 7)
2 of 25 (donor pool unit statecode == 5 for treated unit statecode == 7)
3 of 25 (donor pool unit statecode == 9 for treated unit statecode == 7)
4 of 25 (donor pool unit statecode == 11 for treated unit statecode == 7)
5 of 25 (donor pool unit statecode == 13 for treated unit statecode == 7)
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7 of 25 (donor pool unit statecode == 17 for treated unit statecode == 7)
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13 of 25 (donor pool unit statecode == 35 for treated unit statecode == 7)

```
14 of 25 (donor pool unit statecode == 36 for treated unit statecode == 7)
15 of 25 (donor pool unit statecode == 42 for treated unit statecode == 7)
16 of 25 (donor pool unit statecode == 44 for treated unit statecode == 7)
17 of 25 (donor pool unit statecode == 47 for treated unit statecode == 7)
18 of 25 (donor pool unit statecode == 48 for treated unit statecode == 7)
19 of 25 (donor pool unit statecode == 49 for treated unit statecode == 7)
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21 of 25 (donor pool unit statecode == 51 for treated unit statecode == 7)
22 of 25 (donor pool unit statecode == 54 for treated unit statecode == 7)
23 of 25 (donor pool unit statecode == 56 for treated unit statecode == 7)
24 of 25 (donor pool unit statecode == 58 for treated unit statecode == 7)
25 of 25 (donor pool unit statecode == 60 for treated unit statecode == 7)

Saving results...
(1,040 missing values generated)
(1,040 missing values generated)

Combining data files
(1,925 observations deleted)
```

Treated unit (statecode == 7) results:

> k	statec~e	t	gap	gap_bc	rmspe	r~e_rank	rmspe_bc	r~c_ran
	p	p_bc	N	unique_W				
1926.	7	0	1.795999	1.775765	.	.	.	
> .	.	.	26	1				
1927.	7	1	1.667999	1.708312	.	.	.	
> .	.	.	26	1				
1928.	7	2	1.752999	1.686119	.	.	.	
> .	.	.	26	1				
1929.	7	3	1.878402	2.090436	.	.	.	
> .	.	.	26	1				
1930.	7	4	1.923399	2.026577	.	.	.	
> .	.	.	26	1				
1931.	7	5	1.982999	2.555014	.	.	.	
> .	.	.	26	1				
1932.	7	6	1.953401	3.081003	.	.	.	
> .	.	.	26	1				
1933.	7	7	1.998401	3.303289	.	.	.	
> .	.	.	26	1				
1934.	7	8	1.932598	3.38656	.	.	.	
> .	.	.	26	1				
1935.	7	9	2.002199	3.622003	.	.	.	
> .	.	.	26	1				
1936.	7	10	2.048002	4.047136	.	.	.	
> .	.	.	26	1				
1937.	7	11	2.043	4.125448	.	.	.	
> .	.	.	26	1				
1938.	7	12	1.981399	4.269667	.	.	.	
> .	.	.	26	1				
1939.	7	13	2.019801	4.551363	.	.	.	
> .	.	.	26	1				
1940.	7	14	1.9394	4.814228	.	.	.	
> .	.	.	26	1				
1941.	7	15	1.878598	4.782872	.	.	.	
> .	.	.	26	1				
1942.	7	16	1.948199	5.210133	.	.	.	
> .	.	.	26	1				
1943.	7	17	1.9424	5.222083	.	.	.	
> .	.	.	26	1				
1944.	7	18	1.861201	5.055832	.	.	.	

```
> .          .          .   26          1 |
1945. |        7   19   1.930001   5.360954          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1946. |        7   20   1.854602   5.473272          .          .          .
> .          .          .   26          1 |
1947. |        7   21     1.8988   5.413963          .          .          .
> .          .          .   26          1 |
1948. |        7   22   1.893002   5.751052          .          .          .
> .          .          .   26          1 |
1949. |        7   23   1.917599   5.802018          .          .          .
> .          .          .   26          1 |
1950. |        7   24     1.9626   5.921918          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1951. |        7   25   1.931399   5.820775          .          .          .
> .          .          .   26          1 |
1952. |        7   26     1.9314   6.264202          .          .          .
> .          .          .   26          1 |
1953. |        7   27      1.901   6.341355          .          .          .
> .          .          .   26          1 |
1954. |        7   28   2.050999   6.782124          .          .          .
> .          .          .   26          1 |
1955. |        7   29   2.009801   6.705701          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1956. |        7   30   2.128599   6.776867          .          .          .
> .          .          .   26          1 |
1957. |        7   31   2.248201   6.922553          .          .          .
> .          .          .   26          1 |
1958. |        7   32   2.272799   7.025689          .          .          .
> .          .          .   26          1 |
1959. |        7   33   2.347401   7.392618          .          .          .
> .          .          .   26          1 |
1960. |        7   34      2.417   7.687443          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1961. |        7   35   2.436599   8.068161          .          .          .
> .          .          .   26          1 |
1962. |        7   36   2.455399   8.001535          .          .          .
> .          .          .   26          1 |
1963. |        7   37   2.544601   8.269383          .          .          .
> .          .          .   26          1 |
1964. |        7   38   2.544599     8.3998          .          .          .
> .          .          .   26          1 |
1965. |        7   39   2.564202   8.583223          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1966. |        7   40   2.583801   8.779877    1.57744         11   2.447019
> 5   .4230769   .1923077   26          1 |
1967. |        7   41      2.728   9.063047   1.667932         10   2.527213
> 5   .3846154   .1923077   26          1 |
1968. |        7   42   2.747602   9.300322    1.70655         10   2.600049
> 5   .3846154   .1923077   26          1 |
1969. |        7   43   2.772197   9.396327   1.733878         10   2.650712
> 5   .3846154   .1923077   26          1 |
1970. |        7   44   2.841799   9.580304   1.768741         10   2.703275
> 5   .3846154   .1923077   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1971. |        7   45     2.7918   9.478877    1.78089         10    2.72809
> 5   .3846154   .1923077   26          1 |
1972. |        7   46   2.861403   9.763128   1.802849         10   2.770618
> 5   .3846154   .1923077   26          1 |
1973. |        7   47   2.935998   9.927704   1.832092          9   2.815373
> 5   .3461539   .1923077   26          1 |
1974. |        7   48   2.880999   9.917784   1.846437          9   2.849488
```

```
> 5   .3461539   .1923077   26          1
1975.          7   49   2.955602   10.12987   1.868201          9   2.890277
> 5   .3461539   .1923077   26          1
1976.          7   50   2.875199   9.984899   1.875939          9   2.915235
> 5   .3461539   .1923077   26          1
1977.          7   51   2.975202   10.25361   1.893906          9   2.950418
> 5   .3461539   .1923077   26          1
1978.          7   52     2.8948   10.12722   1.900531          9     2.9739
> 5   .3461539   .1923077   26          1
1979.          7   53   2.894799   10.12388   1.906209          9   2.993873
> 5   .3461539   .1923077   26          1
1980.          7   54   3.014401   10.28751   1.922264          8   3.018252
> 5   .3076923   .1923077   26          1
1981.          7   55   2.989798   10.40118    1.93413          8   3.044248
> 5   .3076923   .1923077   26          1
1982.          7   56   2.959399   10.41128   1.942086          9   3.067579
> 5   .3461539   .1923077   26          1
1983.          7   57   2.933999   10.32637   1.947194          9   3.085213
> 5   .3461539   .1923077   26          1
1984.          7   58   2.954403   10.59709   1.953257          9   3.110453
> 5   .3461539   .1923077   26          1
1985.          7   59   2.979001   10.70265   1.960439          8   3.136739
> 6   .3076923   .2307692   26          1
1986.          7   60      3.024   10.88272   1.969976          8   3.166396
> 6   .3076923   .2307692   26          1
1987.          7   61   3.023998   10.88091   1.978647          7     3.1933
> 6   .2692308   .2307692   26          1
1988.          7   62   3.018999   10.95021   1.986252          7   3.219954
> 6   .2692308   .2307692   26          1
1989.          7   63   3.044402    11.1459   1.994741          7   3.250105
> 6   .2692308   .2307692   26          1
1990.          7   64   3.044401   11.20351    2.00255          7   3.279479
> 6   .2692308   .2307692   26          1
1991.          7   65   3.089398   11.36243   2.012267          7   3.310972
> 6   .2692308   .2307692   26          1
1992.          7   66   3.063999   11.23714   2.019896          7   3.336802
> 6   .2692308   .2307692   26          1
1993.          7   67     3.0894   11.36921   2.028299          7   3.364174
> 6   .2692308   .2307692   26          1
1994.          7   68      3.109   11.63178   2.037113          7   3.396267
> 6   .2692308   .2307692   26          1
1995.          7   69   3.134403    11.7566   2.046588          7   3.429311
> 6   .2692308   .2307692   26          1
1996.          7   70   3.134399    11.7042   2.055452          8   3.458963
> 6   .3076923   .2307692   26          1
1997.          7   71   3.134398   11.65226   2.063762          8   3.485559
> 6   .3076923   .2307692   26          1
1998.          7   72   3.179399   11.81531   2.073602          8   3.514225
> 6   .3076923   .2307692   26          1
1999.          7   73     3.1548   11.83617   2.081781          8   3.541664
> 6   .3076923   .2307692   26          1
2000.          7   74     3.1548   11.84547   2.089493          8   3.567735
> 6   .3076923   .2307692   26          1
2001.          7   75   3.199803   12.10579   2.098653          8   3.597856
> 6   .3076923   .2307692   26          1
2002.          7   76   3.199799   12.05568   2.107317          8   3.625309
> 6   .3076923   .2307692   26          1
```

allsynth is a user-written command made freely-available to the research community. Pl > ease cite the paper:

Wiltshire, Justin C., 2022. allsynth: (Stacked) Synthetic Control Bias-Correction Uti > lities for Stata. Working paper.

```
3 .
4 . allsynth fullvax repvotes2020pct black fullcollege cases_per_capita whiteevangelical
  >  catholic poverty medfamilinc pop0to4pct pop5to9pct pop10to14pct pop15to19pct pop60t
  > o64pct pop65to69pct pop70to74pct pop75to79pct pop80to84pct pop85abovepct, trunit(7)
  > trperiod(40) bcorrect(merge) gapfigure(bcorrect, save(synthcontrolresults_fullvax_gp
  > h.svg, replace)) keep(synthcontrolresults_fullvax, replace) pvalues

Identifying donor pool...


Bias-correcting the plain vanilla -synth- estimate for statecode 7
```

Synthetic Control Method for Comparative Case Studies

First Step: Data Setup

Data Setup successful

Treated Unit:	**CO**
Control Units:	**AL, AZ, DC, FL, GA, IA, ID, IN, KS, MS, MT, ND, NE, NH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, WY**
Dependent Variable:	**fullvaxpct**
MSPE minimized for periods:	**0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39**
Results obtained for periods:	**0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76**
Predictors:	**repvotes2020pct black fullcollege cases_per_capita whiteevangelical catholic poverty medfamilinc pop0to4pct pop5to9pct pop10to14pct pop15to19pct pop60to64pct pop65to69pct pop70to74pct pop75to79pct pop80to84pct pop85abovepct**
Unless period is specified predictors are averaged over:	**0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39**

Second Step: Run Optimization

Optimization done

Third Step: Obtain Results

Loss: Root Mean Squared Prediction Error

RMSPE	**1.840802**

Unit Weights:

Co_No	Unit_Weight
AL	**0**
AZ	**0**
DC	**.172**
FL	**0**
GA	**0**
IA	**0**
ID	**0**
IN	**0**
KS	**0**
MS	**0**
MT	**0**
ND	**0**
NE	**0**
NH	**.341**
OK	**0**
PA	**0**
RI	**0**
SC	**0**
SD	**0**
TN	**0**
TX	**.403**
VA	**.007**
VT	**0**
WI	**0**
WY	**.078**

Predictor Balance:

	Treated	Synthetic
repvotes2020pct	**42.1467**	**43.08309**
black	**4.635333**	**14.47003**
fullcollege	**41.00235**	**37.34102**
cases_per_capita	**.0402105**	**.032687**
whiteevangelical	**16.41762**	**13.51393**
catholic	**18.18784**	**22.18697**
poverty	**9.429272**	**11.20439**
medfamilinc	**93187.19**	**92297.6**
pop0to4pct	**5.752328**	**5.959465**
pop5to9pct	**6.012807**	**6.047865**
pop10to14pct	**6.308905**	**6.07126**
pop15to19pct	**6.353192**	**6.37081**
pop60to64pct	**6.057702**	**6.188175**
pop65to69pct	**5.157971**	**5.097487**
pop70to74pct	**3.932786**	**3.984856**
pop75to79pct	**2.469836**	**2.635322**
pop80to84pct	**1.541385**	**1.665828**
pop85abovepct	**1.565145**	**1.786021**

Estimating synthetic controls using in-space placebo treatments for treated unit state
> code == 7. This could take awhile...

1 of 25 (donor pool unit statecode == 2 for treated unit statecode == 7)
2 of 25 (donor pool unit statecode == 5 for treated unit statecode == 7)
3 of 25 (donor pool unit statecode == 9 for treated unit statecode == 7)
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13 of 25 (donor pool unit statecode == 35 for treated unit statecode == 7)

```
14 of 25 (donor pool unit statecode == 36 for treated unit statecode == 7)
15 of 25 (donor pool unit statecode == 42 for treated unit statecode == 7)
16 of 25 (donor pool unit statecode == 44 for treated unit statecode == 7)
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18 of 25 (donor pool unit statecode == 48 for treated unit statecode == 7)
19 of 25 (donor pool unit statecode == 49 for treated unit statecode == 7)
20 of 25 (donor pool unit statecode == 50 for treated unit statecode == 7)
21 of 25 (donor pool unit statecode == 51 for treated unit statecode == 7)
22 of 25 (donor pool unit statecode == 54 for treated unit statecode == 7)
23 of 25 (donor pool unit statecode == 56 for treated unit statecode == 7)
24 of 25 (donor pool unit statecode == 58 for treated unit statecode == 7)
25 of 25 (donor pool unit statecode == 60 for treated unit statecode == 7)

Saving results...
(1,040 missing values generated)
(1,040 missing values generated)

Combining data files
(1,925 observations deleted)
```

Treated unit (statecode == 7) results:

> k	statec~e	t	gap	gap_bc	rmspe	r~e_rank	rmspe_bc	r~c_ran
	p	p_bc	N	unique_W				
1926.	7	0	.2316	7.578515	.	.	.	
> .	.	.	26	1				
1927.	7	1	.2660009	7.114801	.	.	.	
> .	.	.	26	1				
1928.	7	2	.4756998	6.731262	.	.	.	
> .	.	.	26	1				
1929.	7	3	.6662006	6.791915	.	.	.	
> .	.	.	26	1				
1930.	7	4	.8446992	6.698419	.	.	.	
> .	.	.	26	1				
1931.	7	5	.8996994	6.497786	.	.	.	
> .	.	.	26	1				
1932.	7	6	.8789003	6.478991	.	.	.	
> .	.	.	26	1				
1933.	7	7	1.1325	6.759116	.	.	.	
> .	.	.	26	1				
1934.	7	8	1.2664	6.531877	.	.	.	
> .	.	.	26	1				
1935.	7	9	1.3572	6.143378	.	.	.	
> .	.	.	26	1				
1936.	7	10	1.430501	6.156705	.	.	.	
> .	.	.	26	1				
1937.	7	11	1.5073	6.03652	.	.	.	
> .	.	.	26	1				
1938.	7	12	1.416799	5.662984	.	.	.	
> .	.	.	26	1				
1939.	7	13	1.277198	5.279618	.	.	.	
> .	.	.	26	1				
1940.	7	14	1.319701	4.786708	.	.	.	
> .	.	.	26	1				
1941.	7	15	1.276898	4.005605	.	.	.	
> .	.	.	26	1				
1942.	7	16	1.476499	3.914366	.	.	.	
> .	.	.	26	1				
1943.	7	17	1.6747	4.083821	.	.	.	
> .	.	.	26	1				
1944.	7	18	1.724699	3.69693	.	.	.	

```
> .          .          .   26          1 |
1945. |       7   19   1.702102   3.521761          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1946. |       7   20   1.796699   3.500467          .          .          .
> .          .          .   26          1 |
1947. |       7   21   1.880299     3.2716          .          .          .
> .          .          .   26          1 |
1948. |       7   22   1.906399    2.82024          .          .          .
> .          .          .   26          1 |
1949. |       7   23   2.033699   2.592845          .          .          .
> .          .          .   26          1 |
1950. |       7   24   2.124199   2.573316          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1951. |       7   25     2.2183   2.939141          .          .          .
> .          .          .   26          1 |
1952. |       7   26   2.270499    3.44255          .          .          .
> .          .          .   26          1 |
1953. |       7   27     2.2132   3.752155          .          .          .
> .          .          .   26          1 |
1954. |       7   28     2.2411    3.79559          .          .          .
> .          .          .   26          1 |
1955. |       7   29   2.217899   3.860952          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1956. |       7   30     2.2615   4.087705          .          .          .
> .          .          .   26          1 |
1957. |       7   31   2.374402   4.382715          .          .          .
> .          .          .   26          1 |
1958. |       7   32   2.344499   4.355224          .          .          .
> .          .          .   26          1 |
1959. |       7   33     2.3961   4.604013          .          .          .
> .          .          .   26          1 |
1960. |       7   34   2.399598   4.857583          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1961. |       7   35     2.4109   5.133873          .          .          .
> .          .          .   26          1 |
1962. |       7   36   2.414402   5.405509          .          .          .
> .          .          .   26          1 |
1963. |       7   37   2.301098   5.406707          .          .          .
> .          .          .   26          1 |
1964. |       7   38   2.391599   5.678711          .          .          .
> .          .          .   26          1 |
1965. |       7   39     2.3131   5.700305          .          .          .
> .          .          .   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1966. |       7   40     2.2836   5.821169   1.608016         12   1.299142
> 9   .4615385   .3461539   26          1 |
1967. |       7   41   2.313798   6.285264    1.62942         12   1.406845
> 6   .4615385   .2307692   26          1 |
1968. |       7   42   2.201199   6.206377   1.584301         12   1.430153
> 6   .4615385   .2307692   26          1 |
1969. |       7   43   2.239898   6.324265   1.574991         13   1.455966
> 6         .5   .2307692   26          1 |
1970. |       7   44     2.2794   6.386051   1.580413         13   1.477475
> 6         .5   .2307692   26          1 |
      |-------------------------------------------------------------------------------------------
  ----------------------------------------|
1971. |       7   45     2.1793   6.310689   1.561092         13     1.4857
> 6         .5   .2307692   26          1 |
1972. |       7   46   2.278602   6.651335   1.566791         13   1.515758
> 6         .5   .2307692   26          1 |
1973. |       7   47   2.166699   6.575444   1.551891         13   1.533492
> 5         .5   .1923077   26          1 |
1974. |       7   48   2.156699   6.859795   1.538822         13   1.563558
```

> 5	.5	.1923077	26	1				
1975.	7	49	2.171098	6.955491	1.530287	13	1.59268	
> 5	.5	.1923077	26	1				
1976.	7	50	2.2516	7.125115	1.533285	13	1.624832	
> 5	.5	.1923077	26	1				
1977.	7	51	2.139001	6.938279	1.52308	13	1.64323	
> 5	.5	.1923077	26	1				
1978.	7	52	2.287	7.186336	1.529982	13	1.66913	
> 5	.5	.1923077	26	1				
1979.	7	53	2.325701	7.26894	1.53983	13	1.694601	
> 5	.5	.1923077	26	1				
1980.	7	54	2.3504	7.624736	1.550739	13	1.730219	
> 5	.5	.1923077	26	1				
1981.	7	55	2.405998	7.907773	1.565381	13	1.771919	
> 5	.5	.1923077	26	1				
1982.	7	56	2.470999	8.292495	1.584051	13	1.822769	
> 5	.5	.1923077	26	1				
1983.	7	57	2.4353	8.237117	1.597645	13	1.86602	
> 6	.5	.2307692	26	1				
1984.	7	58	2.516599	8.404164	1.616343	13	1.910327	
> 6	.5	.2307692	26	1				
1985.	7	59	2.524301	8.407607	1.633769	13	1.950314	
> 6	.5	.2307692	26	1				
1986.	7	60	2.531202	8.690216	1.650047	13	1.995315	
> 6	.5	.2307692	26	1				
1987.	7	61	2.555299	8.994803	1.666564	13	2.045611	
> 7	.5	.2692308	26	1				
1988.	7	62	2.5954	9.187088	1.684414	13	2.097362	
> 7	.5	.2692308	26	1				
1989.	7	63	2.637101	9.192966	1.703579	13	2.144973	
> 7	.5	.2692308	26	1				
1990.	7	64	2.661901	9.403211	1.722833	13	2.19477	
> 7	.5	.2692308	26	1				
1991.	7	65	2.734802	9.584457	1.745271	13	2.245812	
> 7	.5	.2692308	26	1				
1992.	7	66	2.793799	9.716014	1.769772	13	2.296678	
> 7	.5	.2692308	26	1				
1993.	7	67	2.7937	9.697321	1.792517	12	2.343414	
> 7	.4615385	.2692308	26	1				
1994.	7	68	2.7595	9.68169	1.811674	12	2.386527	
> 7	.4615385	.2692308	26	1				
1995.	7	69	2.841501	9.826703	1.834275	13	2.43038	
> 7	.5	.2692308	26	1				
1996.	7	70	2.8004	10.00366	1.853111	13	2.475744	
> 7	.5	.2692308	26	1				
1997.	7	71	2.900302	10.24513	1.876257	13	2.524131	
> 7	.5	.2692308	26	1				
1998.	7	72	2.907998	10.29413	1.898419	13	2.570755	
> 7	.5	.2692308	26	1				
1999.	7	73	2.832899	10.22884	1.915367	13	2.613125	
> 7	.5	.2692308	26	1				
2000.	7	74	2.9328	10.2932	1.936421	12	2.654521	
> 7	.4615385	.2692308	26	1				
2001.	7	75	2.932698	10.34999	1.9563	12	2.694865	
> 7	.4615385	.2692308	26	1				
2002.	7	76	2.932601	10.26407	1.9751	12	2.731193	
> 7	.4615385	.2692308	26	1				

allsynth is a user-written command made freely-available to the research community. Pl > ease cite the paper:

Wiltshire, Justin C., 2022. allsynth: (Stacked) Synthetic Control Bias-Correction Uti > lities for Stata. Working paper.

```
5 .
6 . allsynth dDose1pct repvotes2020pct black fullcollege cases_per_capita whiteevangelic
  > al catholic poverty medfamilinc pop0to4pct pop5to9pct pop10to14pct pop15to19pct pop6
  > 0to64pct pop65to69pct pop70to74pct pop75to79pct pop80to84pct pop85abovepct, trunit(7
  > ) trperiod(40) bcorrect(merge) gapfigure(bcorrect, save(synthcontrolresults_ddose1_g
  > ph.svg, replace)) keep(synthcontrolresults_ddose, replace) pvalues

Identifying donor pool...


Bias-correcting the plain vanilla -synth- estimate for statecode 7
```

Synthetic Control Method for Comparative Case Studies

First Step: Data Setup

Data Setup successful

Treated Unit:	**CO**
Control Units:	**AL, AZ, DC, FL, GA, IA, ID, IN, KS, MS, MT, ND, NE, NH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, WY**
Dependent Variable:	**dDose1pct**
MSPE minimized for periods:	**0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39**
Results obtained for periods:	**0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76**
Predictors:	**repvotes2020pct black fullcollege cases_per_capita whiteevangelical catholic poverty medfamilinc pop0to4pct pop5to9pct pop10to14pct pop15to19pct pop60to64pct pop65to69pct pop70to74pct pop75to79pct pop80to84pct pop85abovepct**
Unless period is specified predictors are averaged over:	**0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39**

Second Step: Run Optimization

Optimization done

Third Step: Obtain Results

Loss: Root Mean Squared Prediction Error

RMSPE	**.0005879**

Unit Weights:

Co_No	Unit_Weight
AL	**0**
AZ	**0**
DC	**.232**
FL	**0**
GA	**.029**
IA	**0**
ID	**0**
IN	**0**
KS	**0**
MS	**0**
MT	**0**
ND	**0**
NE	**0**
NH	**.251**
OK	**0**
PA	**0**
RI	**0**
SC	**0**
SD	**0**
TN	**0**
TX	**.311**
VA	**0**
VT	**0**
WI	**0**
WY	**.176**

Predictor Balance:

	Treated	Synthetic
repvotes2020pct	**42.1467**	**42.53357**
black	**4.635333**	**16.59663**
fullcollege	**41.00235**	**38.05004**
cases_per_capita	**.0402105**	**.0358119**
whiteevangelical	**16.41762**	**13.64801**
catholic	**18.18784**	**19.89444**
poverty	**9.429272**	**11.44496**
medfamilinc	**93187.19**	**92745.96**
pop0to4pct	**5.752328**	**6.027327**
pop5to9pct	**6.012807**	**6.045051**
pop10to14pct	**6.308905**	**5.985311**
pop15to19pct	**6.353192**	**6.251323**
pop60to64pct	**6.057702**	**6.096503**
pop65to69pct	**5.157971**	**5.064713**
pop70to74pct	**3.932786**	**3.931085**
pop75to79pct	**2.469836**	**2.604531**
pop80to84pct	**1.541385**	**1.649334**
pop85abovepct	**1.565145**	**1.775401**

Estimating synthetic controls using in-space placebo treatments for treated unit state
> code == 7. This could take awhile...

1 of 25 (donor pool unit statecode == 2 for treated unit statecode == 7)
2 of 25 (donor pool unit statecode == 5 for treated unit statecode == 7)
3 of 25 (donor pool unit statecode == 9 for treated unit statecode == 7)
4 of 25 (donor pool unit statecode == 11 for treated unit statecode == 7)
5 of 25 (donor pool unit statecode == 13 for treated unit statecode == 7)
6 of 25 (donor pool unit statecode == 16 for treated unit statecode == 7)
7 of 25 (donor pool unit statecode == 17 for treated unit statecode == 7)
8 of 25 (donor pool unit statecode == 19 for treated unit statecode == 7)
9 of 25 (donor pool unit statecode == 20 for treated unit statecode == 7)
10 of 25 (donor pool unit statecode == 31 for treated unit statecode == 7)
11 of 25 (donor pool unit statecode == 32 for treated unit statecode == 7)
12 of 25 (donor pool unit statecode == 34 for treated unit statecode == 7)
13 of 25 (donor pool unit statecode == 35 for treated unit statecode == 7)

```
14 of 25 (donor pool unit statecode == 36 for treated unit statecode == 7)
15 of 25 (donor pool unit statecode == 42 for treated unit statecode == 7)
16 of 25 (donor pool unit statecode == 44 for treated unit statecode == 7)
17 of 25 (donor pool unit statecode == 47 for treated unit statecode == 7)
18 of 25 (donor pool unit statecode == 48 for treated unit statecode == 7)
19 of 25 (donor pool unit statecode == 49 for treated unit statecode == 7)
20 of 25 (donor pool unit statecode == 50 for treated unit statecode == 7)
21 of 25 (donor pool unit statecode == 51 for treated unit statecode == 7)
22 of 25 (donor pool unit statecode == 54 for treated unit statecode == 7)
23 of 25 (donor pool unit statecode == 56 for treated unit statecode == 7)
24 of 25 (donor pool unit statecode == 58 for treated unit statecode == 7)
25 of 25 (donor pool unit statecode == 60 for treated unit statecode == 7)

Saving results...
(1,040 missing values generated)
(1,040 missing values generated)

Combining data files
(1,925 observations deleted)
```

Treated unit (statecode == 7) results:

	statec~e	t	gap	gap_bc	rmspe	r~e_rank	rmspe_bc	r~c_r
	p	p_bc	N	unique_W				
1926.	7	0	.0007786	-.0019439	.	.	.	
> .	.	.	26	1				
1927.	7	1	-.0006055	-.0015792	.	.	.	
> .	.	.	26	1				
1928.	7	2	.0011665	.0023252	.	.	.	
> .	.	.	26	1				
1929.	7	3	.0014706	.002977	.	.	.	
> .	.	.	26	1				
1930.	7	4	.0003334	.0003931	.	.	.	
> .	.	.	26	1				
1931.	7	5	.0007936	.0051019	.	.	.	
> .	.	.	26	1				
1932.	7	6	-.0003839	.0056935	.	.	.	
> .	.	.	26	1				
1933.	7	7	.0007246	.0034606	.	.	.	
> .	.	.	26	1				
1934.	7	8	.000315	.0026307	.	.	.	
> .	.	.	26	1				
1935.	7	9	.0000965	.001974	.	.	.	
> .	.	.	26	1				
1936.	7	10	.0005285	.0030195	.	.	.	
> .	.	.	26	1				
1937.	7	11	-.0000459	.0013483	.	.	.	
> .	.	.	26	1				
1938.	7	12	-.0000526	.001618	.	.	.	
> .	.	.	26	1				
1939.	7	13	-.0002017	.0031197	.	.	.	
> .	.	.	26	1				
1940.	7	14	-.0002772	.0022626	.	.	.	
> .	.	.	26	1				
1941.	7	15	-.0005424	.0015863	.	.	.	
> .	.	.	26	1				
1942.	7	16	.000219	.0021384	.	.	.	
> .	.	.	26	1				
1943.	7	17	.0000916	.0006182	.	.	.	
> .	.	.	26	1				
1944.	7	18	-.0004129	-.0004321	.	.	.	

```
>   .          .          .   26          1 |
1945. |        7   19    .0002534    .0016038          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1946. |        7   20    .0000682    .0025151          .          .          .
>   .          .          .   26          1 |
1947. |        7   21   -.0000557    .0013495          .          .          .
>   .          .          .   26          1 |
1948. |        7   22    .0002364    .0024751          .          .          .
>   .          .          .   26          1 |
1949. |        7   23    .0004696    .0011127          .          .          .
>   .          .          .   26          1 |
1950. |        7   24    .0002208    .0005217          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1951. |        7   25   -.0001328    .0008773          .          .          .
>   .          .          .   26          1 |
1952. |        7   26     .000293    .0024575          .          .          .
>   .          .          .   26          1 |
1953. |        7   27    .0001138    .0030049          .          .          .
>   .          .          .   26          1 |
1954. |        7   28    .0004656    .0017616          .          .          .
>   .          .          .   26          1 |
1955. |        7   29    .0006288    .0012105          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1956. |        7   30     .000944    .0002053          .          .          .
>   .          .          .   26          1 |
1957. |        7   31    .0012311    .0018876          .          .          .
>   .          .          .   26          1 |
1958. |        7   32    .0005529     .001816          .          .          .
>   .          .          .   26          1 |
1959. |        7   33    .0007204    .0048175          .          .          .
>   .          .          .   26          1 |
1960. |        7   34    .0008615    .0034769          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1961. |        7   35    .0006532    .0027253          .          .          .
>   .          .          .   26          1 |
1962. |        7   36    .0004215    .0016236          .          .          .
>   .          .          .   26          1 |
1963. |        7   37    .0007277    .0028523          .          .          .
>   .          .          .   26          1 |
1964. |        7   38    .0007845    .0014769          .          .          .
>   .          .          .   26          1 |
1965. |        7   39    .0002779    .0022819          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1966. |        7   40    .0002925    .0024094   .2467607          7   .9495273
>   1  .2692308   .0384615   26          1 |
1967. |        7   41    .0004592    .0024419   .4274532          5   .9624298
>   1  .1923077   .0384615   26          1 |
1968. |        7   42    .0005462     .001805   .5717819          5   .8192555
>   2  .1923077   .0769231   26          1 |
1969. |        7   43    .0006291     .001682   .7142354          2   .7301254
>   2  .0769231   .0769231   26          1 |
1970. |        7   44    .0002881    .0007687   .6192657          3   .6034327
>   2  .1153846   .0769231   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1971. |        7   45    .0001655    .0008741   .5292234          4   .5236874
>   2  .1538462   .0769231   26          1 |
1972. |        7   46    .0001567    .0005473   .4637328          4    .455874
>   2  .1538462   .0769231   26          1 |
1973. |        7   47    .0004317    .0019955   .4729544          3   .4803018
>   2  .1153846   .0769231   26          1 |
1974. |        7   48    .0002398    .0013616   .4388295          4   .4606266
```

```
>   2   .1538462   .0769231   26          1
1975.          7   49    .0002445     .001415   .4121906          3   .4473123
>   2   .1153846   .0769231   26          1
```

```
1976.          7   50    .0000191    .0011611   .3748146          5   .4266933
>   2   .1923077   .0769231   26          1
1977.          7   51    .0001787     .000783   .3512565          5   .3994919
>   2   .1923077   .0769231   26          1
1978.          7   52    .0000481    .0001297   .3247496          5   .3689733
>   2   .1923077   .0769231   26          1
1979.          7   53    .0001049    .0005697   .3038188          6   .3464097
>   5   .2307692   .1923077   26          1
1980.          7   54    .0000947    .0011004   .2852875          6   .3365203
>   5   .2307692   .1923077   26          1
```

```
1981.          7   55    3.35e-06     .000937    .267459          6    .324463
>   5   .2307692   .1923077   26          1
1982.          7   56    .0001905    .0012103   .2578829          6   .3194712
>   5   .2307692   .1923077   26          1
1983.          7   57    .0001942    .0007414   .2495969          6   .3067182
>   5   .2307692   .1923077   26          1
1984.          7   58    .0001017    .0008566   .2380313          6   .2968913
>   5   .2307692   .1923077   26          1
1985.          7   59    .0000901    .0003265   .2272999          6   .2829184
>   5   .2307692   .1923077   26          1
```

```
1986.          7   60   -1.09e-06    .0007584   .2164762          7    .273926
>   6   .2692308   .2307692   26          1
1987.          7   61    .0001114    .0013902   .2082641          7   .2758448
>   6   .2692308   .2307692   26          1
1988.          7   62    .0000585    .0013274    .199638          7   .2763818
>   5   .2692308   .1923077   26          1
1989.          7   63    .0000907    .0012092   .1923083          7   .2748314
>   5   .2692308   .1923077   26          1
1990.          7   64    .0002718    .0009974   .1931428          7   .2703465
>   5   .2692308   .1923077   26          1
```

```
1991.          7   65    .0000522    .0008701   .1860171          7   .2647117
>   5   .2692308   .1923077   26          1
1992.          7   66    .0001391    .0005271   .1811956          7   .2565909
>   5   .2692308   .1923077   26          1
1993.          7   67    .0001381    .0009133   .1766904          7   .2522993
>   5   .2692308   .1923077   26          1
1994.          7   68    .0001509    .0011921   .1728627          7   .2516145
>   5   .2692308   .1923077   26          1
1995.          7   69     .000183    .0012292   .1703193          7   .2514658
>   5   .2692308   .1923077   26          1
```

```
1996.          7   70    .0001434    .0010494   .1667392          8   .2491648
>   5   .3076923   .1923077   26          1
1997.          7   71    .0001884    .0005514   .1647284          8   .2429325
>   5   .3076923   .1923077   26          1
1998.          7   72    .0000778     .000694   .1602653          8   .2379581
>   5   .3076923   .1923077   26          1
1999.          7   73    .0001478    .0004576   .1574053          9   .2319667
>   5   .3461539   .1923077   26          1
2000.          7   74    .0000756    .0006456   .1533788          9    .227287
>   5   .3461539   .1923077   26          1
```

```
2001.          7   75    .0001334     .001072   .1505444          9   .2261953
>   5   .3461539   .1923077   26          1
2002.          7   76    .0000914     .000669   .1471276          9   .2220602
>   6   .3461539   .2307692   26          1
```

allsynth is a user-written command made freely-available to the research community. Pl > ease cite the paper:

Wiltshire, Justin C., 2022. allsynth: (Stacked) Synthetic Control Bias-Correction Uti > lities for Stata. Working paper.

```
7 .
8 . allsynth dFullvaxpct repvotes2020pct black fullcollege cases_per_capita whiteevangel
  > ical catholic poverty medfamilinc pop0to4pct pop5to9pct pop10to14pct pop15to19pct po
  > p60to64pct pop65to69pct pop70to74pct pop75to79pct pop80to84pct pop85abovepct, trunit
  > (7) trperiod(40) bcorrect(merge) gapfigure(bcorrect, save(synthcontrolresults_dfullv
  > ax_gph.svg, replace)) keep(synthcontrolresults_dfullvax, replace) pvalues

Identifying donor pool...


Bias-correcting the plain vanilla -synth- estimate for statecode 7
```

Synthetic Control Method for Comparative Case Studies

First Step: Data Setup

Data Setup successful

Treated Unit:	**CO**
Control Units:	**AL, AZ, DC, FL, GA, IA, ID, IN, KS, MS, MT, ND, NE, NH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, WY**
Dependent Variable:	**dFullvaxpct**
MSPE minimized for periods:	**0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39**
Results obtained for periods:	**0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76**
Predictors:	**repvotes2020pct black fullcollege cases_per_capita whiteevangelical catholic poverty medfamilinc pop0to4pct pop5to9pct pop10to14pct pop15to19pct pop60to64pct pop65to69pct pop70to74pct pop75to79pct pop80to84pct pop85abovepct**
Unless period is specified predictors are averaged over:	**0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39**

Second Step: Run Optimization

Optimization done

Third Step: Obtain Results

Loss: Root Mean Squared Prediction Error

RMSPE	**.0013104**

Unit Weights:

Co_No	Unit_Weight
AL	**0**
AZ	**0**
DC	**.218**
FL	**0**
GA	**.035**
IA	**0**
ID	**0**
IN	**0**
KS	**0**
MS	**0**
MT	**0**
ND	**0**
NE	**0**
NH	**.264**
OK	**0**
PA	**0**
RI	**0**
SC	**0**
SD	**0**
TN	**0**
TX	**.358**
VA	**0**
VT	**0**
WI	**0**
WY	**.124**

Predictor Balance:

	Treated	Synthetic
repvotes2020pct	**42.1467**	**42.1365**
black	**4.635333**	**16.82942**
fullcollege	**41.00235**	**37.89992**
cases_per_capita	**.0402105**	**.0348974**
whiteevangelical	**16.41762**	**13.71724**
catholic	**18.18784**	**20.4832**
poverty	**9.429272**	**11.53861**
medfamilinc	**93187.19**	**92252.21**
pop0to4pct	**5.752328**	**6.041496**
pop5to9pct	**6.012807**	**6.070359**
pop10to14pct	**6.308905**	**6.024419**
pop15to19pct	**6.353192**	**6.303801**
pop60to64pct	**6.057702**	**6.054136**
pop65to69pct	**5.157971**	**5.011463**
pop70to74pct	**3.932786**	**3.903837**
pop75to79pct	**2.469836**	**2.586967**
pop80to84pct	**1.541385**	**1.6376**
pop85abovepct	**1.565145**	**1.755777**

```
Estimating synthetic controls using in-space placebo treatments for treated unit state
> code == 7. This could take awhile...

1 of 25 (donor pool unit statecode == 2 for treated unit statecode == 7)
2 of 25 (donor pool unit statecode == 5 for treated unit statecode == 7)
3 of 25 (donor pool unit statecode == 9 for treated unit statecode == 7)
4 of 25 (donor pool unit statecode == 11 for treated unit statecode == 7)
5 of 25 (donor pool unit statecode == 13 for treated unit statecode == 7)
6 of 25 (donor pool unit statecode == 16 for treated unit statecode == 7)
7 of 25 (donor pool unit statecode == 17 for treated unit statecode == 7)
8 of 25 (donor pool unit statecode == 19 for treated unit statecode == 7)
9 of 25 (donor pool unit statecode == 20 for treated unit statecode == 7)
10 of 25 (donor pool unit statecode == 31 for treated unit statecode == 7)
11 of 25 (donor pool unit statecode == 32 for treated unit statecode == 7)
12 of 25 (donor pool unit statecode == 34 for treated unit statecode == 7)
13 of 25 (donor pool unit statecode == 35 for treated unit statecode == 7)
```

```
14 of 25 (donor pool unit statecode == 36 for treated unit statecode == 7)
15 of 25 (donor pool unit statecode == 42 for treated unit statecode == 7)
16 of 25 (donor pool unit statecode == 44 for treated unit statecode == 7)
17 of 25 (donor pool unit statecode == 47 for treated unit statecode == 7)
18 of 25 (donor pool unit statecode == 48 for treated unit statecode == 7)
19 of 25 (donor pool unit statecode == 49 for treated unit statecode == 7)
20 of 25 (donor pool unit statecode == 50 for treated unit statecode == 7)
21 of 25 (donor pool unit statecode == 51 for treated unit statecode == 7)
22 of 25 (donor pool unit statecode == 54 for treated unit statecode == 7)
23 of 25 (donor pool unit statecode == 56 for treated unit statecode == 7)
24 of 25 (donor pool unit statecode == 58 for treated unit statecode == 7)
25 of 25 (donor pool unit statecode == 60 for treated unit statecode == 7)

Saving results...
(1,040 missing values generated)
(1,040 missing values generated)

Combining data files
(1,925 observations deleted)
```

Treated unit (statecode == 7) results:

	statec~e	t	gap	gap_bc	rmspe	r~e_rank	rmspe_bc	r~c_r
	p	p_bc	N	unique_W				
1926.	7	0	.0014715	-.0007904	.	.	.	
> .	.	.	26	1				
1927.	7	1	.0013001	-.0031084	.	.	.	
> .	.	.	26	1				
1928.	7	2	.0030955	-.0023124	.	.	.	
> .	.	.	26	1				
1929.	7	3	.0024101	.001396	.	.	.	
> .	.	.	26	1				
1930.	7	4	.0011166	-.0011862	.	.	.	
> .	.	.	26	1				
1931.	7	5	.0006814	-.0035259	.	.	.	
> .	.	.	26	1				
1932.	7	6	.0005246	.0018267	.	.	.	
> .	.	.	26	1				
1933.	7	7	.0022039	.0012505	.	.	.	
> .	.	.	26	1				
1934.	7	8	.0018816	-.0007764	.	.	.	
> .	.	.	26	1				
1935.	7	9	.0020931	-.0036921	.	.	.	
> .	.	.	26	1				
1936.	7	10	.0004411	.0003839	.	.	.	
> .	.	.	26	1				
1937.	7	11	.0009442	-.0016024	.	.	.	
> .	.	.	26	1				
1938.	7	12	-.0006011	-.002262	.	.	.	
> .	.	.	26	1				
1939.	7	13	-.0009758	-.0037102	.	.	.	
> .	.	.	26	1				
1940.	7	14	.0005478	-.0056942	.	.	.	
> .	.	.	26	1				
1941.	7	15	.0001879	-.0053592	.	.	.	
> .	.	.	26	1				
1942.	7	16	.0029045	-.0007221	.	.	.	
> .	.	.	26	1				
1943.	7	17	.0023465	.0009737	.	.	.	
> .	.	.	26	1				
1944.	7	18	.0001289	-.0034337	.	.	.	

```
>   .          .          .   26          1 |
1945. |        7   19    .0011551   -.0007893          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1946. |        7   20    .0005739    .0004067          .          .          .
>   .          .          .   26          1 |
1947. |        7   21    .0008006   -.0043715          .          .          .
>   .          .          .   26          1 |
1948. |        7   22    .0005609   -.0040053          .          .          .
>   .          .          .   26          1 |
1949. |        7   23    .0020943   -.0008989          .          .          .
>   .          .          .   26          1 |
1950. |        7   24    .0013521    .0021542          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1951. |        7   25     .001503     .000971          .          .          .
>   .          .          .   26          1 |
1952. |        7   26    .0009919    .0068117          .          .          .
>   .          .          .   26          1 |
1953. |        7   27   -.0008515    .0030617          .          .          .
>   .          .          .   26          1 |
1954. |        7   28    .0014259    .0035307          .          .          .
>   .          .          .   26          1 |
1955. |        7   29   -.0003293   -.0012736          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1956. |        7   30    .0005571    .0028467          .          .          .
>   .          .          .   26          1 |
1957. |        7   31    .0014392    .0048078          .          .          .
>   .          .          .   26          1 |
1958. |        7   32   -.0000707   -5.40e-08          .          .          .
>   .          .          .   26          1 |
1959. |        7   33    .0005057     .001972          .          .          .
>   .          .          .   26          1 |
1960. |        7   34     .000237    .0038411          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1961. |        7   35    .0003181    .0026726          .          .          .
>   .          .          .   26          1 |
1962. |        7   36    .0000125    .0011848          .          .          .
>   .          .          .   26          1 |
1963. |        7   37    .0005541    .0023855          .          .          .
>   .          .          .   26          1 |
1964. |        7   38     .000479    .0022479          .          .          .
>   .          .          .   26          1 |
1965. |        7   39   -.0000889    .0010236          .          .          .
>   .          .          .   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1966. |        7   40   -.0000436    .0014116   .0011023         26    .242287
>  10          1   .3846154   26          1 |
1967. |        7   41   -.0001271     .002589   .0052314         25   .5286711
>   8   .9615384   .3076923   26          1 |
1968. |        7   42   -.0001318    .0008512   .0068442         25   .3818182
>   8   .9615384   .3076923   26          1 |
1969. |        7   43    .0002639    .0015339   .0152248         24   .3578847
>   9   .9230769   .3461539   26          1 |
1970. |        7   44       .00034   .0007829   .0255873         23   .3012122
>   9   .8846154   .3461539   26          1 |
    ---------------------------------------+-----------------------------------------------------------------------
1971. |        7   45    .0002204    .0009861   .0260173         23   .2707187
>   9   .8846154   .3461539   26          1 |
1972. |        7   46    .0001759    .0011573   .0248619         23   .2553124
>  10   .8846154   .3846154   26          1 |
1973. |        7   47   -.0000253    .0014191   .0218004         24   .2540088
>  10   .9230769   .3846154   26          1 |
1974. |        7   48   -.0001915    .0016353   .0217409         24   .2619181
```

```
> 10  .9230769   .3846154   26          1 |
1975. |       7   49    .0001605    .0019933   .0210607         24   .2840395
> 8   .9230769   .3076923   26          1 |
  ----------------------------------------+-----------------------------------------------------------
1976. |       7   50    .0004393    .0017049   .0293188         24   .2903501
> 8   .9230769   .3076923   26          1 |
1977. |       7   51    .0006813    .0000208   .0492992         21   .2661586
> 9   .8076923   .3461539   26          1 |
1978. |       7   52    .0007675    .0002273   .0717754         19   .2461682
> 9   .7307692   .3461539   26          1 |
1979. |       7   53    .0003762    .0009603   .0725096         19   .2365938
> 11  .7307692   .4230769   26          1 |
1980. |       7   54    .0007372    .0049974   .0886835         17   .4232756
> 8   .6538461   .3076923   26          1 |
  ----------------------------------------+-----------------------------------------------------------
1981. |       7   55    .0007172    .0030209   .1017786         16   .4661778
> 8   .6153846   .3076923   26          1 |
1982. |       7   56    .0007653     .003586   .1157663         15   .5307389
> 7   .5769231   .2692308   26          1 |
1983. |       7   57    .0004054    .0004113   .1146294         15   .5023962
> 7   .5769231   .2692308   26          1 |
1984. |       7   58     .000794    .0028765   .1278335         15   .5289071
> 6   .5769231   .2307692   26          1 |
1985. |       7   59    .0006713    .0013066   .1345035         14   .5128419
> 6   .5384616   .2307692   26          1 |
  ----------------------------------------+-----------------------------------------------------------
1986. |       7   60     .000209    .0013766   .1293048         14   .4993934
> 7   .5384616   .2692308   26          1 |
1987. |       7   61      .00033    .0024938   .1262971         14   .5110685
> 6   .5384616   .2307692   26          1 |
1988. |       7   62     .000478    .0023863   .1265661         14   .5189543
> 6   .5384616   .2307692   26          1 |
1989. |       7   63    .0004464    .0019216   .1261073         14    .516039
> 5   .5384616   .1923077   26          1 |
1990. |       7   64    .0006746    .0011897   .1316169         14   .5022814
> 5   .5384616   .1923077   26          1 |
  ----------------------------------------+-----------------------------------------------------------
1991. |       7   65     .000543    .0016226   .1331296         14   .4952766
> 5   .5384616   .1923077   26          1 |
1992. |       7   66     .000186    .0005692   .1289416         14   .4783923
> 5   .5384616   .1923077   26          1 |
1993. |       7   67    .0002025       .0003    .125186         14   .4616978
> 5   .5384616   .1923077   26          1 |
1994. |       7   68    .0005038     .002214   .1259438         14   .4663301
> 5   .5384616   .1923077   26          1 |
1995. |       7   69     .000336    .0014638   .1239277         14   .4594712
> 4   .5384616   .1538462   26          1 |
  ----------------------------------------+-----------------------------------------------------------
1996. |       7   70    .0003061    .0013649   .1216826         14   .4519569
> 4   .5384616   .1538462   26          1 |
1997. |       7   71    .0002378    .0010711   .1189049         14   .4421924
> 4   .5384616   .1538462   26          1 |
1998. |       7   72    .0002785    .0008604   .1166642         13   .4315204
> 4         .5   .1538462   26          1 |
1999. |       7   73    .0001392    .0002508   .1135633         13   .4190537
> 4         .5   .1538462   26          1 |
2000. |       7   74    .0001077    .0001178   .1105108         13    .407129
> 4         .5   .1538462   26          1 |
  ----------------------------------------+-----------------------------------------------------------
2001. |       7   75    .0001987     .001254   .1080766         14   .4011314
> 4   .5384616   .1538462   26          1 |
2002. |       7   76    .0000188    .0001225   .1051612         14   .3903393
> 4   .5384616   .1538462   26          1 |
  ----------------------------------------+-----------------------------------------------------------
```

---

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Wiltshire, Justin C., 2022. allsynth: (Stacked) Synthetic Control Bias-Correction Uti > lities for Stata. Working paper.

```
9 .
10. translate synth_output.smcl synth_output.log, replace
  (file synth_output.log not found)
  file synth_output.log saved as .log format

11. translate synth_output.smcl synth_output.pdf, replace
```