Lott's Response to Eggers and Grimmer Part 2

Eggers and Grimmer complain that "much of the paper's writing remains unchanged, but … the quantitative analysis itself has changed substantially." As noted in my original memo, when I figured out all the changes they had made in my turnout data, I discovered that some places had updated their data from what was released immediately after the election. The discovery of this data meant that I no longer lost observations in Table 6, so I didn't have to use the weaker second-best approach used in Table 7 to overcome the fact that observations were lost when the denominators had been zero. It also meant some small changes in the turnout regressions, though I continued using the exact same specifications.

I thank Eggers and Grimmer for making me figure out all the changes they had made in their turnout estimates because that caused me to discover the updated data. But I think it is unreasonable for them to object to these changes if the data is correct.

Eggers and Grimmer have three main objections. First, they claim that my results regarding absentee ballots aren't "mixed." Next, they complain that I removed the second-best regressions dealing with provisional ballots because updated data allowed a lot more degrees of freedom in the preferred specification. The list of objections to my turnout estimates is long.

As I showed in my previous response, Table 6 is not susceptible to the problem with reverse regressions that occurred in the second-best approach that I originally used in Table 7. My original paper clearly stated that I used a different approach in Table 7 than in the previous tables because I was missing a lot of observations since it wasn't possible to divide by zero. Are Eggers and Grimmer now claiming that this updated data is incorrect? No.

My most substantial response involves Eggers and Grimmer's comments regarding voter turnout rates. Accounting for same-day voter registration, the date of the registration data, or Menominee County does not affect my results. As to their claim that they thought they were just replicating my turnout variable, even if they ignored the variable descriptions titled "voter registration" etc. in the STATA data file that I provided, one would think they would compare simple summary statistics or contact me for any clarification.

1) Description of Absentee Mixed results

When I first submitted the paper in January 2021, there was no version of what later became Table 9 with the combined observations for Georgia and Pennsylvania. At that point, I described the results as mixed. Except for fixing one typo and adding a negative but not statistically significant estimate for the combined state data in Table 9, nothing else has changed. Neither the referees nor the editors mentioned that this discussion in the original paper was misleading. Table 9, which showed the combined state results, was added in my response to the second round of referee reports. All but one of the estimates provides a coefficient consistent with the vote fraud hypothesis, but only one of the estimates is statistically

significant and negative. I don't think that the results will deceive anyone. I showed all the results for readers to decide for themselves.

As to Table 3, the paper's idea behind the first nine tables was to compare adjacent precincts on either side of county borders. These precincts are small relatively homogenous areas that are very similar to each other. They aren't perfectly similar; as I note, there are reasons why people move into one county and not the other. So Table 3 compares the differences in Trump's share of the absentee ballots between adjacent precincts after accounting for detailed race and gender differences at the precinct level.

Eggers and Grimmer's last two paragraphs in this section point out that I am providing a range of estimates, but anyone reading the paper can clearly see the range of estimates. So my question is: Other than objecting to the word "mixed," what are they adding to the discussion that I am not already stating? Do they fear that readers will be unable to judge the results themselves?

2) Description of Provisional ballots results

Eggers and Grimmer claim that the analysis in the old version of Table 7a "is dropped entirely without comment" and that "he introduces a completely new provisional ballot analysis." Both are false. In my attempt to figure out all the changes that Eggers and Grimmer had made in my turnout estimates, I made it clear that I discovered that some Pennsylvania counties had updated some available numbers immediately after the election. I also made it clear that the new data ensured that I no longer lost observations in Table 6. Previously observations were dropped because it is not possible to divide by zero. The old Table 7a was a second-best approach that was explicitly used only because of the missing observations. But it is no longer necessary because of the corrected data and the expanded sample size for Table 6.

With the updated data, the results in Table 6 for the Allegheny County variable are now statistically significant, going from a t-statistic significant for a two-tailed t-test at only the 23% level to now significant at the 5% or 9% level. Table 7 now reports just the Georgia estimates previously reported in 7b that correspond directly with those in Table 6, and the statistical insignificance is unchanged. If I had left in the previous specification that corresponded with the old Table 7a, it would have remained unchanged, as none of the Georgia estimates have changed.

In Table 6, in what I reported in the paper, I have now shown the regressions of Trump's share of the provisional ballots in the adjacent precincts on his absentee vote shares in the adjacent precincts and then that and also his in-person vote share in the adjacent precincts. Before I had done it on just the in-person votes, but I decided to also include absentee ballots because the accusation, that I discuss in the paper, is that these provisional ballots were being issued to people who had improperly filled out their absentee ballots. Including just the in-person votes as the control variable still implies Biden picks up 3.6% more provisional votes in Allegheny County. The result is statistically significant at the 10 percent level for a one-tailed t-test (see Appendix 1).

In the first and fourth paragraphs of this section, Eggers and Grimmer make comments like: “In Lott’s memo responding to these points he concedes (perhaps accidentally) that his analysis cannot distinguish between pro- or anti-Trump fraud.” But again, this is wrong. The results in Table 6 show a consistent bias in provisional ballots for Biden in Allegheny County whether you run the direct regression or the reverse regression. I didn’t report the reverse regression in the paper precisely because I didn’t want to add new tests, but I would be happy to add it.

Eggers and Grimmer complain that the effects are "modest." I am not sure that everyone would agree, but why does it matter? Table 6 shows estimates between a 3.8 and 4.5 percentage point swing in Biden's share of the provisional ballots. Will an additional 7,200 votes in provisional votes by themselves in just two counties swing an election? No, but I never claim otherwise. There may have been other problems also, and the point of the paper is to figure out ways to measure problems with the voting system. If they want to argue that the gap is too small to worry about, that is their choice. My point was to see if problems existed and show a way of measuring them.

Eggers and Grimmer also continually point out that the results are statistically significant for a one-tailed t-test, not a two-tailed t-test. That is true, but no one is being deceived. I make that very clear in the paper. We are dealing with fairly small samples, and, in any case, a one-tailed t-test is appropriate for these tests.

3) Description of “Voter Turnout Results”

Eggers and Grimmer make four claims in this section. The strange thing here is that they make several claims regarding potential issues such as same-day voter registration, but they don’t test whether including a control variable for that law or excluding those states makes a difference in the results. Here, in order, are the four points that they raise regarding voter turnout.

Eggers and Grimmer changed the dependent variable and other variables

Eggers and Grimmer say that they used their measure of voter turnout in their “replication” of my results. Even if one accepts their claim that the body of my paper wasn’t clear, the data set that I provided them labels and defines the variables in terms of registered voters and total votes in calculating turnout – just as I did in the data files that I provided to the editors. Eggers and Grimmer apparently never used simple summary statements to compare the means and variances for the turnout variable that I provided them with the turnout variable that they created. If they had, they would have seen that they created a different measure of turnout.

As Eggers and Grimmer acknowledge, I provided the data to them the day they asked for it. If they had any problem replicating my regressions and data, I would have been very happy to have explained things to them, but they never asked.

In any case, they now know that they aren’t using the measure of voter turnout that I used, and they know why I used the measure that I did. As to them changing the other control variables,

they offer no explanation, and it is hard to figure out an explanation for them claiming to "replicate" my research given the variables for the racial demographic variables listed in the paper's tables. As I showed in my previous response, it was only by simultaneously changing the endogenous variable and primarily adding in the percent of the population that is Native American that they got the results that they did. Even then, it was for just one of the specifications that I provided. The issue with adding a variable regarding Native American populations is that they were also areas where large-scale fraud was alleged. You are thus potentially simultaneously measuring fraud in two different ways that are correlated with each other. In any case, while including the variable for the percent of the population that is Native American reduces the size of the coefficient measuring fraud, the fraud variable is still statistically significant.

Eggers and Grimmer say "Lott's new analysis seems to adopt the data we used (with a different denominator)." But that is wrong. Both times I used the same sources of data from each state's official website. See Appendix 7.

While there are not a lot of degrees of freedom, especially with clustering for just ten states, I have no problem with including state-fixed effects, which is why I provided an estimate with them. But that is not the only way to account for different related factors, such as past changes in turnout, or a dummy for the closest swing states. In any case, in the responses below, I will primarily focus my discussion on the estimate corresponding to the specification in Table 11 that uses the fixed state effects.

The claim regarding Same Day Voter Registration

Four of the ten states examined on voter turnout have same-day voter registration (Iowa, Michigan, Nevada, and Wisconsin (https://www.ncsl.org/research/elections-and-campaigns/same-day-registration.aspx)). One way to address this is to include a dummy variable for the counties in those four states. In the estimate that corresponds to column 6 in Table 11 that accounts for state fixed effects, the coefficient remains unchanged at 0.019 (for a two-tailed t-test $p = 0.017$). See Appendix 2.

Another approach is to remove those four states from the regressions. The coefficient values for the regressions that correspond to those in Table 11 remain virtually unchanged, actually rising very slightly. In the estimate that corresponds to column 6 in Table 11 that accounts for state fixed effects the coefficient changes little to 0.01433 (see Appendix 3). However, because of the reduced number of states with clustering, that one specification is now only statistically significant at the 0.0725 level for a one-tailed t-test. Two of those four states also have counties with large percentages of Native Americans where fraud was alleged.

The claim regarding Menominee County

"In fact, Lott's result is no longer significant if we exclude this one small county in Wisconsin."

Menominee County has a large Native American population, with 43.1 percent. It also had a very large increase in voter turnout. Removing that county picks up some of the effect of controlling for the percent of the population that is Native American.

So how do the results in Table 11 change with the removal of Menominee County, Wisconsin? Not much. In redoing all the regressions in Table 11, the fraud variable remains consistently statistically significant at the 4 percent level for a two-tailed t-test in all the estimates (See Appendix 4). Removing Menominee County, Wisconsin and including the variable for the percent of the population that is Native American reduces the coefficient for the fraud variable from 0.01429 to 0.0109, but it is still statistically significant at the 4.1 percent level for a two-tailed t-test (See Appendix 5).

To further test this issue, I redid the voter turnout variable using registration data from December 1, 2020 compared to the voter registration on December 7, 2016. Doing this would clearly no longer face the problem that Eggers and Grimmer raised, and changing this does indeed dramatically reduce the change in voter turnout in Menominee County in the county from 20.4 percentage points to 12.8 percentage points, but the results are little changed – raising the fraud coefficient for the specification in Table 11 with state fixed effects from 0.0191 ($p = 0.017$) to 0.0177 ($p = 0.020$). See Appendix 6. All the other estimates that correspond to what I showed in Table 11 also indicate similar larger increases in turnout.

The data for 2016 also had voter registration data November 16th, so I tried that but again got very similar results. I report the December data simply because both are almost exactly the same length of time after the election. (The 2016 election was on November 8th and the 2020 election was on November 3rd.)

Including measures for Native Americans in different ways reduces the statistical significance and size of the fraud variable, but the effect of fraud is still present. The issue is that you now have two measures that might be accounting for fraud that are highly correlated with each other.

There are data errors in all data. I have tried to explain why Eggers and Grimmer's decision to look at the voting age population by county ignores the fact that there are large variations across counties in the number of voting-age people who are American citizens and those disqualified to vote because they are felons. I have now shown that their critiques regarding using registered voters doesn't significantly change my results.

Coding for "county where fraud was alleged"

Navarro's paper didn't come out until December 15th, 2020, and I wasn't immediately made aware of it. I had already compiled a list of counties where state Republican parties had filed lawsuits.

As just illustrated above, my approach to this problem has been to exclude different states from the turnout regressions or to account for other control variables to see if it alters the results. For example, Table 12 in my paper includes only Georgia and Pennsylvania as the states for which fraud was alleged. I note that Eggers and Grimmer do not raise any objections to the counties that were identified as engaging in fraud in those states, and yet, I continued to get similar results even when the other four states with alleged fraud were excluded (Arizona, Michigan, Nevada, and Wisconsin). Two of those states (Arizona and Nevada) are ones that Eggers and Grimmer discuss in the last full paragraph on page 4 of their response. If I drop just those two states, it again doesn't alter my results. The results I reported above when dropping out other states to deal with their concerns about same-day registration provide further support for the consistency of these results don't depend on a particular state.

Conclusion

While Eggers and Grimmer concede that "Lott is correct that much of the paper's writing remains unchanged," they complain about the changes in the quantitative analysis. But the only consequential changes were due to updating the data. The changes in Tables 6 or 11 and 12 were not due to changes in specifications, but to changes in the data.

Those corrections in the data would not have occurred without me having to figure out how Eggers and Grimmer changed my regressions, so I am thankful that they didn't actually replicate my work.

Appendixes

Appendix 1: Including a Dummy Variable for States with Same Day Voter Registration

```
. reg  difTrumpPercProvisional difTrumpPercInPerson  countywithfraud, noconst

      Source |       SS       df       MS              Number of obs =      84
-------------+------------------------------           F(  2,    82) =    6.13
       Model |  .666672183     2  .333336092           Prob > F      =  0.0033
    Residual |  4.45927638    82  .054381419           R-squared     =  0.1301
-------------+------------------------------           Adj R-squared =  0.1088
       Total |  5.12594856    84  .061023197           Root MSE      =   .2332

------------------------------------------------------------------------------
difTrumpPercProvis~l |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
---------------------+--------------------------------------------------------
difTrumpPercInPerson |   .7597412   .2619548     2.90   0.005     .2386297    1.280853
     countywithfraud |  -.0363851   .0285769    -1.27   0.207    -.0932335    .0204634
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Appendix 2: Including a Dummy Variable for States with Same Day Voter Registration

```
.   xi: reg diffinturnoutrate20162020new fraud samedayregistration trumpcountiesnew
trumpcountiesnewsq bidencountiesnew bidencountiesnewsq Medianhouseholdincome
PercentFemale PercentBlack PercentHispanicorLatino PercentAsian PercentTwoormoreraces
PercentHighschoolgraduate PercentSomecollegeorassociate PercentBachelorsdegree
PercentGraduateorprofessional Percentage18to29-Percentage80andover i.state,
cluster(state)

i.state           _Istate_1-10        (_Istate_1 for state==AZ omitted)
note: _Istate_7 omitted because of collinearity

Linear regression                                       Number of obs =     767
                                                        F(  8,     9) =       .
                                                        Prob > F      =       .
                                                        R-squared     =  0.4808
                                                        Root MSE      =  .02144

                                              (Std. Err. adjusted for 10 clusters in state)
------------------------------------------------------------------------------
                             |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----------------------------+------------------------------------------------
                       fraud |   .0191216   .0065053     2.94   0.017     .0044055    .0338376
          samedayregistration |   .0104749    .006374     1.64   0.135    -.0039442    .0248939
             trumpcountiesnew |  -.0126323   .0121219    -1.04   0.325    -.0400539    .0147893
           trumpcountiesnewsq |  -.0058858   .0180057    -0.33   0.751    -.0466176    .0348459
             bidencountiesnew |  -.0097464   .0251371    -0.39   0.707    -.0666104    .0471176
           bidencountiesnewsq |   .0592043   .0630655     0.94   0.372    -.0834597    .2018684
        Medianhouseholdincome |  -3.11e-08   1.39e-07    -0.22   0.828    -3.45e-07    2.83e-07
                PercentFemale |  -.0546789   .0969658    -0.56   0.587    -.2740306    .1646729
                PercentBlack |  -.0534654   .0229078    -2.33   0.044    -.1052865   -.0016442
      PercentHispanicorLatino |  -.0315075   .0247134    -1.27   0.234    -.0874132    .0243981
                PercentAsian |  -.2351255   .0552799    -4.25   0.002    -.3601773   -.1100738
       PercentTwoormoreraces |  -.2353757   .1293926    -1.82   0.102    -.5280821    .0573308
    PercentHighschoolgraduate |     .03567   .0460501     0.77   0.458    -.0685025    .1398424
PercentSomecollegeorassociate |   .0416596    .042996     0.97   0.358    -.0556042    .1389234
       PercentBachelorsdegree |  -.0187578   .0440368    -0.43   0.680    -.1183759    .0808603
PercentGraduateorprofessional |   .0630512   .0602099     1.05   0.322     -.073153    .1992554
             Percentage18to29 |  -.1921385   .0800273    -2.40   0.040    -.3731728   -.0111043
             Percentage30to39 |   .0106519   .2073815     0.05   0.960    -.4584776    .4797815
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```
            Percentage40to49 |  -.1500636   .1283339    -1.17   0.272    -.4403751    .1402479
            Percentage50to59 |  -.1383323   .1262357    -1.10   0.302    -.4238974    .1472328
            Percentage60to69 |  -.1010137   .1159654    -0.87   0.406    -.3633457    .1613183
            Percentage70to79 |   .0007874   .1030334     0.01   0.994    -.2322904    .2338652
          Percentage80andover |  -.3462293   .1563076    -2.22   0.054    -.6998217    .0073631
                     _Istate_2 |  -.0173595   .0062702    -2.77   0.022    -.0315436   -.0031754
                     _Istate_3 |  -.0111857   .0082348    -1.36   0.207    -.0298141    .0074428
                     _Istate_4 |  -.0334717   .0022674   -14.76   0.000    -.0386009   -.0283425
                     _Istate_5 |  -.0169766   .0009931   -17.09   0.000    -.0192232   -.0147301
                     _Istate_6 |    .027738   .0067568     4.11   0.003     .012453     .043023
                     _Istate_7 |  -.0488791    .006039    -8.09   0.000    -.0625403   -.0352179
                     _Istate_8 |  -.0214214   .0074092    -2.89   0.018    -.0381822   -.0046605
                     _Istate_9 |   .0202247   .0069187     2.92   0.017     .0045736    .0358758
                    _Istate_10 |          0  (omitted)
                         _cons |    .165236   .1156791     1.43   0.187    -.0964483    .4269202--
------------------------------------------------------------------------------
```

Appendix 3: Removing states with Same Day Voter Registration (Iowa, Michigan, Nevada, and Wisconsin)

```
. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew   bidencountiesnew
PercentFemale PercentBlack PercentHispanicorLatino PercentAsian PercentTwoormoreraces
Percentage18to29-Percentage80andover if samedayregistration == 0, cluster(state)

Linear regression                                      Number of obs =     496
                                                       F(  4,     5) =       .
                                                       Prob > F      =       .
                                                       R-squared     =  0.1556
                                                       Root MSE      =  .02688

                                               (Std. Err. adjusted for 6 clusters in state)
------------------------------------------------------------------------------
                         |               Robust
diffinturnoutrate2016~w |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------------------+----------------------------------------------------------------
                   fraud |   .0239704   .0111397     2.15   0.084    -.0046652    .0526059
       trumpcountiesnew |  -.0423483   .0247294    -1.71   0.147    -.1059172    .0212207
       bidencountiesnew |   .0069605   .0152103     0.46   0.666    -.0321388    .0460597
          PercentFemale |   .0004927   .0977601     0.01   0.996    -.2508077     .251793
           PercentBlack |   -.063258   .0364749    -1.73   0.143    -.1570197    .0305037
PercentHispanicorLatino |  -.0365727   .0402209    -0.91   0.405    -.1399638    .0668184
          PercentAsian |  -.3298214   .1727268    -1.91   0.114    -.7738298    .1141871
  PercentTwoormoreraces |  -.0955536   .2118595    -0.45   0.671    -.6401558    .4490487
       Percentage18to29 |  -.0011967   .1434443    -0.01   0.994    -.3699319    .3675386
       Percentage30to39 |  -.0124632   .1749292    -0.07   0.946    -.4621332    .4372067
       Percentage40to49 |   .1639561   .2662984     0.62   0.565    -.5205857    .8484979
       Percentage50to59 |   .2443144   .1933782     1.26   0.262    -.2527802     .741409
       Percentage60to69 |   .0126988   .2178223     0.06   0.956    -.5472312    .5726287
       Percentage70to79 |   .1277863   .1616675     0.79   0.465    -.2877931    .5433657
    Percentage80andover |  -.1452676   .3310196    -0.44   0.679    -.9961806    .7056454
                  _cons |   .0189609   .1609835     0.12   0.911    -.3948605    .4327822
------------------------------------------------------------------------------

. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew   bidencountiesnew
Medianhouseholdincome PercentFemale PercentBlack PercentHispanicorLatino PercentAsian
PercentTwoormoreraces  PercentHighschoolgraduate PercentSomecollegeorassociate
PercentBachelorsdegree PercentGraduateorprofessional Percentage18to29-Percentage80andover  if
samedayregistration == 0, cluster(state)

Linear regression                                      Number of obs =     496
                                                       F(  4,     5) =       .
                                                       Prob > F      =       .
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                                                R-squared     =  0.1837
                                                Root MSE      =  .02657

                                              (Std. Err. adjusted for 6 clusters in state)
------------------------------------------------------------------------------------------------
                               |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------------------------+-----------------------------------------------------------------
                         fraud |   .0252535   .0097988     2.58   0.050     .0000649    .0504421
                trumpcountiesnew |  -.0428941   .0283114    -1.52   0.190    -.1156709    .0298826
                bidencountiesnew |   .0145363   .0149627     0.97   0.376    -.0239265    .0529991
          Medianhouseholdincome |  -2.59e-07   3.07e-07    -0.84   0.437    -1.05e-06    5.30e-07
                 PercentFemale |  -.0223762   .0778342    -0.29   0.785    -.2224554     .177703
                  PercentBlack |  -.0810542   .0407939    -1.99   0.104    -.1859182    .0238099
        PercentHispanicorLatino |  -.0594638   .0430356    -1.38   0.226    -.1700902    .0511626
                  PercentAsian |  -.2458384   .0934665    -2.63   0.047    -.4861017   -.0055751
          PercentTwoormoreraces |  -.2238189   .1824744    -1.23   0.275    -.6928842    .2452464
      PercentHighschoolgraduate |  -.0804671   .1401826    -0.57   0.591    -.4408179    .2798836
PercentSomecollegeorassociate |   .0232836   .0800798     0.29   0.783    -.1825679    .2291352
         PercentBachelorsdegree |   .0331269   .0914108     0.36   0.732     -.201852    .2681058
PercentGraduateorprofessional |  -.1421611   .1517492    -0.94   0.392    -.5322448    .2479226
               Percentage18to29 |   .0000229   .1613256     0.00   1.000    -.4146778    .4147236
               Percentage30to39 |  -.0141495   .1483428    -0.10   0.928    -.3954767    .3671777
               Percentage40to49 |   .1570183   .1922867     0.82   0.451    -.3372704    .6513069
               Percentage50to59 |   .3015984   .1811381     1.67   0.157    -.1640319    .7672287
               Percentage60to69 |   -.012037   .1905875    -0.06   0.952    -.5019577    .4778837
               Percentage70to79 |   .0685186    .054217     1.26   0.262    -.0708505    .2078878
            Percentage80andover |  -.0592967   .2831583    -0.21   0.842    -.7871782    .6685849
                          _cons |   .0759387    .135075     0.56   0.598    -.2712827      .42316
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. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseholdincome PercentFemale PercentBlack
PercentHispanicorLatino PercentAsian PercentTwoormoreraces  PercentHighschoolgraduate
PercentSomecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
Percentage18to29-Percentage80andover if samedayregistration == 0, cluster(state)

Linear regression                               Number of obs =     496
                                                F(  4,     5) =       .
                                                Prob > F      =       .
                                                R-squared     =  0.1898
                                                Root MSE      =  .02652

                                              (Std. Err. adjusted for 6 clusters in state)
------------------------------------------------------------------------------------------------
                               |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------------------------+-----------------------------------------------------------------
                         fraud |   .0265231   .0093882     2.83   0.037     .0023899    .0506564
                trumpcountiesnew |  -.0054537   .0203825    -0.27   0.800    -.0578486    .0469412
              trumpcountiesnewsq |   -.052627   .0151318    -3.48   0.018    -.0915245   -.0137294
                bidencountiesnew |   .0117672   .0437703     0.27   0.799    -.1007479    .1242823
              bidencountiesnewsq |   .0262774   .0713581     0.37   0.728    -.1571544    .2097091
          Medianhouseholdincome |  -2.48e-07   2.99e-07    -0.83   0.445    -1.02e-06    5.20e-07
                 PercentFemale |  -.0129412   .0707349    -0.18   0.862    -.1947711    .1688888
                  PercentBlack |   -.078797   .0406773    -1.94   0.110    -.1833614    .0257674
        PercentHispanicorLatino |  -.0577129   .0428477    -1.35   0.236    -.1678565    .0524307
                  PercentAsian |  -.2418774   .0955141    -2.53   0.052    -.4874043    .0036494
          PercentTwoormoreraces |  -.1840871   .1939748    -0.95   0.386    -.6827151     .314541
      PercentHighschoolgraduate |  -.0949093   .1370784    -0.69   0.520    -.4472805    .2574619
PercentSomecollegeorassociate |   .0068335   .0748083     0.09   0.931    -.1854674    .1991344
         PercentBachelorsdegree |   .0265866   .0878242     0.30   0.774    -.1991728     .252346
PercentGraduateorprofessional |  -.1578028   .1456717    -1.08   0.328    -.5322637    .2166582
```

```
            Percentage18to29 |   .0171442   .1499413     0.11   0.913    -.3682922    .4025807
            Percentage30to39 |  -.0190624   .1415965    -0.13   0.898    -.3830478    .3449231
            Percentage40to49 |   .1612517   .1869894     0.86   0.428    -.3194198    .6419233
            Percentage50to59 |   .3197196    .175799     1.82   0.129    -.1321861    .7716253
            Percentage60to69 |   .0202896   .1828082     0.11   0.916    -.4496337     .490213
            Percentage70to79 |   .0335863   .0512934     0.65   0.542    -.0982677    .1654403
          Percentage80andover |  -.0263752   .2696102    -0.10   0.926    -.7194303      .66668
                        _cons |   .0692195   .1245424     0.56   0.602    -.2509268    .3893659
------------------------------------------------------------------------------------------------

. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseholdincome PercentFemale PercentBlack
PercentHispanicorLatino PercentAsian PercentTwoormoreraces  PercentHighschoolgraduate
PercentSomecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
diffinturnoutrate20122016 Percentage18to29-Percentage80andover if samedayregistration == 0,
cluster(state)

Linear regression                               Number of obs =     496
                                                F(  4,     5) =       .
                                                Prob > F      =       .
                                                R-squared     =  0.2000
                                                Root MSE      =  .02638

                                               (Std. Err. adjusted for 6 clusters in state)
------------------------------------------------------------------------------------------------
                               |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------------------------+-----------------------------------------------------------------
                        fraud |   .0276702   .0094045     2.94   0.032     .0034951    .0518453
              trumpcountiesnew |   .0016941   .0189014     0.09   0.932    -.0468934    .0502816
            trumpcountiesnewsq |  -.0508653   .0141966    -3.58   0.016    -.0873589   -.0143717
              bidencountiesnew |    .001649   .0474279     0.03   0.974    -.1202682    .1235662
            bidencountiesnewsq |    .032039   .0739548     0.43   0.683    -.1580678    .2221457
         Medianhouseholdincome |  -2.20e-07   2.71e-07    -0.81   0.453    -9.16e-07    4.76e-07
                 PercentFemale |   .0244164   .0770297     0.32   0.764    -.1735949    .2224277
                 PercentBlack |  -.0546072   .0370524    -1.47   0.201    -.1498534    .0406391
       PercentHispanicorLatino |  -.0588034   .0448203    -1.31   0.247    -.1740176    .0564108
                 PercentAsian |  -.2494197   .0953082    -2.62   0.047    -.4944174   -.0044221
          PercentTwoormoreraces |  -.1696703   .1912639    -0.89   0.416    -.6613298    .3219893
     PercentHighschoolgraduate |  -.1003575   .1342177    -0.75   0.488     -.445375    .2446601
PercentSomecollegeorassociate |  -.0000228   .0674083    -0.00   1.000    -.1733014    .1732557
        PercentBachelorsdegree |   .0049117   .0871203     0.06   0.957    -.2190381    .2288615
PercentGraduateorprofessional |  -.1202907   .1291682    -0.93   0.394    -.4523282    .2117469
    diffinturnoutrate20122016 |   .0733807   .0756734     0.97   0.377     -.121144    .2679055
              Percentage18to29 |   .0049344   .1442406     0.03   0.974    -.3658478    .3757167
              Percentage30to39 |  -.0021144    .165331    -0.01   0.990    -.4271114    .4228825
              Percentage40to49 |   .1413071   .1709797     0.83   0.446    -.2982103    .5808245
              Percentage50to59 |   .3068219   .1730575     1.77   0.136    -.1380367    .7516805
              Percentage60to69 |   .0004362   .1686378     0.00   0.998     -.433061    .4339334
              Percentage70to79 |    .050085    .053334     0.94   0.391    -.0870143    .1871843
            Percentage80andover |  -.1067459   .2587339    -0.41   0.697    -.7718425    .5583507
                          _cons |   .0565242   .1245375     0.45   0.669    -.2636095     .376658
------------------------------------------------------------------------------------------------

. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseholdincome PercentFemale PercentBlack
PercentHispanicorLatino PercentAsian PercentTwoormoreraces  PercentHighschoolgraduate
PercentSomecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
closesttossupstates Percentage18to29-Percentage80andover if samedayregistration == 0,
cluster(state)

Linear regression                               Number of obs =     496
                                                F(  4,     5) =       .
```

```
                                                Prob > F      =       .
                                                R-squared     =  0.5120
                                                Root MSE      =   .0206

                                              (Std. Err. adjusted for 6 clusters in state)
------------------------------------------------------------------------------------------
                             |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----------------------------+------------------------------------------------------------
                       fraud |   .0087801   .0038372     2.29   0.071    -.0010838    .0186439
             trumpcountiesnew |   .0082518   .0142681     0.58   0.588    -.0284254     .044929
          trumpcountiesnewsq |  -.0242971   .0099136    -2.45   0.058    -.0497808    .0011866
            bidencountiesnew |  -.0099033   .0329828    -0.30   0.776    -.0946882    .0748815
         bidencountiesnewsq |   .0201285   .0631968     0.32   0.763     -.142324     .182581
       Medianhouseholdincome |  -3.10e-08   2.14e-07    -0.15   0.890    -5.80e-07    5.18e-07
              PercentFemale |  -.0194754   .0608248    -0.32   0.762    -.1758307    .1368798
               PercentBlack |  -.0254923   .0169867    -1.50   0.194    -.0691579    .0181733
     PercentHispanicorLatino |  -.0505903   .0211637    -2.39   0.062    -.1049933    .0038127
               PercentAsian |  -.1453746   .0348702    -4.17   0.009    -.2350112    -.055738
       PercentTwoormoreraces |  -.1189845   .1239212    -0.96   0.381    -.4375339     .199565
   PercentHighschoolgraduate |  -.0299489   .0373163    -0.80   0.459    -.1258736    .0659757
PercentSomecollegeorassociate |   .0048426    .043542     0.11   0.916    -.1070857    .1167708
      PercentBachelorsdegree |  -.0401182   .0409987    -0.98   0.373    -.1455086    .0652723
PercentGraduateorprofessional |   .0320986    .075568     0.42   0.689    -.1621552    .2263524
         closesttossupstates |   .0394147   .0017417    22.63   0.000     .0349375    .0438918
            Percentage18to29 |  -.0844003   .0704087    -1.20   0.284    -.2653918    .0965911
            Percentage30to39 |  -.0286455    .119232    -0.24   0.820     -.335141      .27785
            Percentage40to49 |   .0023879   .1309537     0.02   0.986    -.3342392     .339015
            Percentage50to59 |    .120166   .1039042     1.16   0.300    -.1469282    .3872602
            Percentage60to69 |  -.1672464   .1158928    -1.44   0.209    -.4651583    .1306655
            Percentage70to79 |   .1061435   .0985531     1.08   0.331    -.1471954    .3594824
          Percentage80andover |  -.2141061   .1181239    -1.81   0.130    -.5177532     .089541
                        _cons |   .0890792   .0846552     1.05   0.341     -.128534    .3066923
------------------------------------------------------------------------------------------


. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseholdincome PercentFemale PercentBlack
PercentHispanicorLatino PercentAsian PercentTwoormoreraces PercentHighschoolgraduate
PercentSomecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
Percentage18to29-Percentage80andover  i.state if samedayregistration == 0, cluster(state)
i.state           _Istate_1-10        (_Istate_1 for state==AZ omitted)
note: _Istate_4 omitted because of collinearity
note: _Istate_5 omitted because of collinearity
note: _Istate_7 omitted because of collinearity
note: _Istate_10 omitted because of collinearity

Linear regression                               Number of obs =     496
                                                F(  4,     5) =       .
                                                Prob > F      =       .
                                                R-squared     =  0.5252
                                                Root MSE      =  .02041

                                              (Std. Err. adjusted for 6 clusters in state)
------------------------------------------------------------------------------------------
                             |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----------------------------+------------------------------------------------------------
                       fraud |   .0143258   .0083002     1.73   0.145    -.0070106    .0356623
             trumpcountiesnew |  -.0039989   .0181487    -0.22   0.834    -.0506516    .0426538
          trumpcountiesnewsq |   -.025568   .0122749    -2.08   0.092    -.0571218    .0059857
            bidencountiesnew |   .0108533   .0269102     0.40   0.703    -.0583216    .0800282
```

```
          biden~tiesnewsq |   .0020182    .055996     0.04   0.973    -.1419241    .1459604
        Medianhouseholdincome |   1.62e-08   2.14e-07     0.08   0.943    -5.33e-07    5.66e-07
                PercentFemale |  -.0772896   .0504018    -1.53   0.186    -.2068514    .0522723
                PercentBlack |  -.0532558    .024674    -2.16   0.083    -.1166824    .0101708
      PercentHispanicorLatino |  -.0394264   .0236769    -1.67   0.157    -.1002899    .0214372
                PercentAsian |  -.1401283   .0357743    -3.92   0.011    -.2320892   -.0481675
       PercentTwoormoreraces |  -.1210761   .1109394    -1.09   0.325    -.4062549    .1641027
    PercentHighschoolgraduate |  -.0031568    .042685    -0.07   0.944    -.1128821    .1065686
PercentSomecollegeorassociate |   .0320817   .0529912     0.61   0.571    -.1041365       .1683
       PercentBachelorsdegree |  -.0469054   .0487884    -0.96   0.381      -.17232    .0785092
PercentGraduateorprofessional |   .0269218   .0808159     0.33   0.753    -.1808221    .2346657
             Percentage18to29 |  -.1236164   .0712673    -1.73   0.143    -.3068149    .0595821
             Percentage30to39 |  -.0694217   .1062097    -0.65   0.542    -.3424423     .203599
             Percentage40to49 |  -.0869652   .1120892    -0.78   0.473    -.3750998    .2011693
             Percentage50to59 |   .0790434   .1257348     0.63   0.557    -.2441682    .4022551
             Percentage60to69 |  -.1795134   .0995287    -1.80   0.131    -.4353601    .0763333
             Percentage70to79 |    .067379    .119064     0.57   0.596    -.2386848    .3734427
          Percentage80andover |  -.1945823   .1289935    -1.51   0.192    -.5261706     .137006
                    _Istate_2 |  -.0209922    .008137    -2.58   0.049    -.0419091   -.0000754
                    _Istate_3 |  -.0120885   .0102827    -1.18   0.293    -.0385211     .014344
                    _Istate_4 |          0  (omitted)
                    _Istate_5 |          0  (omitted)
                    _Istate_6 |   .023733   .0078843     3.01   0.030     .0034656    .0440003
                    _Istate_7 |          0  (omitted)
                    _Istate_8 |  -.0225028   .0109349    -2.06   0.095    -.0506119    .0056062
                    _Istate_9 |   .0179465   .0111541     1.61   0.169    -.0107261    .0466191
                   _Istate_10 |          0  (omitted)
                        _cons |   .1558336   .0914125     1.70   0.149    -.0791497     .390817
------------------------------------------------------------------------------------------------
```

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Appendix 4: Estimates with the removal of Menominee County, Wisconsin

```
. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew   biden~tiesnew
PercentFemale PercentBlack PercentHispanicorLatino  PercentAsian PercentTwoormoreraces
Percentage18to29-Percentage80andover if MenomineeWI==0, cluster(state)

Linear regression                                      Number of obs =     766
                                                       F(  8,     9) =       .
                                                       Prob > F      =       .
                                                       R-squared     =  0.1361
                                                       Root MSE      =  .02684

                                          (Std. Err. adjusted for 10 clusters in state)
------------------------------------------------------------------------------------------------
                          |               Robust
diffinturnoutrate2016~w |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------------------+-----------------------------------------------------------------------
                  fraud |   .0223107   .0060452     3.69   0.005     .0086355    .0359858
       trumpcountiesnew |  -.0328832   .0155038    -2.12   0.063    -.0679552    .0021887
       biden~tiesnew |   .0067889   .0093808     0.72   0.488     -.014432    .0280099
          PercentFemale |   .0702015    .135879     0.52   0.618    -.2371781    .3775811
           PercentBlack |  -.0520304   .0188119    -2.77   0.022    -.0945858    -.009475
PercentHispanicorLatino |   -.032401   .0199343    -1.63   0.139    -.0774955    .0126935
           PercentAsian |  -.3798385   .1277916    -2.97   0.016    -.6689232   -.0907538
  PercentTwoormoreraces |  -.2809623   .2515409    -1.12   0.293    -.8499873    .2880628
       Percentage18to29 |   .0485208   .1583093     0.31   0.766    -.3095996    .4066412
       Percentage30to39 |   .1760029   .2361547     0.75   0.475    -.3582161    .7102219
       Percentage40to49 |   .2918422   .3012005     0.97   0.358    -.3895206    .9732051
       Percentage50to59 |   .2274409   .1810107     1.26   0.241    -.1820338    .6369157
       Percentage60to69 |   .0744466    .157341     0.47   0.647    -.2814834    .4303766
```

```
       Percentage70to79 |   .2004689   .1391011     1.44   0.183    -.1141997    .5151375
    Percentage80andover |  -.2346482   .2309812    -1.02   0.336    -.7571639    .2878675
                  _cons |  -.0717403   .1919878    -0.37   0.717    -.5060469    .3625663
------------------------------------------------------------------------------------------

. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew   bidencountiesnew
Medianhouseholdincome PercentFemale PercentBlack PercentHispanicorLatino PercentAsian
PercentTwoormoreraces  PercentHighschoolgraduate PercentSomecollegeorassociate
PercentBachelorsdegree PercentGraduateorprofessional Percentage18to29-Percentage80andover  if
MenomineeWI==0, cluster(state)

Linear regression                                      Number of obs =     766
                                                       F(  8,     9) =       .
                                                       Prob > F      =       .
                                                       R-squared     =  0.1431
                                                       Root MSE      =  .02682

                                               (Std. Err. adjusted for 10 clusters in state)
------------------------------------------------------------------------------------------
                             |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----------------------------+------------------------------------------------------------
                       fraud |   .0218002   .0054123     4.03   0.003     .0095567    .0340437
             trumpcountiesnew |  -.0349193    .015265    -2.29   0.048    -.0694511   -.0003875
             bidencountiesnew |   .0070494   .0076115     0.93   0.379    -.0101691    .0242678
       Medianhouseholdincome |  -2.72e-07   2.24e-07    -1.21   0.256    -7.79e-07    2.35e-07
               PercentFemale |   .0579343   .1309108     0.44   0.669    -.2382065    .3540751
                PercentBlack |  -.0659007   .0173552    -3.80   0.004     -.105161   -.0266405
     PercentHispanicorLatino |  -.0449252   .0269228    -1.67   0.130    -.1058289    .0159784
               PercentAsian |  -.3632367    .112839    -3.22   0.011    -.6184962   -.1079772
       PercentTwoormoreraces |   -.279103   .2333034    -1.20   0.262     -.806872    .2486659
   PercentHighschoolgraduate |  -.0553189   .1367969    -0.40   0.695     -.364775    .2541372
PercentSomecollegeorassociate |  -.0391348   .0637443    -0.61   0.554    -.1833345     .105065
      PercentBachelorsdegree |  -.0029119   .0664063    -0.04   0.966    -.1531335    .1473096
PercentGraduateorprofessional |  -.0350538   .1249341    -0.28   0.785    -.3176744    .2475667
            Percentage18to29 |   .0118789    .149686     0.08   0.938    -.3267345    .3504922
            Percentage30to39 |   .1606733    .215289     0.75   0.475    -.3263442    .6476908
            Percentage40to49 |   .2697946   .2686077     1.00   0.341    -.3378384    .8774275
            Percentage50to59 |   .2577316   .1546959     1.67   0.130    -.0922148     .607678
            Percentage60to69 |   .0381747    .141589     0.27   0.794    -.2821217    .3584712
            Percentage70to79 |   .1587562   .1136448     1.40   0.196    -.0983261    .4158385
         Percentage80andover |  -.2391586   .1878943    -1.27   0.235    -.6642051    .1858879
                       _cons |   .0003505   .1674622     0.00   0.998    -.3784753    .3791762
------------------------------------------------------------------------------------------

. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseholdincome PercentFemale PercentBlack
PercentHispanicorLatino PercentAsian PercentTwoormoreraces  PercentHighschoolgraduate
PercentSomecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
Percentage18to29-Percentage80andover  if MenomineeWI==0, cluster(state)

Linear regression                                      Number of obs =     766
                                                       F(  8,     9) =       .
                                                       Prob > F      =       .
                                                       R-squared     =  0.1459
                                                       Root MSE      =  .02681

                                               (Std. Err. adjusted for 10 clusters in state)
------------------------------------------------------------------------------------------
                             |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----------------------------+------------------------------------------------------------
                       fraud |   .0222663   .0054388     4.09   0.003     .0099628    .0345698
```

```
            trumpcountiesnew |  -.0100919   .0178932    -0.56   0.587    -.0505691    .0303853
          trumpcountiesnewsq |  -.0371748   .0210625    -1.76   0.111    -.0848214    .0104718
            bidencountiesnew |    .005489   .0318329     0.17   0.867     -.066522    .0775001
          bidencountiesnewsq |   .0172776   .0567948     0.30   0.768    -.1112011    .1457563
       Medianhouseholdincome |  -2.60e-07   2.14e-07    -1.22   0.254    -7.44e-07    2.23e-07
              PercentFemale |   .0665916   .1316392     0.51   0.625     -.231197    .3643802
               PercentBlack |  -.0656632   .0182692    -3.59   0.006    -.1069911   -.0243353
     PercentHispanicorLatino |  -.0444137   .0266254    -1.67   0.130    -.1046446    .0158172
              PercentAsian |  -.3667872   .1137656    -3.22   0.010    -.6241428   -.1094315
      PercentTwoormoreraces |  -.2688225   .2427191    -1.11   0.297    -.8178912    .2802462
   PercentHighschoolgraduate |    -.06449    .136706    -0.47   0.648    -.3737405    .2447605
PercentSomecollegeorassociate |  -.0491307   .0587336    -0.84   0.425    -.1819953    .0837339
      PercentBachelorsdegree |  -.0085087   .0636371    -0.13   0.897    -.1524659    .1354485
PercentGraduateorprofessional |  -.0431929    .125847    -0.34   0.739    -.3278786    .2414928
            Percentage18to29 |   .0235455   .1467185     0.16   0.876    -.3083548    .3554458
            Percentage30to39 |   .1708237   .2169358     0.79   0.451    -.3199191    .6615665
            Percentage40to49 |   .2767996   .2669969     1.04   0.327    -.3271893    .8807885
            Percentage50to59 |   .2638563   .1508685     1.75   0.114    -.0774318    .6051445
            Percentage60to69 |   .0581406   .1385868     0.42   0.685    -.2553645    .3716457
            Percentage70to79 |   .1441738   .1153757     1.25   0.243    -.1168241    .4051717
          Percentage80andover |  -.2315633   .1882041    -1.23   0.250    -.6573106     .194184
                        _cons |  -.0061309   .1678738    -0.04   0.972    -.3858878     .373626
------------------------------------------------------------------------------------------------
```

```
. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseholdincome PercentFemale PercentBlack
PercentHispanicorLatino PercentAsian PercentTwoormoreraces  PercentHighschoolgraduate
PercentSomecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
diffinturnoutrate20122016 Percentage18to29-Percentage80andover if MenomineeWI==0,
cluster(state)

Linear regression                               Number of obs =     766
                                                F(  8,     9) =       .
                                                Prob > F      =       .
                                                R-squared     =  0.1576
                                                Root MSE      =  .02665

                                               (Std. Err. adjusted for 10 clusters in state)
------------------------------------------------------------------------------------------------
                               |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------------------------+-----------------------------------------------------------------
                        fraud |   .0239714   .0050138     4.78   0.001     .0126294    .0353133
            trumpcountiesnew |  -.0126785   .0166283    -0.76   0.465    -.0502943    .0249374
          trumpcountiesnewsq |  -.0273904   .0183885    -1.49   0.171     -.068988    .0142072
            bidencountiesnew |  -.0062595   .0357232    -0.18   0.865    -.0870711     .074552
          bidencountiesnewsq |   .0290371   .0609841     0.48   0.645    -.1089186    .1669927
       Medianhouseholdincome |  -2.20e-07   1.64e-07    -1.34   0.214    -5.91e-07    1.52e-07
              PercentFemale |   .0765523   .1301808     0.59   0.571    -.2179372    .3710419
               PercentBlack |  -.0500014   .0264479    -1.89   0.091    -.1098308     .009828
     PercentHispanicorLatino |  -.0444418   .0274653    -1.62   0.140    -.1065725     .017689
              PercentAsian |  -.3424294   .0907216    -3.77   0.004    -.5476558   -.1372029
      PercentTwoormoreraces |   -.269497   .2381252    -1.13   0.287    -.8081737    .2691797
   PercentHighschoolgraduate |   -.062749   .1301032    -0.48   0.641    -.3570628    .2315648
PercentSomecollegeorassociate |  -.0357082   .0574862    -0.62   0.550     -.165751    .0943347
      PercentBachelorsdegree |  -.0214569   .0623076    -0.34   0.738    -.1624066    .1194928
PercentGraduateorprofessional |  -.0267161   .1209444    -0.22   0.830    -.3003113     .246879
    diffinturnoutrate20122016 |   .0642756   .0699537     0.92   0.382    -.0939706    .2225218
            Percentage18to29 |   .0048118   .1316173     0.04   0.972    -.2929272    .3025507
            Percentage30to39 |   .1929733   .2414474     0.80   0.445    -.3532187    .7391653
            Percentage40to49 |   .2243884   .2128824     1.05   0.319     -.257185    .7059617
            Percentage50to59 |   .2605869   .1412097     1.85   0.098    -.0588515    .5800254
            Percentage60to69 |   .0549398   .1393738     0.39   0.703    -.2603457    .3702254
```

```
            Percentage70to79 |   .1637444   .1251168     1.31   0.223    -.1192894    .4467782
          Percentage80andover |  -.3352507   .1819249    -1.84   0.098    -.7467934     .076292
                        _cons |  -.0085907    .165733    -0.05   0.960    -.3835048    .3663234
------------------------------------------------------------------------------------------------

. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseholdincome PercentFemale PercentBlack
PercentHispanicorLatino PercentAsian PercentTwoormoreraces  PercentHighschoolgraduate
PercentSomecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
closesttossupstates Percentage18to29-Percentage80andover if MenomineeWI==0, cluster(state)

Linear regression                                       Number of obs =     766
                                                        F(  8,     9) =       .
                                                        Prob > F      =       .
                                                        R-squared     =  0.3840
                                                        Root MSE      =  .02279

                                                (Std. Err. adjusted for 10 clusters in state)
------------------------------------------------------------------------------------------------
                               |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------------------------+----------------------------------------------------------------
                         fraud |    .008051   .0030544     2.64   0.027     .0011414    .0149606
             trumpcountiesnew |  -.0249266   .0176312    -1.41   0.191     -.064811    .0149579
           trumpcountiesnewsq |  -.0108462   .0163635    -0.66   0.524    -.0478631    .0261706
             bidencountiesnew |  -.0130476    .028913    -0.45   0.662    -.0784534    .0523583
           bidencountiesnewsq |   .0429328   .0527357     0.81   0.437    -.0763636    .1622293
       Medianhouseholdincome |  -2.23e-07   1.59e-07    -1.41   0.193    -5.83e-07    1.36e-07
              PercentFemale |  -.0625058   .0855624    -0.73   0.484    -.2560613    .1310497
               PercentBlack |  -.0602089   .0212596    -2.83   0.020    -.1083014   -.0121164
     PercentHispanicorLatino |  -.0674697   .0185052    -3.65   0.005    -.1093313    -.025608
              PercentAsian |  -.2155087   .0641823    -3.36   0.008    -.3606991   -.0703183
      PercentTwoormoreraces |  -.3352069   .2028815    -1.65   0.133    -.7941567    .1237428
   PercentHighschoolgraduate |  -.0185637   .0420257    -0.44   0.669    -.1136324    .0765051
PercentSomecollegeorassociate |   .0160161   .0319915     0.50   0.629    -.0563536    .0883858
      PercentBachelorsdegree |  -.0219066   .0346895    -0.63   0.543    -.1003796    .0565664
PercentGraduateorprofessional |   .0393403   .0800416     0.49   0.635    -.1417263    .2204068
          closesttossupstates |   .0352959   .0032365    10.91   0.000     .0279745    .0426173
             Percentage18to29 |  -.1544264   .0573463    -2.69   0.025    -.2841526   -.0247002
             Percentage30to39 |   .0360582   .1529932     0.24   0.819    -.3100364    .3821529
             Percentage40to49 |  -.0634231   .1142603    -0.56   0.592    -.3218979    .1950517
             Percentage50to59 |    .107353   .0738066     1.45   0.180    -.0596092    .2743152
             Percentage60to69 |  -.0708822   .1055478    -0.67   0.519    -.3096479    .1678836
             Percentage70to79 |   .0150104   .0755538     0.20   0.847    -.1559041    .1859249
           Percentage80andover |  -.4283336   .1223251    -3.50   0.007    -.7050521    -.151615
                         _cons |   .1507634   .0868676     1.74   0.117    -.0457448    .3472715
------------------------------------------------------------------------------------------------

. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseholdincome PercentFemale PercentBlack
PercentHispanicorLatino PercentAsian PercentTwoormoreraces PercentHighschoolgraduate
PercentSomecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
Percentage18to29-Percentage80andover  i.state if MenomineeWI ==0, cluster(state)
i.state           _Istate_1-10        (_Istate_1 for state==AZ omitted)

Linear regression                                       Number of obs =     766
                                                        F(  8,     9) =       .
                                                        Prob > F      =       .
                                                        R-squared     =  0.4751
                                                        Root MSE      =  .02115

                                                (Std. Err. adjusted for 10 clusters in state)
------------------------------------------------------------------------------------------------
```

```
                                |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------------------------+------------------------------------------------------------------
                        fraud |   .0142819   .0059269     2.41   0.039     .0008742    .0276895
            trumpcountiesnew |  -.0047241   .0089341    -0.53   0.610    -.0249345    .0154862
          trumpcountiesnewsq |  -.0090917   .0146261    -0.62   0.550    -.0421784    .0239949
            bidencountiesnew |   .0003583    .021131     0.02   0.987    -.0474433    .0481599
          bidencountiesnewsq |   .0075987    .048334     0.16   0.879    -.1017403    .1169378
       Medianhouseholdincome |   1.25e-08   1.36e-07     0.09   0.929    -2.96e-07    3.21e-07
               PercentFemale |  -.0129417    .097023    -0.13   0.897     -.232423    .2065395
               PercentBlack |   -.042383   .0204768    -2.07   0.068    -.0887046    .0039387
     PercentHispanicorLatino |  -.0286427   .0247356    -1.16   0.277    -.0845986    .0273132
               PercentAsian |  -.2051968   .0475859    -4.31   0.002    -.3128436     -.09755
       PercentTwoormoreraces |  -.2665614   .1295374    -2.06   0.070    -.5595953    .0264726
   PercentHighschoolgraduate |   .0213394   .0407355     0.52   0.613    -.0708106    .1134895
PercentSomecollegeorassociate |   .0376309   .0449162     0.84   0.424    -.0639766    .1392385
       PercentBachelorsdegree |  -.0280839   .0456656    -0.61   0.554    -.1313867    .0752189
PercentGraduateorprofessional |   .0552605   .0578063     0.96   0.364    -.0755066    .1860275
            Percentage18to29 |  -.1295245   .0746145    -1.74   0.117    -.2983142    .0392653
            Percentage30to39 |   .1011761   .1931812     0.52   0.613    -.3358301    .5381822
            Percentage40to49 |  -.0498905   .1100939    -0.45   0.661    -.2989402    .1991591
            Percentage50to59 |  -.0797123     .10947    -0.73   0.485    -.3273506    .1679259
            Percentage60to69 |  -.0684207   .1204129    -0.57   0.584    -.3408137    .2039723
            Percentage70to79 |     .06339   .0855763     0.74   0.478    -.1301971    .2569771
          Percentage80andover |  -.2781744   .1529089    -1.82   0.102    -.6240784    .0677296
                    _Istate_2 |  -.0222969   .0050996    -4.37   0.002     -.033833   -.0107608
                    _Istate_3 |  -.0164671   .0072537    -2.27   0.049     -.032876   -.0000582
                    _Istate_4 |  -.0245907   .0064518    -3.81   0.004    -.0391856   -.0099958
                    _Istate_5 |  -.0079667   .0060906    -1.31   0.223    -.0217446    .0058112
                    _Istate_6 |   .0228924   .0053993     4.24   0.002     .0106783    .0351064
                    _Istate_7 |  -.0412187   .0041619    -9.90   0.000    -.0506336   -.0318039
                    _Istate_8 |  -.0237029   .0070073    -3.38   0.008    -.0395546   -.0078512
                    _Istate_9 |   .0178433   .0067552     2.64   0.027     .0025619    .0331247
                   _Istate_10 |   .0083108   .0060528     1.37   0.203    -.0053816    .0220033
                        _cons |   .0980189   .1075147     0.91   0.386    -.1451962    .3412341
------------------------------------------------------------------------------------------------

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```

Appendix 5: Estimates with the removal of Menominee County, Wisconsin and including the percent of the population that is Native American Indian

```
. xi: reg diffinturnoutrate20162020new fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseho
> ldincome PercentFemale PercentBlack PercentHispanicorLatino PercentAsian
PercentTwoormoreraces PercentHighschoolgraduate PercentS
> omecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
Percentage18to29-Percentage80andover eg_percent_native
>  i.state if MenomineeWI ==0, cluster(state)
i.state           _Istate_1-10        (_Istate_1 for state==AZ omitted)

Linear regression                                      Number of obs =     766
                                                       F(  8,     9) =       .
                                                       Prob > F      =       .
                                                       R-squared     =  0.4802
                                                       Root MSE      =  .02106

                                             (Std. Err. adjusted for 10 clusters in state)
------------------------------------------------------------------------------------------
                                |               Robust
 diffinturnoutrate20162020new |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
```

fraud	.0109168	.004573	2.39	0.041	.000572	.0212616
trumpcountiesnew	-.0014042	.0095668	-0.15	0.887	-.0230457	.0202374
trumpcountiesnewsq	-.0060048	.0150935	-0.40	0.700	-.0401487	.0281392
bidencountiesnew	-.0078428	.0209254	-0.37	0.716	-.0551793	.0394936
bidencountiesnewsq	.0153333	.0469104	0.33	0.751	-.0907853	.121452
Medianhouseholdincome	6.25e-08	1.36e-07	0.46	0.656	-2.45e-07	3.70e-07
PercentFemale	.0042045	.1058017	0.04	0.969	-.2351355	.2435445
PercentBlack	-.0318007	.0214217	-1.48	0.172	-.08026	.0166587
PercentHispanicorLatino	-.0152364	.0267284	-0.57	0.583	-.0757003	.0452275
PercentAsian	-.1861772	.0406646	-4.58	0.001	-.2781669	-.0941875
PercentTwoormoreraces	-.2874007	.1253654	-2.29	0.048	-.5709969	-.0038045
PercentHighschoolgraduate	.0291007	.044319	0.66	0.528	-.0711558	.1293571
PercentSomecollegeorassociate	.0437343	.0470654	0.93	0.377	-.062735	.1502037
PercentBachelorsdegree	-.0175041	.0469575	-0.37	0.718	-.1237294	.0887212
PercentGraduateorprofessional	.0598967	.0603493	0.99	0.347	-.076623	.1964163
Percentage18to29	-.0987182	.0882841	-1.12	0.292	-.2984307	.1009943
Percentage30to39	.1403165	.2104783	0.67	0.522	-.3358185	.6164514
Percentage40to49	-.0169241	.1196471	-0.14	0.891	-.2875847	.2537365
Percentage50to59	-.052655	.1105844	-0.48	0.645	-.3028142	.1975042
Percentage60to69	-.0465299	.1357048	-0.34	0.740	-.3535155	.2604557
Percentage70to79	.0943973	.091143	1.04	0.327	-.1117824	.300577
Percentage80andover	-.2454947	.1425902	-1.72	0.119	-.5680562	.0770667
eg_percent_native	.000629	.0003008	2.09	0.066	-.0000513	.0013094
_Istate_2	-.0159212	.0053258	-2.99	0.015	-.0279691	-.0038733
_Istate_3	-.0094392	.0068217	-1.38	0.200	-.0248709	.0059925
_Istate_4	-.0156803	.0086721	-1.81	0.104	-.0352979	.0039374
_Istate_5	.0009104	.0087399	0.10	0.919	-.0188606	.0206814
_Istate_6	.0297335	.006165	4.82	0.001	.0157872	.0436798
_Istate_7	-.0365743	.0045466	-8.04	0.000	-.0468595	-.0262891
_Istate_8	-.0147061	.0080606	-1.82	0.101	-.0329405	.0035283
_Istate_9	.0263349	.0076383	3.45	0.007	.0090558	.043614
_Istate_10	.0170963	.0087398	1.96	0.082	-.0026745	.0368672
_cons	.0451008	.1325101	0.34	0.741	-.2546579	.3448595

Appendix 6: Estimates Using Registration Data from December 7, 2016 and December 1, 2020 to get the change in turnout

```
.   xi: reg diffinturnoutrate20162020newDec fraud trumpcountiesnew  trumpcountiesnewsq
bidencountiesnew bidencountiesnewsq Medianhouseholdincome PercentFemale PercentBlack
PercentHispanicorLatino PercentAsian PercentTwoormoreraces PercentHighschoolgraduate
PercentSomecollegeorassociate PercentBachelorsdegree PercentGraduateorprofessional
Percentage18to29-Percentage80andover  i.state , cluster(state)

i.state           _Istate_1-10        (_Istate_1 for state==AZ omitted)

Linear regression                                      Number of obs =     767
                                                       F(  8,     9) =       .
                                                       Prob > F      =       .
                                                       R-squared     =  0.4724
                                                       Root MSE      =  .02109

                                                 (Std. Err. adjusted for 10 clusters in state)
------------------------------------------------------------------------------
                             |               Robust
diffinturnoutrate20162020ne~c |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----------------------------+------------------------------------------------------------------
                       fraud |   .0177149   .0062817     2.82   0.020     .0035048    .0319251
             trumpcountiesnew |  -.0059932   .0089333    -0.67   0.519    -.0262017    .0142152
           trumpcountiesnewsq |  -.0052295   .0165625    -0.32   0.759    -.0426964    .0322374
             bidencountiesnew |  -.0121768   .0242261    -0.50   0.627      -.06698    .0426265
           bidencountiesnewsq |   .0403495    .050434     0.80   0.444    -.0737401    .1544391
```

Medianhouseholdincome	-6.62e-09	1.40e-07	-0.05	0.963	-3.23e-07	3.10e-07
PercentFemale	-.0127894	.0921884	-0.14	0.893	-.221334	.1957552
PercentBlack	-.0410347	.0197715	-2.08	0.068	-.0857609	.0036915
PercentHispanicorLatino	-.0257652	.0242517	-1.06	0.316	-.0806263	.0290959
PercentAsian	-.2233808	.0517172	-4.32	0.002	-.3403732	-.1063885
PercentTwoormoreraces	-.2435768	.1267964	-1.92	0.087	-.5304102	.0432566
PercentHighschoolgraduate	.0194166	.0417531	0.47	0.653	-.0750355	.1138688
PercentSomecollegeorassociate	.0374128	.0440525	0.85	0.418	-.0622409	.1370666
PercentBachelorsdegree	-.013018	.044037	-0.30	0.774	-.1126366	.0866006
PercentGraduateorprofessional	.0491722	.0583099	0.84	0.421	-.0827339	.1810784
Percentage18to29	-.1277791	.0680647	-1.88	0.093	-.2817523	.026194
Percentage30to39	.0976563	.1851802	0.53	0.611	-.3212505	.5165631
Percentage40to49	-.0665663	.0990939	-0.67	0.519	-.2907324	.1575998
Percentage50to59	-.0642454	.0980163	-0.66	0.529	-.2859736	.1574829
Percentage60to69	-.0654486	.1193436	-0.55	0.597	-.3354225	.2045253
Percentage70to79	.0593451	.0804465	0.74	0.479	-.1226375	.2413277
Percentage80andover	-.2925236	.1492914	-1.96	0.082	-.6302442	.045197
_Istate_2	-.0211786	.0050291	-4.21	0.002	-.0325552	-.009802
_Istate_3	-.0152831	.0072315	-2.11	0.064	-.031642	.0010757
_Istate_4	-.0231744	.0067753	-3.42	0.008	-.0385012	-.0078476
_Istate_5	-.0068235	.0064493	-1.06	0.318	-.0214128	.0077658
_Istate_6	.0238924	.005525	4.32	0.002	.011394	.0363908
_Istate_7	-.0407264	.004215	-9.66	0.000	-.0502614	-.0311915
_Istate_8	-.0221708	.007316	-3.03	0.014	-.0387208	-.0056208
_Istate_9	.0190565	.0069358	2.75	0.023	.0033666	.0347465
_Istate_10	.0074094	.0063739	1.16	0.275	-.0070093	.021828
_cons	.096743	.0983317	0.98	0.351	-.1256987	.3191848

Appendix 7: Data sources showing that I didn't use the same source as Eggers and Grimmer

The voter turnout rate is calculated as the percentage of the registered voters who cast the ballots in the election.

1. Arizona

Total eligible registration and total ballots cast from State of Arizona Official Canvass[1], which compiled and issued by the Arizona Secretary of State, has been used as Arizona's voter data.

2. Florida

Florida's voter registration and turnout data for 2016[2] and 2020[3] General Elections are collected from the Florida Department of State's Election Reporting System. This system is provided as a public service by the Florida Department of State in cooperation with the Supervisors of Elections in each of Florida's 67 counties.

3. Georgia

Georgia's voter data are retrieved from Georgia Election Results[4] by Secretary of State. The website provides the link for downloadable "Voter Turnout by Demographics" file[5], which

[1] 2016-https://apps.azsos.gov/election/2016/General/Official%20Signed%20State%20Canvass.pdf
2020- https://azsos.gov/sites/default/files/2020_General_State_Canvass.pdf
[2] https://results.elections.myflorida.com/Index.asp?ElectionDate=11/8/2016&DATAMODE=%20Voter%20Turnout
[3] https://results.elections.myflorida.com/Index.asp?ElectionDate=11/3/2020&DATAMODE=%20Voter%20Turnout
[4] https://sos.ga.gov/page/georgia-election-results
[5] https://sos.ga.gov/sites/default/files/bulk/Voter_Turn_Out_By_Demographics.zip

contains county level voter registration details. Candidates' vote is collected from the certified election results platforms for 2016[6] and 2020[7] General Elections through the Georgia Secretary of State's official website[8].

4. Iowa

Iowa's voter data came from General Election Voter Turnout Reports[9] as well as General Election Canvass Summary[10] by Iowa Secretary of State's Office.

5. Michigan

Michigan Secretary of State's Office provides Voter Turnout data[11] as well as Election Results Data[12] in the format of TAB-delimited by County available to download. Voter Registration Totals by year by county[13] is documented on Michigan Department of State[14].

6. Nevada

Nevada's voter data are derived from Voter Turnout Statistics[15] and Official Election Results[16] on the Nevada Secretary of State's general election results websites.

7. North Carolina

North Carolina State Board of Elections offers access to Voter History Data[17] with files contain group-level counts of voters who participated in a specific election; as well as "Voter Registration Statistics Search[18]," which is a voter tool that lists registration numbers broken down by county.

8. Ohio

Ohio's voter data are gathered from official elections results reports[19] on the Ohio Secretary of State website, which include data on voter registration and turnout by county.

9. Pennsylvania

Pennsylvania's voter registration statistics[20] are derived from Department of State

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[6] https://results.enr.clarityelections.com/GA/63991/184321/en/summary.html
[7] https://results.enr.clarityelections.com/GA/107231/web.264614/#/access-to-races
[8] https://sos.ga.gov/page/georgia-election-results
[9] 2016-https://sos.iowa.gov/elections/pdf/2016/general/turnout.pdf;
2020-https://sos.iowa.gov/elections/pdf/2020/general/turnout.pdf
[10] 2016-https://sos.iowa.gov/elections/pdf/2016/general/canvsummary.pdf;
2020-https://sos.iowa.gov/elections/pdf/2020/general/canvsummary.pdf

[11] 2016- https://mielections.us/election/results/2016GEN_CENR_TURNOUT.html
2020- https://mielections.us/election/results/2020GEN_CENR_TURNOUT.html
[12] https://mielections.us/election/results/2020GEN_CENR.html#;
[13] 2016- https://www.michigan.gov/documents/sos/2016_RegVoterCount_511666_7.pdf
2020- https://www.michigan.gov/documents/sos/2020_Registered_Voter_Count_682262_7.pdf
[14] https://www.michigan.gov/sos/elections/election-results-and-data
[15] 2016- https://www.nvsos.gov/silverstate2016gen/vote-turnout/
2020- https://silverstateelection.nv.gov/vote-turnout/
[16] https://silverstateelection.nv.gov/USPresidential/
[17] https://www.ncsbe.gov/results-data/voter-history-data
[18] https://vt.ncsbe.gov/RegStat/
[19] 2016- https://www.ohiosos.gov/elections/election-results-and-data/2016-official-elections-results/
2020- https://www.ohiosos.gov/elections/election-results-and-data/2020/
[20] 2016-
https://www.dos.pa.gov/VotingElections/OtherServicesEvents/VotingElectionStatistics/Documents/2016%20Election%20VR%20Stats.pdf

Division of Voter Registration, while election results are collected from Pennsylvania's election reporting center[21] by Department of State.

10. Wisconsin

Wisconsin's voter data are collected from canvass reporting system's county by county reports[22] as well as monthly statistical reports of registered voters[23] by Wisconsin Elections Commission.

2020-
https://www.dos.pa.gov/VotingElections/OtherServicesEvents/VotingElectionStatistics/Documents/2020%20Election%20VR%20Stats%20%20FINAL%20REVIEWED.pdf

[21] https://www.electionreturns.pa.gov/ReportCenter/Reports

[22] 2016-
https://elections.wi.gov/sites/elections/files/County%20by%20County%20Report%20President%20of%20the%20United%20States%20Recount.pdf
2020- https://elections.wi.gov/sites/elections/files/County%20by%20County%20Report%20-%20President%20of%20the%20United%20States%20post%20recount.pdf

[23] https://elections.wi.gov/publications/statistics/registration