The Effect of Caucuses on US Primary Elections

IDS 690: Unifying Data Science II

Anna Berman, Kate Coulter, Shota Takeshima

Background

Motivation

In the US presidential voting system, a preliminary round of voting takes place in which voters select a party nominee. The winner of this first election then goes on to run in the general election against the nominees of the other parties. This first round of voting can take place in two very different formats, a primary or a caucus. In primary elections, voters go to polls and cast ballots for their preferred candidate for their party in the general election. In caucuses, on the other hand, voters gather locally to openly debate and decide which candidate to support.

As Caitlin Jewitt put it during an NPR interview, “proponents of caucuses often say that it is deliberative democracy at its finest. It is the chance for people to show up and talk to their neighbors about politics, have informed conversation, talk to representatives from the campaigns and be persuaded” (Cornish 2020). Because caucuses are a more participatory form of elections, proponents of caucuses often believe they make voters feel that they have a voice and that leads to increased voter turnout. Conversely, proponents of primaries retain that caucuses are time consuming and thus less available to all voters. If caucus voters are required to spend hours talking about the candidates and standing in a gymnasium waiting for all people in the room to be counted, perhaps hiring a babysitter to stay home with their kids, that may very well be enough to prevent many from attending.

The following analysis examines the effect of election format on voter turnout. Specifically, do primaries result in higher voter turnout compared to caucus elections?

Research Design

Without the capability to randomly assign election formats to each US state, we turn to voter records from presidential candidate primary and caucus elections as well as records of which format of election each state utilized. In 2020, several states switched from caucuses to primary presidential nominee election including Colorado, Maine, Washington, Minnesota, Kansas, Idaho, Hawaii, and Nebraska. Our design will group states that made the switch from caucuses to primaries in the 2020 election and those that did not, but that had similar changes in voter turnout between 2012 and 2016. We will then do a difference in difference analysis between 2016 and 2020 democratic elections to assess the effect of election format on voter turnout.

Building upon this initial analysis, we also plan to complete a second case study analysis examining one county in a state that made the switch from caucuses to primaries in the 2020 election. This analysis will assess the impact of election format on various demographic groups

such as African Americans or Millenials using a pre-post approach. Ideally, this analysis will shed light onto the differing effects of election format of these unique groups of potential voters. Completion of this phase is contingent on our ability to locate and access voter data for the selected county in both 2016 and 2020.

Data

Data Sources

Based on Nathaniel Rakich's preliminary analysis with FiveThirtyEight, we believe the best source for this data can be taken from the United States Elections Project (Rakich 2020). Voter turnout and election format records were collected from electprojec.org. This data is freely available and was retrieved March 22, 2020 (United States Election Project 2020). Elections included in this analysis include 2008, 2016 and 2020 US primaries. The 2012 primary election was excluded from this analysis as this was an Democratic incumbent year and many voter records were resultantly missing.

States included in the treatment group are Maine, Minnesota, Washington and Colorado as each of these states switched from caucus to primary elections in 2020. States included in the control group are states that had a consistent election format across all three elections. States with unique voting systems such as California were excluded from this analysis. States with presidential nominee elections that were affected by COVID-19 were also excluded from analysis. Finally, states without complete democratic voter turnout data for 2008, 2016, and 2020 elections were excluded from analysis. A complete list of states included in this analysis can be found in Appendix A.

We supplemented this initial data source with data collected by Kaiser Family Foundation, "Population Distribution by Race/Ethnicity". As previously mentioned our second phase is contingent on finding data at the county level for turnout in 2016 and 2020 that includes demographic variables, such as race. Unfortunately we have not been able to find this data so far.

Summary Statistics

Population & Race

2020 population density is relatively similar across both treatment and control groups with mean populations of 4.92 and 6.75 million respectively (and median populations of 4.91 and 5.52 million for control and treatment groups respectively). These statistics are consistent across 2008-2020. Although population density is consistent across groups, racial demographics diverge. Treatment groups have larger proportions of white citizens and a much lower proportions of black citizens compared to control groups. This divergence will be controlled for in the difference in difference analysis. The county pre-post analysis will further examine the effect of election format for specific demographic groups.

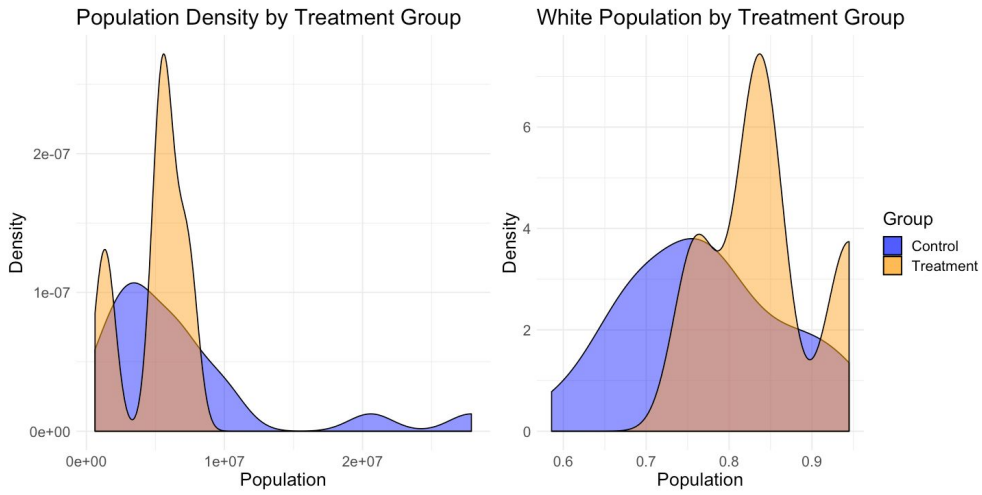

Fig X. Kernel density plots for 2020 total population density and white population proportion in treatment and control groups. Population density is relatively similar across treatment and control groups while treatment groups show a higher proportion of white citizens compared to control groups.

Voter Turnout

On a National level, the mean voter turnout for the Democratic Primaries for 2008, 2016 and 2020 were 15.0%, 10.9% and 15.7% respectively. Each year, states with primaries observe greater voter turnouts with rates 2.5 - 3.4 times that of states with caucuses. This descriptive analysis does not imply causality, but does show evidence for a relationship between election format and voter turnout.

Year	Voter Turnout		Election Format	Voter Turnout	
	Mean	Median		Mean	Median
2008	15%	15.4%	Caucus	7.2%	5.7%
			Primary	18.2%	16.5%
2016	10.9%	10.3%	Caucus	4.3%	4.4%
			Primary	13.6%	11.8%
2020	15.7%	13.2%	Caucus	5%	4.9%
			Primary	17.2%	14.4%

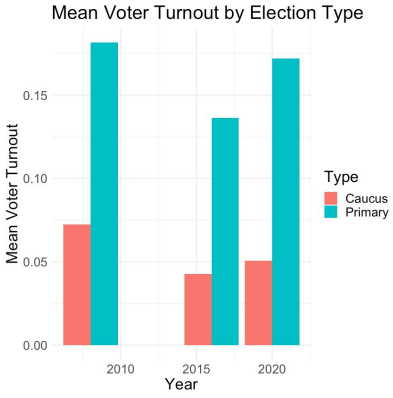

Fig X. Average voter turnout by election format. Primary election formats are associated with much higher voter turnout compared to caucus formats.

Results

National Voter Turnout Difference in Difference

Our results show parallel trends between 2008 and 2016 Democratic primary elections. Between 2008 and 2016 control states saw a 4.3 percentage point drop in voter turnout while treatment states saw a 2.9 percentage point drop. On the other hand, between 2016 and 2020 we can observe stark differences in voter turnout rates. In control states there was a 2.2 percentage point increase in voter turnout while in treatment states there was a 17.9 percentage

point increase. Using a difference in difference approach, the estimate for the effect of primary election format is 15.7 percentage points.

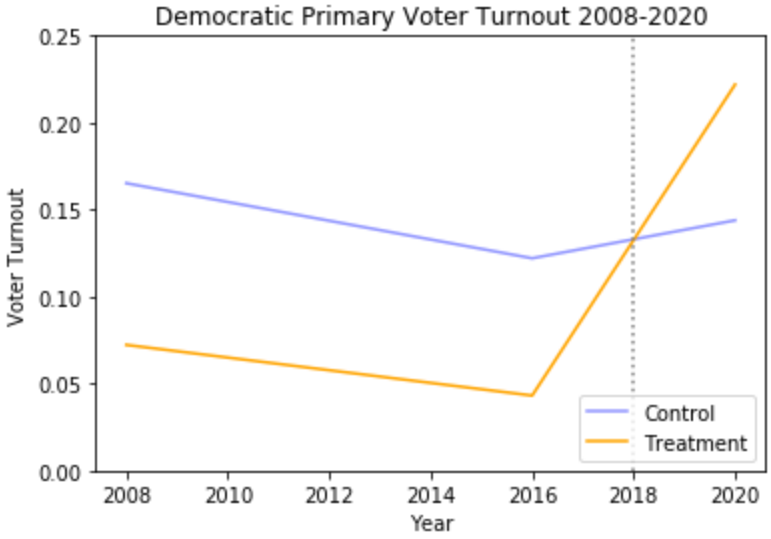

Fig X. Democratic primary voter turnout between 2008 and 2020. Assumptions of parallel trends is met for elections between 2008 and 2020. Voter turnout greatly increased with the switch from caucus to primary election format. The causal effect of primary election format on voter turnout is 15.7 percentage points.

Discussion

Our findings suggest a considerable effect of election format on voter turnout. A 15.7 percentage point increase is enormous considering that the mean voter turnout for democratic caucus elections for 2008, 2016, and 2020 is only 5.6%. While voting regulations continue to be a state-regulated feature of presidential elections, the shift to having fewer caucuses and more typical primaries has continued throughout time and should continue to be monitored as voter turnout is an important feature of a democracy. We expect the second phase of our analysis to further show the important benefits of switching to a primary system, where certain groups benefit even more so to having a system that doesn't require as much to participate as caucuses do, potentially with minority groups seeing even higher levels of increased turnout than groups already represented regardless of the voting system.

References

Cornish, A. (Host). (2020, February 5) Caucuses Or Primaries? Why States Might Pick One Or The Other. [Radio broadcast episode]. https://www.npr.org/2020/02/05/803183343/caucuses-or-primaries-why-states-might-pick-one-or-the-other

Kaiser Family Foundation. Population Distribution by Race/Ethnicity. Retrieved from https://www.kff.org/other/state-indicator/distribution-by-raceethnicity/?dataView=1&currentTimeframe=10&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

Rakich, N. (2020, March 12). Historic Turnout In 2020? Not so Far. Retrieved from https://fivethirtyeight.com/features/historic-turnout-in-2020-not-so-far/

United States Elections Project. (Retrieved 2020, March 22). Voter Turnout Data. http://www.electproject.org/home/voter-turnout/voter-turnout-data

Appendix A

States included in the treatment group are states switched from caucus to primary elections in 2020. States included in the control group are states that had a consistent election format across all three elections. States with unique voting systems such as California were excluded from this analysis. States with presidential nominee elections that were affected by COVID-19 were also excluded from analysis. Finally, states without complete democratic voter turnout data for 2008, 2016, and 2020 elections were excluded from analysis.

Treatment group: Colorado, Washington, Minnesota, & Maine

Control Group: Alabama, Arizona, Arkansas, Florida, Iowa, Massachusetts, Michigan, Mississippi, Missouri, Nevada, New Hampshire, North Carolina, North Dakota, Oklahoma, South Carolina, Tennessee, Texas, Utah, Vermont, & Virginia