

The Effect of Partisan Primaries on Turnout and Representation*

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Abstract

What are the representative and participatory consequences of primary participation rules? Elections rules that open participation to all eligible voters and allow more flexibility at the ballot box should boost turnout and reduce disparities in the primary electorate. However, some scholars argue that disparities in the primary electorate are not that large and that primary rules are ineffective in achieving these goals. Utilizing original panel data on state primary rules and nearly a decade of nationwide voter file data, I use a difference-in-differences design to test the effects of opening primaries to unaffiliated voters on who participates. I find that states increase voter turnout by an average of 5 percentage points when they open their primaries up to unaffiliated voters. Additionally, the makeup of the primary electorate becomes more racially and politically representative of the general election electorate and the pool of eligible voters. I also present evidence that Election Day registration and registration deadlines affect primary election voter turnout. At a time when an unprecedented number of states are considering reforms to their primary systems, this research sheds light on the role that primary rules play in shaping who has democratic voice in America.

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1 Introduction

Do primary election reforms that allow unaffiliated voters to participate increase turnout and make the electorate more representative? Primary elections were instituted as a progressive-era reform aimed at greatly expanding democratic engagement (Hirano and Snyder 2019). However, these nominating contests have consistently attracted a fraction of the participation that general elections receive. Turnout averages only 20% of all eligible voters in recent primary election cycles (Ferrer and Thorning 2023). This lack of interest from voters raises concerns that the voters who do participate in primaries are unrepresentative of voters who participate in general elections or who are eligible to vote (Centeno et al. 2021). Primary elections have been blamed for contributing to many of our democracy’s maladies, including polarization, dysfunctional and unrepresentative government, declining approval of Congress, and negative campaigning (Troiano 2024).

In recent years, states have experimented with the rules governing primary participation, including opening primary participation to unaffiliated voters and instituting nonpartisan primaries. In the 2024 election cycle, voters are likely to weigh in on open and nonpartisan primaries in six states.¹ Yet scholars disagree about the necessity (McDonald and Merivaki 2015; Sides et al. 2020) and the effectiveness (Centeno et al. 2021; Norrander and Wendland 2016) of these reforms.

This project uses original and large-scale administrative data to shed new light on how representative primary electorates are and the test the effectiveness of these reforms in increasing voter turnout and partisan, demographic, and racial diversity of the electorate. I create an original panel of state primary types going back to 2000 and categorizing differences between the two major parties and between presidential, congressional, state executive, and state legislative offices. I combine this with L2 nationwide voter file data for even-year elections between 2014 and 2020, a resource that contains billions of individual observations

¹<https://www.nytimes.com/2024/06/25/us/ohio-redistricting-ballot-measures.html>

and can be used to accurately measure changes in turnout and demographic composition of the electorate over time.

I find in descriptive analysis that states have shifted from hosting closed primaries to primary contests that allow unaffiliated voters to participate. Primary electorates include fewer young and unaffiliated voters than general election contests, and primary voters are less representative of the pool of eligible voters than general election electorates are in terms of partisan composition, racial diversity, age, income, education, and veteran status.

I leverage primary reforms in Colorado, Idaho, and Oklahoma and a difference-in-differences design to test the causal effects of opening primaries to unaffiliated voters on voter turnout and the composition of the electorate. When states allow unaffiliated voters to participate in primaries for the first time, voter turnout increases and the electorate grows more demographically and politically representative. This is the strongest evidence to date that primary rules shape who votes in significant ways.

Finally, I explore the effects of Election Day registration (EDR) and registration deadlines utilizing original panel data on state rules over time. States that adopt see a 3.7 percentage point boost to primary turnout, on average, although this reform does not appear to change the composition of the primary electorate. Additionally, stricter registration deadlines reduce voter turnout. I find that when states move their registration deadline 10 days farther away from election day, voter turnout declines by 1 percentage point and the share of the electorate that is nonwhite declines by 2 percentage points.

2 Existing Literature

Representation in primaries matters because who shows up at the polls shapes who gets nominated and, ultimately, who gets elected. If institutional rules prevent all otherwise eligible voters from participating on Election Day, then the primary electorate might not match either the general election electorate or the broader pool of eligible voters.

Previous scholarship on the composition of primary electorates can be separated into two categories: those comparing differences between primary and general electorates, and those comparing differences between closed and open primaries. In the former case, scholars have long worried that primary electorates are unrepresentative of general electorates, leading primaries to increase polarization among U.S. politicians (Hirano and Snyder 2019). Primary voter turnout is lower than general election voter turnout and has been on the decline over several decades (Hirano 2010), although there appears to be a recent upswing. Participation is particularly low in midterm, off-cycle, runoff, and special primaries. Only 21.3% of eligible voters participated in the 2022 primary elections and only 14.3% participated in the 2014 primary cycle (Ferrer and Thorning 2023). 80% of eligible voters regularly do not participate in selecting which nominees appear in the general election.

Scholars have long worried that primary electorates are unrepresentative (Key jr.) and that primary voters tend to be more ideologically extreme and of higher socioeconomic status than the general electorate (Polsby 1983; Ranney 1975). However, recent scholarship is split on the extent of demographic and ideological disparities between primary and general electorates. Sides et al. (2020) find that primary voters tend to have similar demographic attributes and policy attitudes to rank-and-file voters. On the other hand, McDonald and Merivaki (2015) find that primary voters are more ideologically extreme than general election voters.

Another body of scholarship has investigated whether open primaries lead to more ideologically and demographically representative electorates. A series of recent studies have found little relationship between primary type and ideological orientation of the electorate (McDonald and Merivaki 2015; Norrander and Wendland 2016; Sides et al. 2020). However, primary type does appear to strongly influence party registration and party identification among voters (Burden and Greene 2000; Finkel and Scarrow 1985; Norrander 1989). Primary type also appears to shape the demographics of the electorate in other ways. Open primaries are associated with younger voters (Kaufmann, Gimpel, and Hoffman 2003), whereas closed

primaries are associated with reduced levels of participation by people of color, especially Asian Americans and Latino voters (Centeno et al. 2021).

3 Data and Methods

I create original state-level panel of primary type rules between 2000 and 2024 for each regularly scheduled primary, including DC and excluding Louisiana due to its jungle primary system. The data for this categorization comes from a mix of sources: previous work by Unite America and the National Conference of State Legislatures (NCSL), contemporaneous newspaper reports, archived government websites, and direct communication with state and party officials. Rather than identifying one primary rule for all of the elections in each state, I distinguish Democratic and Republican party primary rules for presidential, congressional, state executive, and state legislative offices. I count a primary election for state executive office as occurring if it includes at least one of the following offices: governor, lieutenant governor, secretary of state, attorney general, state treasurer, state comptroller/controller, state auditor, superintendent of public instruction, agricultural commissions, insurance commissioner, or elected commissioners for labor, mine inspector, land, or tax.² For states that elect some executive offices in one year and some executive offices in a different year, I do not distinguish the specific offices elected but count both years as constituting a state executive primary. I do not distinguish whether the primary was contested, but do exclude cases where the primary was canceled altogether (as has happened with some recent presidential primaries due to COVID-19), as well as cases where a state party convention made nominating decisions even if a nonbinding or "beauty pageant" primary was held. When states hold both a caucus and a primary for president, I count the rules for which the primary was held. When a state only holds a caucus, I identify the rules used for the caucus. When states hold multiple primaries for the same category in the same year (i.e., New York holding separate

²I do not include executive primaries for state board of education or any other state, local, or tribal offices.

primaries for Senate and House elections in 2022), I consider the rules used for the primary that came first in the calendar year.

I categorize states into five types based on their rules for primary voter participation. States with “closed” primaries only allow voters with party affiliation to vote in that party’s primary. They do not allow voters with prior party affiliation to vote in a different party’s primary, nor do they allow voters not registered with a party to vote for partisan offices. States that are “Open To Unaffiliated” allow voters not registered with a party to vote for the party of their choice, but do not allow voters registered with a party to vote in a different party’s primary. States that are “Partially Open” allow both unaffiliated voters and voters registered with a party to vote for the party of their choice. However, that choice registers the voter with that party on the voter file. “Open” primaries are similar to partially open ones, with the difference being that selecting a party’s ballot does not register the voter with that party. Finally “nonpartisan primaries” (also called “multi-party primaries”) group candidates from all parties together on the same ballot. All voters can therefore vote for the candidate of their choice for each office and may select candidates from different parties for different offices. Different variations of nonpartisan primaries include blanket, top-two, and top-four primary systems. In blanket primaries, the top vote-getter from each party advances to the general election. In top-two and top-four systems, the top X number of candidates with the most votes advance, regardless of party affiliation. Therefore, the general election might feature multiple candidates with the same party affiliation. Alaska’s top-four system includes an additional innovation—ranked choice voting in the general election. This helps reduce the incidence of strategic voting and disproportionate outcomes, whereby the majority party splits its votes between two candidates, allowing the less numerous party to get their candidate elected.

I use L2 nationwide voter file data for the descriptive and statistical analysis of turnout and electorate composition. L2 is a private company that combines each state’s voter file and adds a range of demographic and commercial data. I have access to this data for primary

and general elections that took place between 2014 and 2020. The L2 voter file contains millions of observations for each election and billions of observations in total. It is the best data source available for information on who voted in each election, as it is not susceptible to sampling or non-response bias. Following best practices for L2 voter file use (Kim and Fraga 2022), I list the file date used to capture each state-election in Section A.1 in the online appendix.

From the voter file, I derive the number of voters and registrants for each election, both overall and by race. I use L2's proprietary data on registrant race, which is calculated using a proprietary algorithm akin to Bayesian Improved Surname Geocoding that takes into account each voter's name and geographic location (Imai and Khanna 2016). I use citizen voter-age population (CVAP) estimates from the ACS 5-year reports as the denominator in calculations of voter turnout.³ I also calculate racial composition shares as the number of voters of a certain race divided by the total number of voters with racial data available. Nonwhite share is calculated as the share of voters that are not non-Hispanic white. I also use L2 data to calculate the mean age of voters in each election; the share of voters that are Democratic, Republican, Third-party, and unaffiliated; the share of voters that are female; the share of voters that make less than \$50,000 a year, less than \$100,000 a year, and more than \$250,000 a year; the share of voters with at least some college education; the share of voters who are working-class; and the share of voters that are veterans.⁴

I use L2 data to calculate turnout and demographics for both primary and general elections, as well as the differences between the two. I also use L2 to calculate the electorate composition of registered voters and data from the 2018 Cooperative Election Survey (CES) to calculate the electorate composition of all citizen voting-age eligible individuals.⁵

³<https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>

⁴For states that do not report party registration on the voter file, L2 estimates party affiliation from other data. Working-class voters are defined per Carnes (2016) as those who work in food services, laborer, maintenance, manufacturing, office assistant, sales, skilled trades, or transportation.

⁵I subset to respondents who are American citizens and employ the post-stratification weights provided in the survey data. This source allows me to calculate estimates of the pool of eligible voters across all racial, political, and demographic variables except for the share of eligible voters that are veterans.

I estimate the causal effects of opening primaries to participation from unaffiliated voters on electorate demographics by leveraging states that have switched their primary type over the past decade. I employ a difference-in-difference estimation with state and year fixed effects (or state by party by office and year fixed effects). This design accounts for the fact that states that use open primaries might have different electorates than those that use closed primaries for reasons beyond the specific primary type employed, and thus a simple comparison between open and closed primary states (as has been done in previous scholarship) produces a biased estimate of the causal effects of primary type on representation.

My approach builds on existing literature in several ways. First, all previous research has been survey based. These studies utilize a relatively small number of observations, typically between 1,000 and 10,000. Even the largest studies sample fewer than 100,000 people. In contrast, the voter file includes administrative records on every registered voter and amounts to hundreds of millions of observations for each election. Surveys are imperfect because samples can produce noisy estimates, especially for relatively small demographic groups, and because surveys may produce bias. Some surveys eliminate social desirability bias by validating turnout using the voter file, but sampling and non-response bias remain of concern (Grimmer et al. 2018). Administrative data solves these problems, since the sample is the complete population of registered voters. Second, almost all previous research only examines one point in time or spans a handful of elections. My data spans every primary and general election that took place between 2014 and 2020. Third, the panel nature of the voter file allows me to credibly estimate the effects of primary type on the composition of the electorate, relying on weaker inferential assumptions than have been made in previous work.

3.1 Changes in State Primary Type, 2000-2024

Figure 1 shows the percentage of primary elections with each primary type in even-year elections between 2000 and 2024. The data is at the state-office-party level, which means

the figure captures differences in rules between the Democratic and Republican parties and across presidential, congressional, state executive, state legislative offices. The percentage of primary elections that are completely closed has declined over time. In 2000, 36% of all primary elections were closed to unaffiliated voters. By 2024, this has dropped to 31% of all elections. The percentage of primaries that are completely open has also slightly diminished, from 32% in 2000 to 29% in 2024. Opening up primaries to unaffiliated voters, on the other hand, has become much more popular over the past two decades, rising from 17% to 25% of all elections. Finally, more states are experimenting with nonpartisan primaries. In 2000, three states used some form of nonpartisan primaries: California, Nebraska and Washington. Alaska joined this group in the 2022 primary cycle, and several states have nonpartisan primary initiatives on the ballot this year.

Figure 3 narrows in on congressional Democratic and Republican primary rules. Here the y-axis is the number of states holding Congressional primaries using the specified type. Republicans are more likely to use closed primaries, whereas Democrats are more likely to open their congressional primaries to unaffiliated voters. The decline in closed primary type and the increase in open to unaffiliated type has been quite dramatic on the Democratic party side, with the number of states allowing unaffiliated voters to participate on the Democratic side almost doubling over the past twenty years. Similar trends are observed in Republican primaries, albeit to a lesser degree.

Finally, Figure 3 maps each state's congressional primary type in four snapshots over the past quarter-century, with Democratic primary rules in the top panel and Republican primary rules in the bottom panel. For both major parties, it appears most of the reforms have occurred in New England and in the Mountain Western states. Beyond these reforms, regional variation in primary type is also apparent. Most Southern states use open primaries, states in the Midwest tend to use partially open primaries, and New England and mountain west states use a mix of closed and open to unaffiliated rules. Nonpartisan primaries are mostly confined to the Pacific west.

Figure 1: **Type of Presidential, Congressional, State Executive, and State Legislative Primaries, 2000-2024.** This graph displays the percentage of primary elections with each primary type in even-year elections between 2000 and 2024. The data is at the state-office-party level, which means the figure captures differences in rules between the Democratic and Republican parties and across presidential, congressional, state executive, state legislative offices.

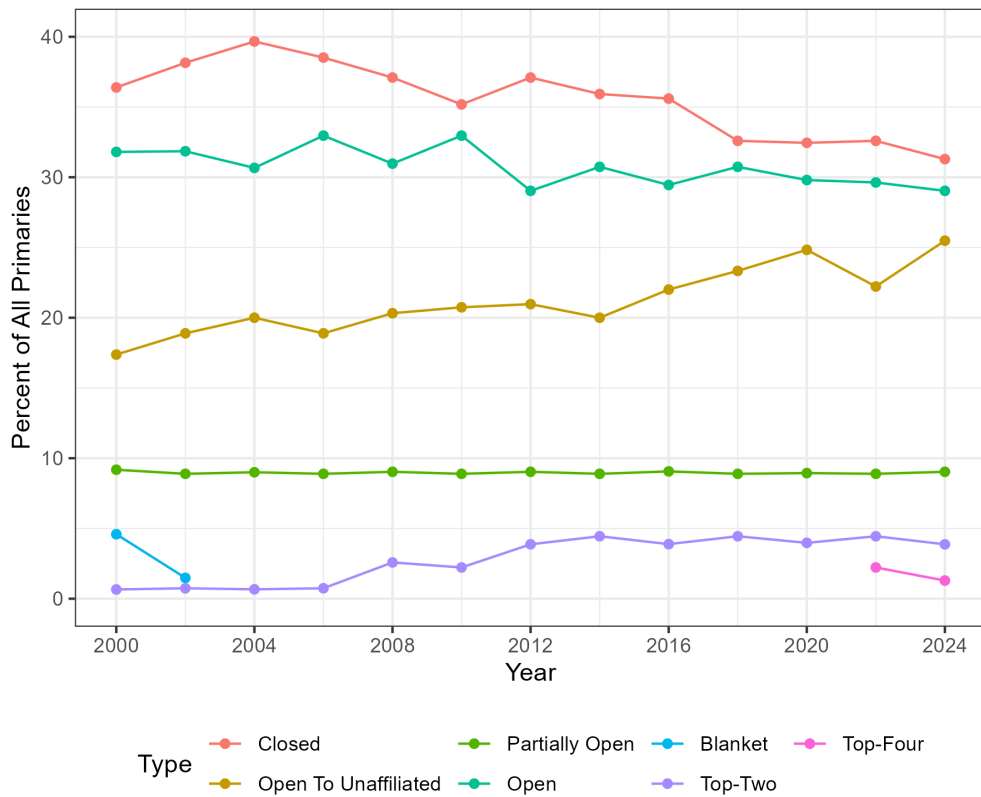


Figure 2: **Type of Congressional Primaries by Party, 2000-2024.** This graph displays the percentage of primary elections with each primary type in even-year congressional elections between 2000 and 2024.

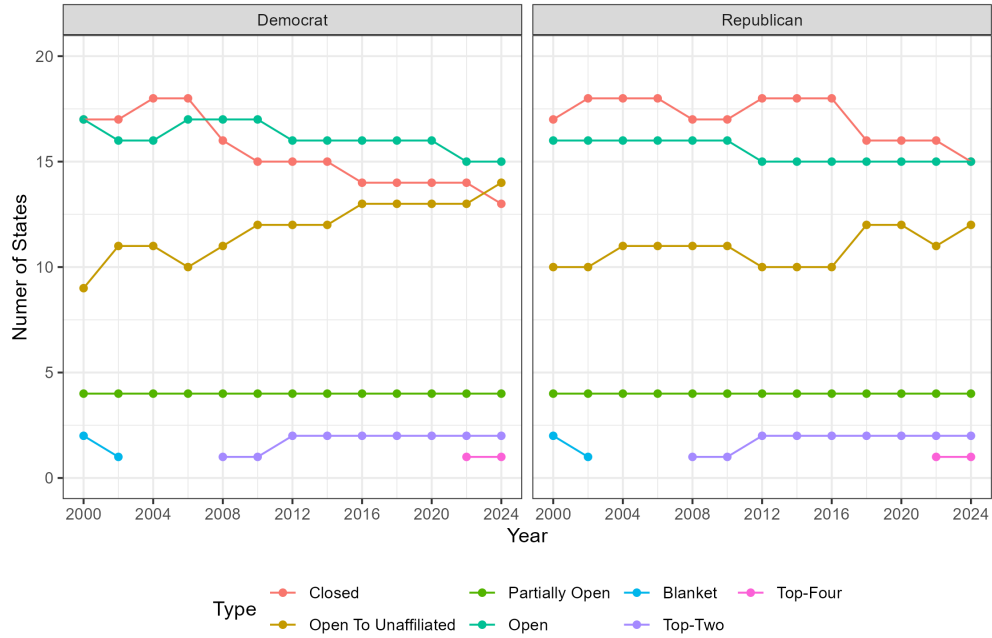
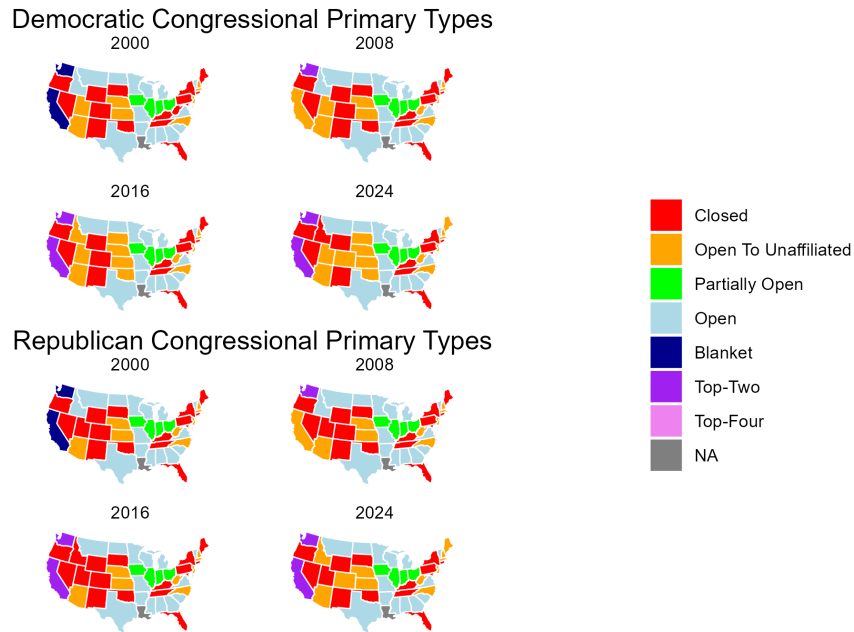


Figure 3: **Map of Congressional Primary Types by Party, 2000-2024.** This graph displays a map of congressional primary type separately for the Democratic and Republican parties at four snapshots in time: 2000, 2008, 2016, and 2024.



4 Descriptive Results

This section examines descriptive evidence for the representativeness of primary electorates and differences in turnout and representation by primary type.

4.1 Do Primary Electorates Resemble General Election and Eligible Voter?

Is the primary electorate unrepresentative of general election or eligible voters? Table 1 shows the average turnout and compositional shares of the primary and general election electorates, as well as the difference between the two. I also show the composition shares of the pool of registered voters and the pool of eligible voters.

In line with previous scholarship, voter turnout rates are much lower in primary elections than in general elections. On average, about one in five eligible voters participate in the average state primary election, compared with over half of eligible voters participating in a typical state's general elections. Primary turnout rates are lower than general election turnout rates across racial and ethnic groups. However, proportionally fewer racial minorities vote in primaries compared with general elections. Fifty-two percent of eligible white voters participate in general elections, compared with 21 in primaries. This means only 40% of white voters who participate in general elections vote in primary elections. Only 10% of eligible Black voters vote in primary elections compared with 27% in general elections, meaning Black primary election turnout is only 37% that of Black general election turnout. And for Latinos and Asians, primary participation is less than 30% that of general election participation. These differential turnout rates contribute to primary electorates that are not racially reflective of the general electorates.

In terms of composition of the electorate, primary and general election voters are similar across a number of categories, including gender, income, education, and veteran balance. Working-class voters are slightly underrepresented in primaries compared to general elec-

Table 1: Turnout and Composition of Primary and General Electorates, 2014-2020

Electorate	Primary	General	Difference	Registered	Eligible
Turnout	21%	53%	-32%		
Black turnout	10%	27%	-17%		
Latino turnout	13%	44%	-30%		
Asian turnout	13%	44%	-30%		
White turnout	21%	52%	-31%		
Share Nonwhite	18%	19%	-2%	22%	25%
Share Black	8%	8%	0%	9%	11%
Share Latino	6%	7%	-1%	8%	8%
Share Asian	2%	3%	0%	3%	3%
Share White	82%	81%	2%	78%	75%
Share Other	2%	2%	0%	2%	4%
Mean age	59	54	5	51	48
Share Democratic	43%	37%	6%	36%	32%
Share Republican	46%	38%	8%	33%	29%
Share 3rd Party	1%	2%	-1%	2%	4%
Share Unaffiliated	10%	23%	-13%	29%	28%
Share Female	54%	53%	0%	53%	51%
Share <50k income	25%	24%	2%	26%	45%
Share <100k income	72%	71%	1%	73%	73%
Share > 250k income	3%	3%	0%	2%	1%
Share some college	68%	68%	0%	67%	63%
Share working-class	28%	30%	-2%	31%	-
Share veteran	6%	5%	1%	4%	11%

Primary, General, and Registered data come from L2 data. “Eligible” is defined as CVAP, or the “citizen voting-age population”. This counts as eligible voters all those who are adults and U.S. citizens, and is a significant improvement over the standard voter-age population (VAP) measure that only takes into account age. It is sourced from the 2018 Congressional Election Survey. Difference is Primary - General. All data is averaged at the state level. The share of eligible voters that are working-class is not available in the CES data.

tions. Primary electorates differ substantially with general electorates on two dimensions: age and partisan affiliation. The primary electorate is older and more likely to be party affiliated. The mean age of voters in primary elections is 59, compared with 54 in general elections. This is unsurprising considering that older voters are more likely to be habitual voters. Primary electorates are also much more major-party affiliated than general electorates. The average primary electorate in a state between 2014 and 2020 was 43% Democratic party-

affiliated, 46% Republican party-affiliated, 1% Third-party affiliated, and 10% unaffiliated. This contrasts with 23% of general election voters who are unaffiliated, on average.

Columns 4 and 5 compare primary and general election voters to the universe of registered and eligible voters. Across virtually every category, the primary electorate is less representative of the pool of citizen voting-age eligible voters than the general electorate, with the pool of registered voters in-between the general and eligible electorates. Nonwhites make up 25% of the pool of eligible voters and 22% of all registered voters in the average state, but only 19% of the general election electorate and 18% of the primary electorate. The average age of eligible voters is 48, compared with 51 among registered, 54 among general election voters, and 59 among primary election voters. Unaffiliated voters comprise 28% of the average state's pool of eligible voters, but 23% of the general electorate and only 10% of the primary electorate. Low-income voters and veterans are severely underrepresented in the primary and general electorates, and those without at least some college education are also underrepresented.

Table A.2 in the appendix shows that differences in the average state's turnout and composition of the primary versus general electorate are consistent across years. Overall primary turnout is far lower than overall general election turnout, ranging from a 23 percentage point difference in 2014 to a 40 percentage point gap in 2020 (likely due, in part, to the onset of the COVID-19 pandemic). Turnout among different racial and ethnic groups are also consistently lower in primary than general elections. Turnout gaps are largest in presidential election cycles, especially since many states choose to hold their presidential and congressional/state primaries on different days and general presidential election turnout far exceeds general midterm turnout. In terms of the makeup of the electorate, unaffiliated, minority, and working class voters are also consistently underrepresented in primary elections.

In summary, primary electorates significantly differ from general electorates and the pool of eligible voters, especially in terms of party affiliation, race, age, and class. Primary electorates are whiter and older than general election and eligible voters. They are also

substantially more likely to affiliate with a major political party. Across all racial, economic, and demographic characteristics studied, primary electorates are worse approximations of the pool of eligible voters than general electorates. This means it is worth studying the effects of reforms designed to increase turnout and make the primary electorate more closely resemble the pool of eligible voters.

4.2 Differences in Turnout and Electorate Composition by Primary Type

How does turnout and demographic composition of primary electorates vary by primary type, relative to general electorates? In other words, under which rules do primary election voters look most similar to general election voters? Table 2 compares primary and general electorates, grouping states by the rules they use to determine who can participate in their congressional primaries. Columns with hyphenated primary types indicate that the Democratic and Republican parties use different rules for congressional contests. All numbers show the gap in turnout or compositional share between primary and general elections, according to the rules used by each state which dictate who can participate in the state's congressional primaries that year. Turnout gaps between primary and general elections tend to be smaller under open or nonpartisan primary rules than under closed primary rules. The average gap in turnout between primaries and general elections under closed primary rules is 34 percentage points, compared with 32 percentage points under open primaries and 21 percentage points under top-two primaries. The same is true of turnout rates for most racial and ethnic groups. The gap in primary turnout for Latinos is 32 percentage points on average under closed primary rules but is 29-30 percentage points under partially open or open rules and is only 23 percentage points under top-two primaries. The gap in Asian turnout between primary and general elections is typically 30 percentage points, but is only 17 percentage points under top-two primaries.

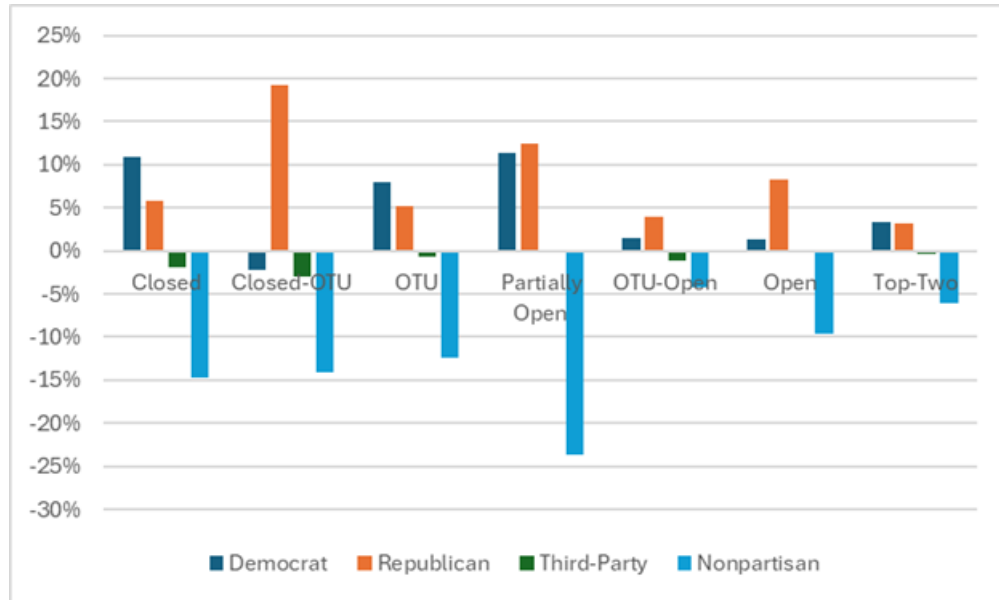
Table 2: Turnout and Composition Differences Between Primary and General Electorates by Congressional Primary Type, 2014-2020

Type	Closed	Closed-OTU	OTU	Partially Open	OTU-Open	Open	Top-Two
Turnout	-34%	-31%	-33%	-33%	-32%	-32%	-21%
Black turnout	-18%	-9%	-15%	-18%	-8%	-18%	-9%
Latino turnout	-32%	-25%	-33%	-29%	-29%	-30%	-23%
Asian turnout	-30%	-38%	-30%	-33%	-14%	-31%	-17%
White turnout	-33%	-30%	-31%	-30%	-37%	-30%	-19%
Share Nonwhite	-1%	-2%	-2%	-1%	-2%	-2%	-4%
Share Black	1%	0%	0%	0%	0%	-1%	0%
Share Latino	-1%	-2%	-1%	-1%	-1%	-1%	-3%
Share Asian	-1%	0%	-1%	0%	0%	0%	-1%
Share White	1%	2%	2%	1%	2%	2%	4%
Share Other	0%	0%	0%	0%	0%	0%	0%
Mean age of voters	5	6	5	5	4	5	5
Share Democratic	11%	-2%	8%	11%	2%	1%	3%
Share Republican	6%	19%	5%	12%	4%	8%	3%
Share 3rd Party	-2%	-3%	-1%	0%	-1%	0%	0%
Share Unaffiliated	-15%	-14%	-12%	-24%	-4%	-10%	-6%
Share Female	1%	1%	0%	0%	1%	0%	0%
Share <50k income	2%	2%	2%	2%	1%	1%	1%
Share <100k income	1%	1%	2%	0%	-1%	0%	0%
Share >250k income	0%	0%	0%	0%	0%	0%	0%
Share some college	0%	0%	0%	0%	0%	0%	0%
Share working-class	-2%	-2%	-1%	-2%	-2%	-2%	-1%
Share veteran	1%	1%	1%	1%	1%	1%	1%
Observations	55	15	37	16	4	60	8

Each value is the difference in average difference in state turnout or electorate composition between primaries and general elections. OTU = “Open-To-Unaffiliated”. Primary type is a combination of primary type for each state’s Democratic and Republican congressional primaries. Hyphenated types indicate the state’s major parties use different rules for primary participation.

In terms of composition of the electorate, there is a clear trend in partisan affiliation, illustrated in Figure 4. Under closed primaries, registered Democrats and Republicans are over-represented by 11 percentage points and 6 percentage points, respectively, compared with the electorate in the general election. In contrast, third-party voters and unaffiliated voters are underrepresented by 2 and 15 percentage points, respectively. These imbalances are much smaller in open primary rules.

Figure 4: **Average Difference In Partisan Composition Between Primary and General Electorates by Congressional Primary Type.** Each bar is the average gap in partisan composition between primary and general electorates among states that use the specified primary type. Positive numbers indicate voters registered with that party affiliation are over-represented in primary elections relative to general elections. Negative numbers indicate voters of that affiliation are underrepresented in primaries.



These comparisons are suggestive rather than causal in nature, since states that happen to have open or nonpartisan primary turnout could attract significantly different primary participation and electorate compositions for reasons besides the participation rules themselves. In the next section, I turn towards a more inferentially sound design testing the effects of primary reform of turnout and electorate composition.

5 Does Opening Primaries to Unaffiliated Voters Affect Turnout and Representation?

In this section, I leverage primary reforms to the rules for participation between 2014 and 2020 to run a difference-in-differences design, comparing changes in turnout and electorate composition of a state that has undergone reform to changes in states that have not reformed their primary systems. The only primary reform states implemented between 2014

and 2020 were switches between closed primary and open-to-unaffiliated primary systems. Therefore, regressions capture the effect of switching from a closed primary to an open-to-unaffiliated primary on turnout and composition of the electorate. Analyses are powered by reforms in three states: Colorado, which opened their primaries to unaffiliated voters in 2018; Idaho, whose Republican party allowed unaffiliated voters to voter for state executive and legislative elections in 2018 and whose Democratic party stopped allowing unaffiliated participation; and Oklahoma, whose Democratic party opened up their congressional and state legislative primaries to unaffiliated voters in 2016. I study the effects of reform on voter turnout, the composition of the electorate, party registration of registered voters, and participation disparities between primary and general elections. All analyses are conducted at the state-party-office-election level. Robustness tests at the state-election level and using only Democratic or Republican congressional primary type as a classifier are found in sections A.3 and A.4 of the online appendix, respectively.

5.1 Impact of Open Primaries on Voter Turnout

Primary election voter turnout is very low. Fewer than 20% of eligible voters have participated in recent midterm primary elections, far below participation rates of general elections (Ferrer and Thorning 2023). When states or parties open their primaries to unaffiliated voters, does this boost participation? Table 3 shows the results of difference-in-differences regressions on the effect of opening primary participation to unaffiliated voters on turnout. Regressions are run at the state-party-office-year level, capturing the fact that primary types vary within some states by party and office. Column 1 shows that overall primary voter turnout increases by 4.9 percentage points, on average, when states allow those without formal party affiliation to participate in the nominating process. Columns 2 through 5 examine changes to turnout levels of specific racial and ethnic groups. This participation boost is shared across racial groups, with Asian and white voters increasing their participation by

approximately 5 percentage points and Black and Latino voters enjoying a 3 percentage point boost to turnout.

Table 3: Opening Primaries to Nonpartisans Increases Voter Turnout

	Turnout	Black Turnout	Asian Turnout	Latino Turnout	White Turnout
	(1)	(2)	(3)	(4)	(5)
Open To Unaffiliated	0.049*** (0.017)	0.028 (0.018)	0.048*** (0.018)	0.029*** (0.010)	0.051*** (0.017)
State x Party x Office FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	1,044	1,044	1,044	1,044	1,044

5.2 Impact of Open Primaries on Turnout and the Electorate

Does opening primaries lead to more ideologically and demographically representative electorates? Table 2 showed that states with more open primary types tend to have primary electorates that are more representative of the general election electorate. However, this relationship could have arisen for other reasons. For example, states that have more open primary types could also happen to have more diverse demographics. Here I examine what happens to the composition of a state’s primary electorate when it starts allowing unaffiliated voters to participate in these contests.

Table 4 shows the effects of opening primaries to unaffiliated voters on the partisan composition of the primary. The unaffiliated share of the electorate increases by 12 percentage points on average and the share of voters who are registered with a third-party increases slightly. These increases come at the expense of the share of voters who are affiliated with the Democratic and Republican parties—whose share decreases by 3 and 9 percentage points, respectively. In other words, as the share of unaffiliated and third-party voters increases, Democratic and Republican shares decrease.

Table 4: Effect of Opening Primaries on Partisan Composition of Electorate

	Nonpartisan Share	Third-party Share	Dem Share	Rep Share
	(1)	(2)	(3)	(4)
Open To Unaffiliated	0.120*** (0.035)	0.001* (0.0004)	-0.030*** (0.008)	-0.091*** (0.030)
State x Party x Office FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Observations	1,044	1,044	1,044	1,044

Table 5 shows that opening primaries to unaffiliated voters increases Asian and Latino participation slightly as a share of the overall electorate. Table 6 examines the effects of primary reform on a range of other demographic characteristics. When states allow unaffiliated participation, the share of male voters increases by about 1 percentage point and the mean age of voters decreases by 1.5 years. It does not appreciably alter the share of voters who are low-income, working-class, without any college education, and who are veterans.

Table 5: Effect of Opening Primaries on Racial Composition of Electorate

	Black Share	Asian Share	Latino Share	Nonwhite Share	White Share
	(1)	(2)	(3)	(4)	(5)
Open To Unaffiliated	-0.004 (0.003)	0.001** (0.001)	0.003** (0.001)	-0.0002 (0.003)	0.0002 (0.003)
State x Party x Office FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	1,044	1,044	1,044	1,044	1,044

5.3 Impact of Open Primaries on Voter Registration

A switch to allowing unaffiliated voters to participate in partisan primaries appears to also affect the balance of party registration. A descriptive analysis of partisan registration by

Table 6: Effect of Opening Primaries on Demographic Composition of Electorate

	Male Share	Mean Age	Low-Income Share	WC Share	Low-Edu Share	Veteran Share
	(1)	(2)	(3)	(4)	(5)	(6)
Open To Unaffiliated	0.010*** (0.002)	-1.554*** (0.515)	-0.002 (0.003)	-0.001 (0.001)	-0.0002 (0.002)	-0.004 (0.003)
State x Party x Office FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,044	1,044	1,044	1,044	1,044	1,044

primary type reveals that in state contests with closed primaries, an average of 23% of registered voters are unaffiliated. By comparison, Open To Unaffiliated contests averaged 34%, Partially Open average 40%, and fully open primaries average 28% unaffiliated share of registrants. Table 7 suggests that primary type may influence whether voters affiliated with a party. When states no longer require party affiliation to participate in the nominating contest, the share of registrants that are unaffiliated with a party increases by almost 3 percentage points and the third-party share of registered voters increases slightly. This comes at the expense of major party registrants. The percentage of registered voters that affiliated with the Democratic and Republican parties both decline by about 1.5 percentage points. This evidence is in line with an explanation that closed primary systems force people to register with major parties, whereas they would prefer to stay unaffiliated if still given the chance to meaningfully participate in the primary process.

Table 7: Effect of Opening Primaries on Partisan Composition of Registered Voters

	Nonpartisan Reg Share	Third-party Reg Share	Dem Reg Share	Rep Reg Share
	(1)	(2)	(3)	(4)
Open To Unaffiliated	0.026 (0.022)	0.002** (0.001)	-0.014* (0.008)	-0.014 (0.016)
State x Party x Office FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Observations	1,044	1,044	1,044	1,044

5.4 Impact of Open Primaries on Disparities Between Primary and General Electorates

Table 1 revealed significant differences in the typical composition of state primaries compared to general elections and the eligible voter electorate. Do primary election reforms reduce disparities in turnout and electorate composition between primary and general election voters? Table 8 shows the effects on participation disparities and Tables 10, 9, and 11 shows the effects on composition disparities in race, party, and other demographics, respectively.

Table 8: Opening Primaries to Nonpartisans Reduces Voter Turnout Gap Between Primary and General Elections

	Turnout (1)	Black Turnout (2)	Asian Turnout (3)	Latino Turnout (4)	White Turnout (5)
Open To Unaffiliated	-0.064*** (0.020)	-0.010 (0.018)	-0.045*** (0.015)	-0.043*** (0.012)	-0.062*** (0.021)
State x Party x Office FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	1,032	1,032	1,032	1,032	1,032

Table 9: Effect of Opening Primaries on Racial Composition Gap Between Primary and General Electorate

	Black Share (1)	Asian Share (2)	Latino Share (3)	Nonwhite Share (4)	White Share (5)
Open To Unaffiliated	0.0001 (0.0005)	-0.001*** (0.0004)	-0.0001 (0.001)	0.001 (0.001)	0.001 (0.001)
State x Party x Office FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	1,032	1,032	1,032	1,032	1,032

The evidence presented in these tables suggest that opening primaries to unaffiliated voters does reduce participation and compositional disparities between primary and general

Table 10: Effect of Opening Primaries on Partisan Composition Gap Between Primary and General Electorate

	Nonpartisan Share	Third-party Share	Dem Share	Rep Share
	(1)	(2)	(3)	(4)
Open To Unaffiliated	-0.094** (0.036)	0.0003 (0.0005)	-0.020*** (0.007)	-0.078*** (0.029)
State x Party x Office FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Observations	1,032	1,032	1,032	1,032

Table 11: Effect of Opening Primaries on Demographic Composition Gap Between Primary and General Electorate

	Male Share	Mean Age	Low-Income Share	WC Share	Low-Edu Share	Veteran Share
	(1)	(2)	(3)	(4)	(5)	(6)
Open To Unaffiliated	-0.003*** (0.001)	-1.453*** (0.537)	0.003 (0.004)	-0.001 (0.001)	-0.002 (0.001)	-0.001 (0.002)
State x Party x Office FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,032	1,032	1,032	1,032	1,032	1,032

elections. When states open their primaries up to unaffiliated voters, turnout disparities between primary and general election turnout decrease by 6.4 percentage points on average. This includes sharply reducing the compositional disparity for unaffiliated voters, as well as the disparity for Democratic and Republican voters. In other words, after implementing more open primaries, the primary electorate looks more similar to the general electorate in terms of partisan representation. Switching to more open primaries also results in a 4.5 percentage point decrease in Asian turnout disparities and a 4.3 percentage point decrease in Latino turnout disparities. However, this only translates into a slight decrease in compositional disparity for Asian voters and no decrease in compositional disparity for Latino voters. Finally, opening up primaries significantly decreases mean age disparities by about 1.5 years on average, and slightly decreases gender disparities.

Unaffiliated, third-party, racial minority, male, and young voters are all underrepresented in primary electorates, as shown in Table 1. Opening primaries to unaffiliated voters alters the primary electorate in ways that reduce representational disparities between who casts votes in primary elections and who is eligible to participate. While the evidence here rests on a relatively small set of reforms, it is the strongest yet that primary reforms can reduce participation disparities at the ballot box.

6 Effect of Registration Deadlines on Primary Election Participation

I test the effects of registration deadlines, a policy related to primary type that affects how close to Election Day eligible voters can register to vote and change their party affiliation. A state's registration deadline is the date by which a voter must register if they wish to vote in the upcoming election. I measure deadlines in days as the length between the registration deadline and the election. Election Day registration (EDR) is a special case where the registration deadline is effectively 0 days. EDR allows voters to register or change their

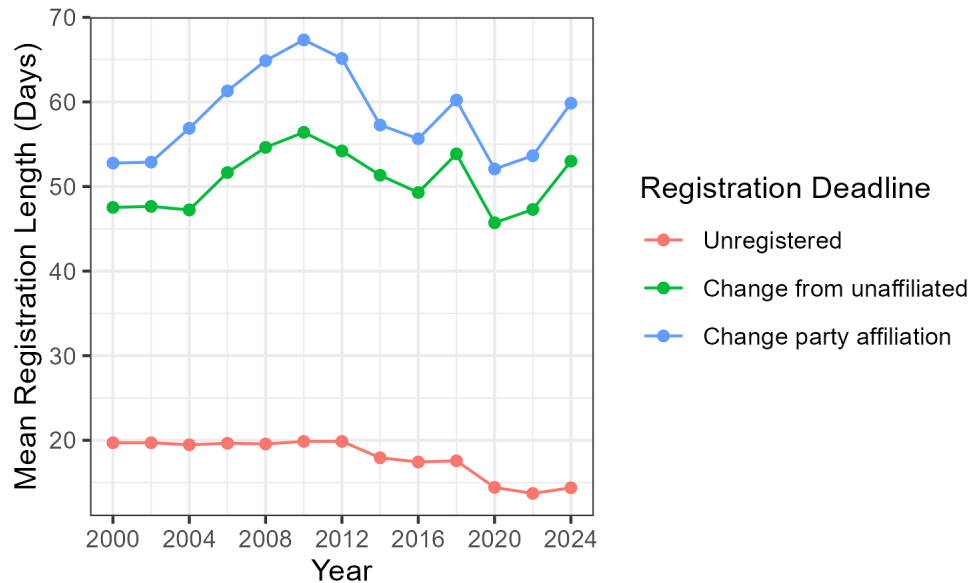
voter registration at the polls on Election Day. I measure registration deadlines in days as the length between the registration deadline and the election. Registration deadlines are only measured for the set of states with closed primary types and are compiled from state statutes. I compile panel data on the implementation of EDR from the NCSL. I first examine the effects of stricter registration deadlines on primary election turnout and composition. I then examine the effects of implementing EDR.

6.1 Effects of Registration Deadlines

There is wide variation among states in terms of the registration deadline. States with EDR effectively have a zero-day registration deadline, as voters can change their registration on Election Day to match the party’s ballot they wish to vote on. The strictest deadline for unregistered voters to register among closed-rule states is Tennessee, which closes its rolls to new registrants 30 days before the primary. States can have up to three different registration deadlines: the deadline for new registrants, the deadline for registered unaffiliated voters to affiliate with a party, and the deadline for voters affiliated with a party to change their affiliation to a different party. For instance, Connecticut allows unregistered voters to register and registered unaffiliated voters to affiliate up to the day before their closed primary election. However, voters who are already affiliated with a party and wishing to switch their affiliation must do so 90 days before the election. New York requires unaffiliated voters and those wishing to switch their party affiliation to do so up to 263 days before the election in order to cast a ballot for their preferred party.

Figure 5 maps changes in registration deadlines over time among states with closed primaries. Deadlines for unregistered voters have declined sharply over the past quarter century. In 2000, the average deadline to register to vote in a closed primary was 20 days—nearly three weeks. In 2024, the average registration deadline was 14 days. However, states have gotten more restrictive over time in their deadlines for unaffiliated voters to register for a party and for already-affiliated voters to change their party registration. In 2000, states

Figure 5: **Average Registration Deadline Among Closed-Primary States, 2000-2024.** “Unregistered” means the number of days prior to Election Day that eligible unregistered voters must register by in order to participate in that primary election. “Change from unaffiliated” means the number of days prior to Election Day that voters registered as unaffiliated must change their registration to affiliate with a party by in order to participate in that party’s primary election. “Change party affiliation” means the number of days prior to Election Day that voters registered with a party must change their party affiliation by in order to participate in the new party’s primary.



required unaffiliated voters to affiliate 48 days prior to Election Day, on average, and required affiliated voters to change their party registration an average of 53 days prior to Election Day. Both of these numbers increased substantially over the following decade, peaking in 2010 at 56 and 67 days, respectively. States have since loosened their deadlines slightly. In the 2024 cycle, closed-primary states, on average, required those without party affiliation to affiliate 53 days prior to Election Day and those changing their party registration to do so 60 days prior to Election Day. In short, closed primary states typically require voters to decide well in advance which primary they intend to participate in.

The analysis here uses difference-in-difference specifications to study the effects of changes in the deadline for unregistered voters to register before the election. Longer registration deadlines appear to reduce turnout slightly. Column 1 of Table 12 shows that a 10-day increase in the registration deadline reduces voter turnout by 1 percentage point, although

the results can not be confidently distinguished from a null effect. Longer registration deadlines appear to deter racial minorities from participating compared to other racial groups (Table 13). A 10-day increase in the registration deadline equates to a small reduction in the share of Asian voters, a 1 percentage point reduction in the share of Latino voters, and a 2 percentage point reduction in the nonwhite share of the electorate. Tables 14 and 15 show that registration deadlines appear to have little effect on the partisan or demographic balance of the electorate.

Table 12: Longer Registration Deadlines Reduce Voter Turnout

	Turnout	Black Turnout	Asian Turnout	Latino Turnout	White Turnout
	(1)	(2)	(3)	(4)	(5)
Registration Deadline (Days)	-0.001 (0.001)	-0.002 (0.002)	0.0005 (0.001)	-0.001 (0.001)	-0.0003 (0.001)
State FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	80	80	80	80	80

Table 13: Effect of Longer Registration Deadlines on Racial Composition of Electorate

	Black Share	Asian Share	Latino Share	Nonwhite Share	White Share
	(1)	(2)	(3)	(4)	(5)
Registration Deadline (Days)	-0.001 (0.001)	-0.0002*** (0.0001)	-0.001* (0.0004)	-0.002*** (0.001)	0.002*** (0.001)
State FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	80	80	80	80	80

6.2 Effects of Election-Day Registration

Over a dozen states have adopted EDR over the past 20 years. Figure 6 maps when states adopted the policy. Election Day registration allows voters to effectively overcome restrictive

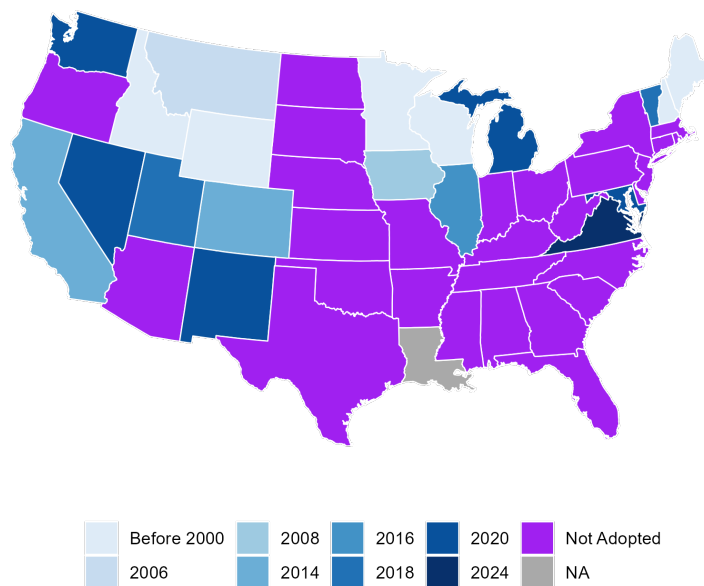
Table 14: Effect of Longer Registration Deadlines on Partisan Composition of Electorate

	Nonpartisan Share	Third-party Share	Dem Share	Rep Share
	(1)	(2)	(3)	(4)
Registration Deadline (Days)	-0.001 (0.001)	-0.0002 (0.0002)	-0.00005 (0.001)	0.001 (0.001)
State FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Observations	80	80	80	80

Table 15: Effect of Longer Registration Deadlines on Demographic Composition of Electorate

	Male Share	Mean Age	Low-Income Share	WC Share	Low-Edu Share	Veteran Share
	(1)	(2)	(3)	(4)	(5)	(6)
Registration Deadline (Days)	-0.0002 (0.0002)	0.0002 (0.043)	-0.001 (0.001)	-0.0002 (0.0002)	0.001*** (0.0001)	-0.0002 (0.0002)
State FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	80	80	80	80	80	80

Figure 6: **Map of Election Day Registration Adoption, 2000-2024.** This map shows when states first adopted Election Day Registration. Louisiana is excluded because it holds a jungle primary on Election Day. Alaska has not implemented EDR and Hawaii enacted EDR in 2014.



primary participation rules. For example, in California the Republican Party holds a “closed” presidential primary, meaning only registered Republicans can participate. However, California also has EDR. This means voters who are unregistered can register as Republicans on the day of the election. It also means that voters registered without a party affiliation or voters registered with another party can change their party registration status at the polling station, and then participate in that primary. Voters might still be dissuaded from participation if they prefer not to be registered as Republicans, but no voter is prevented altogether from participating in the primary of their choice. Therefore, EDR reduces the barriers to participation under closed primary rules.

Tables 16, 18, 17, and 19 show the effects of EDR on primary election turnout and electorate composition. When states implement EDR, they enjoy 3.7 percentage points higher primary turnout, on average. Turnout increases among all racial groups, especially white, Latino, and Asian Americans. Beyond changes in participation, however, it appears

EDR has little effect on the composition of the primary electorate. States that enacted EDR encountered few changes to the racial, partisan, or demographic composition of their electorates, compared with states that did not make this switch.

Table 16: Election-Day Registration Increases Voter Turnout

	Turnout	Black Turnout	Asian Turnout	Latino Turnout	White Turnout
	(1)	(2)	(3)	(4)	(5)
Election-Day Registration	0.037*** (0.012)	0.007 (0.021)	0.026** (0.011)	0.039** (0.016)	0.047*** (0.010)
State FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	196	196	196	196	196

Table 17: Effect of Election-Day Registration on Racial Composition of Electorate

	Black Share	Asian Share	Latino Share	Nonwhite Share	White Share
	(1)	(2)	(3)	(4)	(5)
Election-Day Registration	-0.003 (0.007)	-0.003 (0.004)	0.003 (0.006)	-0.001 (0.014)	0.001 (0.014)
State FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	196	196	196	196	196

Table 18: Effect of Election-Day Registration on Partisan Composition of Electorate

	Nonpartisan Share	Third-party Share	Dem Share	Rep Share
	(1)	(2)	(3)	(4)
Election-Day Registration	-0.019 (0.015)	0.001 (0.001)	0.011 (0.031)	0.007 (0.033)
State FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Observations	196	196	196	196

Table 19: Effect of Election-Day Registration on Demographic Composition of Electorate

	Male Share	Mean Age	Low-Income Share	WC Share	Low-Edu Share	Veteran Share
	(1)	(2)	(3)	(4)	(5)	(6)
Election-Day Registration	0.007* (0.004)	-0.791 (0.594)	0.012 (0.008)	0.003 (0.003)	-0.003 (0.003)	0.002 (0.005)
State FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	196	196	196	196	196	196

7 Conclusion

It has been proposed that more open and nonpartisan primaries can help increase voter turnout and facilitate a more representative electorate when nominating candidates for the general election. Using the most detailed collection of state primary participation rules to date and voter file data, I find that primary electorates are less representative than general electorates, that opening primary elections to unaffiliated voters increase turnout and the representativeness of the primary electorate, and that registration deadlines and Election Day registration also shape voter turnout. The evidence presented here supports these findings across a variety of demographic groups and other characteristics, including partisanship, though not uniformly for all. Notably, more open and nonpartisan primaries enjoy higher participation from unaffiliated voters and the composition of the primary electorate is more representative in terms of partisanship. In other words, more open and nonpartisan primaries do not just make it easier for unaffiliated voters to participate, but under these circumstances voters actually do participate at higher rates and in a way that better reflects the general electorate. In some ways, changing the primary type appears to be even more effective at achieving a more representative electorate than reforms like Election Day Registration, which also reduce barriers to participation.

I plan to conduct two additional validation tests: a generalized synthetic control estimation balancing treated and controlled units on pre-treatment covariates, and a within-state individual fixed effects estimation. I will also test the parallel trends assumption with a time-series plot.

As policymakers and voters across the country consider adopting primary reforms, insofar as their goals might be to increase turnout, especially among unaffiliated voters, and to encourage a more representative primary electorate, they can be confident that more open and nonpartisan primaries will help achieve those goals.

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Online Appendix

Intended for online publication only.

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A.1 L2 Voter File Dates Used

Table A.1: L2 Voter File Dates Used

State	Election Date	Election	File Date	State	Election Date	Election	File Date
AK	8/19/2014	Primary	3/13/2015	ND	6/10/2014	Primary	4/15/2015
AK	11/4/2014	General	3/13/2015	ND	11/4/2014	General	4/15/2015
AK	8/16/2016	Primary	1/27/2017	ND	6/14/2016	Primary	9/28/2016
AK	11/8/2016	General	5/25/2017	ND	11/8/2016	General	2/9/2017
AK	8/21/2018	Primary	5/3/2019	ND	6/12/2018	Primary	5/13/2019
AK	11/6/2018	General	5/3/2019	ND	11/6/2018	General	5/13/2019
AK	8/18/2020	Primary	2/3/2021	ND	6/9/2020	Primary	9/18/2020
AK	11/3/2020	General	2/3/2021	ND	11/3/2020	General	3/18/2021
AL	6/3/2014	Primary	4/10/2015	NE	5/13/2014	Primary	3/25/2015
AL	11/4/2014	General	4/10/2015	NE	11/4/2014	General	3/25/2015
AL	3/1/2016	Primary	3/7/2017	NE	5/10/2016	Primary	10/3/2016
AL	11/8/2016	General	3/7/2017	NE	11/8/2016	General	5/25/2017
AL	6/5/2018	Primary	5/16/2019	NE	5/15/2018	Primary	5/3/2019
AL	11/6/2018	General	5/16/2019	NE	11/6/2018	General	5/3/2019
AL	3/3/2020	Primary	8/14/2020	NE	5/12/2020	Primary	1/20/2021
AL	11/3/2020	General	2/24/2021	NE	11/3/2020	General	7/13/2021
AR	5/20/2014	Primary	3/24/2015	NH	9/9/2014	Primary	3/20/2015
AR	11/4/2014	General	3/24/2015	NH	11/4/2014	General	3/20/2015
AR	3/1/2016	Primary	9/23/2016	NH	9/13/2016	Primary	8/15/2018
AR	11/8/2016	General	3/29/2017	NH	11/8/2016	General	8/15/2018
AR	5/22/2018	Primary	9/20/2018	NH	9/11/2018	Primary	5/13/2019
AR	11/6/2018	General	5/13/2019	NH	11/6/2018	General	5/13/2019
AR	3/3/2020	Primary	7/30/2020	NH	9/8/2020	Primary	3/25/2021
AR	11/3/2020	General	3/16/2021	NH	11/3/2020	General	3/25/2021
AZ	8/26/2014	Primary	4/22/2015	NJ	6/3/2014	Primary	2/25/2015
AZ	11/4/2014	General	4/22/2015	NJ	11/4/2014	General	2/25/2015
AZ	8/30/2016	Primary	4/12/2017	NJ	6/2/2015	Primary	12/12/2015
AZ	11/8/2016	General	4/12/2017	NJ	11/3/2015	General	9/29/2016
AZ	8/28/2018	Primary	5/10/2019	NJ	6/7/2016	Primary	9/29/2016
AZ	11/6/2018	General	5/10/2019	NJ	11/8/2016	General	3/31/2017
AZ	8/4/2020	Primary	1/13/2021	NJ	6/6/2017	Primary	9/20/2017
AZ	11/3/2020	General	5/20/2021	NJ	11/7/2017	General	3/6/2018
CA	6/3/2014	Primary	1/29/2015	NJ	6/5/2018	Primary	10/16/2018
CA	11/4/2014	General	5/21/2015	NJ	11/6/2018	General	3/1/2019
CA	6/7/2016	Primary	9/29/2016	NJ	6/4/2019	Primary	9/30/2019
CA	11/8/2016	General	3/25/2017	NJ	11/5/2019	General	2/26/2020

State	Election Date	Election	File Date	State	Election Date	Election	File Date
CA	6/5/2018	Primary	1/31/2019	NJ	7/7/2020	Primary	3/11/2021
CA	11/6/2018	General	8/2/2019	NJ	11/3/2020	General	3/11/2021
CA	3/3/2020	Primary	7/2/2020	NJ	6/8/2021	Primary	11/3/2021
CA	11/3/2020	General	8/24/2021	NM	6/3/2014	Primary	3/19/2015
CO	6/24/2014	Primary	5/5/2015	NM	11/4/2014	General	3/19/2015
CO	11/4/2014	General	5/5/2015	NM	6/7/2016	Primary	9/28/2016
CO	6/28/2016	Primary	10/13/2016	NM	11/8/2016	General	2/8/2017
CO	11/8/2016	General	2/8/2017	NM	6/5/2018	Primary	5/3/2019
CO	6/26/2018	Primary	12/20/2018	NM	11/6/2018	General	5/3/2019
CO	11/6/2018	General	5/8/2019	NM	6/2/2020	Primary	2/25/2021
CO	6/30/2020	Primary	10/30/2020	NM	11/3/2020	General	2/25/2021
CO	11/3/2020	General	5/28/2021	NV	6/10/2014	Primary	1/30/2015
CT	8/12/2014	Primary	3/25/2015	NV	11/4/2014	General	5/28/2015
CT	11/4/2014	General	3/25/2015	NV	6/14/2016	Primary	10/7/2016
CT	8/9/2016	Primary	1/20/2017	NV	11/8/2016	General	5/24/2017
CT	11/8/2016	General	6/9/2017	NV	6/12/2018	Primary	5/3/2019
CT	8/14/2018	Primary	5/8/2019	NV	11/6/2018	General	5/3/2019
CT	11/6/2018	General	5/8/2019	NV	6/9/2020	Primary	12/17/2020
CT	8/11/2020	Primary	3/30/2021	NV	11/3/2020	General	6/13/2021
CT	11/3/2020	General	3/30/2021	NY	6/24/2014	Primary	1/15/2015
DC	4/1/2014	Primary	3/7/2015	NY	9/9/2014	Primary	1/15/2015
DC	11/4/2014	General	3/7/2015	NY	11/4/2014	General	7/28/2015
DC	6/14/2016	Primary	9/23/2016	NY	9/10/2015	Primary	12/11/2015
DC	11/8/2016	General	2/15/2017	NY	11/3/2015	General	5/27/2016
DC	6/19/2018	Primary	5/3/2019	NY	6/28/2016	Primary	10/23/2016
DC	11/6/2018	General	5/3/2019	NY	9/13/2016	Primary	3/13/2017
DC	6/2/2020	Primary	1/30/2021	NY	11/8/2016	General	3/13/2017
DC	11/3/2020	General	7/5/2021	NY	9/12/2017	Primary	8/14/2018
DE	9/9/2014	Primary	2/23/2015	NY	11/7/2017	General	8/14/2018
DE	11/4/2014	General	2/23/2015	NY	6/26/2018	Primary	10/19/2018
DE	9/13/2016	Primary	1/17/2017	NY	9/13/2018	Primary	2/27/2019
DE	11/8/2016	General	1/11/2018	NY	11/6/2018	General	2/27/2019
DE	9/6/2018	Primary	5/10/2019	NY	6/25/2019	Primary	11/19/2019
DE	11/6/2018	General	5/10/2019	NY	11/5/2019	General	8/24/2020
DE	9/15/2020	Primary	3/24/2021	NY	6/23/2020	Primary	3/15/2021
DE	11/3/2020	General	3/24/2021	NY	11/3/2020	General	3/15/2021
FL	8/26/2014	Primary	1/28/2015	NY	6/22/2021	Primary	11/3/2021
FL	11/4/2014	General	5/16/2015	OH	5/6/2014	Primary	1/8/2015
FL	8/30/2016	Primary	1/27/2017	OH	11/4/2014	General	7/29/2015
FL	11/8/2016	General	3/6/2017	OH	5/5/2015	Primary	12/11/2015

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FL	8/28/2018	Primary	5/8/2019	OH	11/3/2015	General	5/22/2016
FL	11/6/2018	General	5/8/2019	OH	3/15/2016	Primary	10/5/2016
FL	8/18/2020	Primary	2/4/2021	OH	11/8/2016	General	6/30/2017
FL	11/3/2020	General	2/4/2021	OH	5/2/2017	Primary	6/28/2018
GA	5/20/2014	Primary	5/16/2015	OH	11/7/2017	General	6/28/2018
GA	11/4/2014	General	5/16/2015	OH	5/8/2018	Primary	5/9/2019
GA	5/24/2016	Primary	9/23/2016	OH	11/6/2018	General	5/9/2019
GA	11/8/2016	General	8/16/2017	OH	5/7/2019	Primary	11/26/2019
GA	5/22/2018	Primary	5/11/2019	OH	11/5/2019	General	5/3/2020
GA	11/6/2018	General	5/11/2019	OH	4/28/2020	Primary	1/7/2021
GA	6/9/2020	Primary	11/19/2020	OH	11/3/2020	General	5/28/2021
GA	11/3/2020	General	7/16/2021	OK	6/24/2014	Primary	3/26/2015
HI	8/9/2014	Primary	3/5/2015	OK	11/4/2014	General	3/26/2015
HI	11/4/2014	General	3/5/2015	OK	6/28/2016	Primary	10/3/2016
HI	8/13/2016	Primary	3/22/2017	OK	11/8/2016	General	4/22/2017
HI	11/8/2016	General	3/22/2017	OK	6/26/2018	Primary	10/9/2018
HI	8/11/2018	Primary	5/13/2019	OK	11/6/2018	General	5/3/2019
HI	11/6/2018	General	5/13/2019	OK	6/30/2020	Primary	2/8/2021
HI	8/8/2020	Primary	4/1/2021	OK	11/3/2020	General	2/8/2021
HI	11/3/2020	General	4/1/2021	OR	5/20/2014	Primary	4/16/2015
IA	6/3/2014	Primary	1/27/2015	OR	11/4/2014	General	4/16/2015
IA	11/4/2014	General	3/25/2015	OR	5/17/2016	Primary	10/26/2016
IA	6/7/2016	Primary	10/18/2016	OR	11/8/2016	General	6/6/2017
IA	11/8/2016	General	6/13/2017	OR	5/15/2018	Primary	8/27/2018
IA	6/5/2018	Primary	5/10/2019	OR	11/6/2018	General	5/8/2019
IA	11/6/2018	General	5/10/2019	OR	5/19/2020	Primary	2/5/2021
IA	6/2/2020	Primary	10/22/2020	OR	11/3/2020	General	2/5/2021
IA	11/3/2020	General	3/4/2021	PA	5/20/2014	Primary	5/1/2015
ID	5/20/2014	Primary	2/23/2015	PA	11/4/2014	General	5/1/2015
ID	11/4/2014	General	2/23/2015	PA	5/19/2015	Primary	12/12/2015
ID	5/17/2016	Primary	10/5/2016	PA	11/3/2015	General	3/8/2016
ID	11/8/2016	General	3/20/2017	PA	4/26/2016	Primary	2/14/2017
ID	5/15/2018	Primary	8/21/2018	PA	11/8/2016	General	2/14/2017
ID	11/6/2018	General	5/3/2019	PA	5/16/2017	Primary	8/24/2018
ID	5/19/2020	Primary	10/4/2020	PA	11/7/2017	General	8/24/2018
ID	11/3/2020	General	3/16/2021	PA	5/15/2018	Primary	8/24/2018
IL	3/18/2014	Primary	1/8/2015	PA	11/6/2018	General	8/22/2019
IL	11/4/2014	General	3/2/2015	PA	5/21/2019	Primary	8/22/2019
IL	3/15/2016	Primary	9/23/2016	PA	11/5/2019	General	2/29/2020
IL	11/8/2016	General	3/17/2017	PA	6/2/2020	Primary	2/17/2021

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IL	3/20/2018	Primary	7/28/2018	PA	11/3/2020	General	2/17/2021
IL	11/6/2018	General	5/14/2019	RI	9/9/2014	Primary	3/6/2015
IL	3/17/2020	Primary	7/14/2020	RI	11/4/2014	General	3/6/2015
IL	11/3/2020	General	3/5/2021	RI	9/13/2016	Primary	1/18/2017
IN	5/6/2014	Primary	5/6/2015	RI	11/8/2016	General	6/8/2017
IN	11/4/2014	General	5/6/2015	RI	9/12/2018	Primary	5/10/2019
IN	5/3/2016	Primary	9/23/2016	RI	11/6/2018	General	5/10/2019
IN	11/8/2016	General	4/7/2017	RI	9/8/2020	Primary	3/16/2021
IN	5/8/2018	Primary	10/17/2018	RI	11/3/2020	General	3/16/2021
IN	11/6/2018	General	5/3/2019	SC	6/10/2014	Primary	10/22/2014
IN	6/2/2020	Primary	1/15/2021	SC	11/4/2014	General	4/9/2015
IN	11/3/2020	General	7/8/2021	SC	6/14/2016	Primary	10/3/2016
KS	8/5/2014	Primary	2/26/2015	SC	11/8/2016	General	2/24/2017
KS	11/4/2014	General	2/26/2015	SC	6/12/2018	Primary	9/11/2018
KS	8/2/2016	Primary	2/16/2017	SC	11/6/2018	General	5/11/2019
KS	11/8/2016	General	2/16/2017	SC	6/9/2020	Primary	9/16/2020
KS	8/7/2018	Primary	5/3/2019	SC	11/3/2020	General	5/21/2021
KS	11/6/2018	General	5/3/2019	SD	6/3/2014	Primary	7/29/2015
KS	8/4/2020	Primary	3/16/2021	SD	11/4/2014	General	7/29/2015
KS	11/3/2020	General	3/16/2021	SD	6/7/2016	Primary	9/28/2016
KY	5/20/2014	Primary	3/5/2015	SD	11/8/2016	General	2/20/2017
KY	11/4/2014	General	3/5/2015	SD	6/5/2018	Primary	5/11/2019
KY	5/17/2016	Primary	9/23/2016	SD	11/6/2018	General	5/11/2019
KY	11/8/2016	General	3/3/2017	SD	6/2/2020	Primary	1/22/2021
KY	5/22/2018	Primary	9/29/2018	SD	11/3/2020	General	7/6/2021
KY	11/6/2018	General	5/10/2019	TN	8/7/2014	Primary	2/23/2015
KY	6/23/2020	Primary	5/11/2021	TN	11/4/2014	General	2/23/2015
KY	11/3/2020	General	5/11/2021	TN	8/4/2016	Primary	2/17/2017
LA	11/4/2014	General	2/23/2015	TN	11/8/2016	General	2/17/2017
LA	10/24/2015	Primary	1/29/2016	TN	8/2/2018	Primary	5/10/2019
LA	11/21/2015	General	5/22/2016	TN	11/6/2018	General	5/10/2019
LA	11/8/2016	General	2/14/2017	TN	8/6/2020	Primary	3/29/2021
LA	10/14/2017	Primary	6/25/2018	TN	11/3/2020	General	3/29/2021
LA	11/18/2017	General	6/25/2018	TX	3/4/2014	Primary	11/8/2014
LA	11/6/2018	General	5/15/2019	TX	11/4/2014	General	7/31/2015
LA	10/12/2019	Primary	2/27/2020	TX	3/1/2016	Primary	9/30/2016
LA	11/16/2019	General	2/27/2020	TX	11/8/2016	General	3/12/2017
LA	11/3/2020	General	7/7/2021	TX	3/6/2018	Primary	6/29/2018
MA	9/9/2014	Primary	4/2/2015	TX	11/6/2018	General	5/24/2019
MA	11/4/2014	General	4/2/2015	TX	3/3/2020	Primary	3/25/2021

State	Election Date	Election	File Date	State	Election Date	Election	File Date
MA	9/8/2016	Primary	4/11/2017	TX	11/3/2020	General	3/25/2021
MA	11/8/2016	General	4/11/2017	UT	6/24/2014	Primary	3/6/2015
MA	9/4/2018	Primary	5/10/2019	UT	11/4/2014	General	3/6/2015
MA	11/6/2018	General	5/10/2019	UT	6/28/2016	Primary	10/3/2016
MA	9/1/2020	Primary	1/19/2021	UT	11/8/2016	General	6/2/2017
MA	11/3/2020	General	7/8/2021	UT	6/26/2018	Primary	5/3/2019
MD	6/24/2014	Primary	2/25/2015	UT	11/6/2018	General	5/3/2019
MD	11/4/2014	General	2/25/2015	UT	6/30/2020	Primary	9/30/2020
MD	4/26/2016	Primary	10/3/2016	UT	11/3/2020	General	3/26/2021
MD	11/8/2016	General	6/9/2017	VA	6/10/2014	Primary	4/18/2015
MD	6/26/2018	Primary	5/10/2019	VA	11/4/2014	General	4/18/2015
MD	11/6/2018	General	5/10/2019	VA	6/9/2015	Primary	9/30/2015
MD	6/2/2020	Primary	2/15/2021	VA	11/3/2015	General	5/23/2016
MD	11/3/2020	General	2/15/2021	VA	6/14/2016	Primary	9/28/2016
ME	6/10/2014	Primary	4/29/2015	VA	11/8/2016	General	3/29/2017
ME	11/4/2014	General	4/29/2015	VA	6/13/2017	Primary	10/7/2017
ME	6/14/2016	Primary	10/5/2016	VA	11/7/2017	General	8/27/2018
ME	11/8/2016	General	4/7/2017	VA	6/12/2018	Primary	2/25/2019
ME	6/12/2018	Primary	7/17/2019	VA	11/6/2018	General	2/25/2019
ME	11/6/2018	General	7/17/2019	VA	6/11/2019	Primary	9/16/2019
ME	7/14/2020	Primary	5/28/2021	VA	11/5/2019	General	3/1/2020
ME	11/3/2020	General	5/28/2021	VA	6/23/2020	Primary	5/28/2021
MI	8/5/2014	Primary	2/28/2015	VA	11/3/2020	General	5/28/2021
MI	11/4/2014	General	2/28/2015	VA	6/8/2021	Primary	11/3/2021
MI	8/2/2016	Primary	2/21/2017	VT	8/26/2014	Primary	3/20/2015
MI	11/8/2016	General	2/21/2017	VT	11/4/2014	General	3/20/2015
MI	8/7/2018	Primary	5/13/2019	VT	8/9/2016	Primary	2/14/2017
MI	11/6/2018	General	5/13/2019	VT	11/8/2016	General	2/14/2017
MI	8/4/2020	Primary	1/30/2021	VT	8/14/2018	Primary	5/12/2019
MI	11/3/2020	General	11/3/2021	VT	11/6/2018	General	5/12/2019
MN	8/12/2014	Primary	3/3/2015	VT	8/11/2020	Primary	5/28/2021
MN	11/4/2014	General	3/3/2015	VT	11/3/2020	General	5/28/2021
MN	8/9/2016	Primary	3/10/2017	WA	8/5/2014	Primary	5/5/2015
MN	11/8/2016	General	3/10/2017	WA	11/4/2014	General	5/5/2015
MN	8/14/2018	Primary	5/10/2019	WA	8/4/2015	Primary	12/14/2015
MN	11/6/2018	General	5/10/2019	WA	11/3/2015	General	10/28/2016
MN	8/11/2020	Primary	2/14/2021	WA	8/2/2016	Primary	12/23/2016
MN	11/3/2020	General	2/14/2021	WA	11/8/2016	General	5/24/2017
MO	8/5/2014	Primary	3/2/2015	WA	8/1/2017	Primary	12/19/2017
MO	11/4/2014	General	3/2/2015	WA	11/7/2017	General	7/15/2018

State	Election Date	Election	File Date	State	Election Date	Election	File Date
MO	8/2/2016	Primary	2/8/2017	WA	8/7/2018	Primary	5/12/2019
MO	11/8/2016	General	2/8/2017	WA	11/6/2018	General	5/12/2019
MO	8/7/2018	Primary	5/10/2019	WA	8/6/2019	Primary	12/20/2019
MO	11/6/2018	General	5/10/2019	WA	11/5/2019	General	3/3/2020
MO	8/4/2020	Primary	2/11/2021	WA	8/4/2020	Primary	12/9/2020
MO	11/3/2020	General	2/11/2021	WA	11/3/2020	General	7/22/2021
MS	6/3/2014	Primary	3/17/2015	WI	8/26/2014	Primary	3/3/2015
MS	11/4/2014	General	3/17/2015	WI	11/4/2014	General	3/3/2015
MS	3/8/2016	Primary	10/3/2016	WI	8/9/2016	Primary	3/30/2017
MS	11/8/2016	General	3/7/2017	WI	11/8/2016	General	3/30/2017
MS	6/5/2018	Primary	9/18/2018	WI	8/14/2018	Primary	5/10/2019
MS	11/6/2018	General	3/11/2019	WI	11/6/2018	General	5/10/2019
MS	3/10/2020	Primary	6/9/2020	WI	8/11/2020	Primary	2/24/2021
MS	11/3/2020	General	3/23/2021	WI	11/3/2020	General	2/24/2021
MT	6/3/2014	Primary	3/27/2015	WV	5/13/2014	Primary	3/16/2015
MT	11/4/2014	General	3/27/2015	WV	11/4/2014	General	3/16/2015
MT	6/7/2016	Primary	10/3/2016	WV	5/10/2016	Primary	9/28/2016
MT	11/8/2016	General	7/14/2017	WV	11/8/2016	General	4/3/2017
MT	6/5/2018	Primary	5/3/2019	WV	5/8/2018	Primary	8/14/2018
MT	11/6/2018	General	5/3/2019	WV	11/6/2018	General	5/12/2019
MT	6/2/2020	Primary	12/14/2020	WV	6/9/2020	Primary	10/6/2020
MT	11/3/2020	General	11/3/2021	WV	11/3/2020	General	3/11/2021
NC	5/6/2014	Primary	7/29/2015	WY	8/19/2014	Primary	3/30/2015
NC	11/4/2014	General	7/29/2015	WY	11/4/2014	General	3/30/2015
NC	3/15/2016	Primary	10/19/2016	WY	8/16/2016	Primary	2/2/2017
NC	6/7/2016	Primary	10/19/2016	WY	11/8/2016	General	7/17/2017
NC	11/8/2016	General	5/24/2017	WY	8/21/2018	Primary	5/12/2019
NC	5/8/2018	Primary	5/10/2019	WY	11/6/2018	General	5/12/2019
NC	11/6/2018	General	5/10/2019	WY	8/18/2020	Primary	1/13/2021
NC	3/3/2020	Primary	8/14/2020	WY	11/3/2020	General	7/6/2021
NC	11/3/2020	General	5/18/2021				

File date is the date of the L2 file grab for the corresponding election in that state.

A.2 Additional Descriptive Tables

Table A.2: Differences in Turnout and Composition Between Primary and General Electorates By Year, 2014-2020

Year	2014	2016	2018	2020
Turnout	-23%	-37%	-29%	-40%
Black turnout	-11%	-20%	-15%	-20%
Latino turnout	-19%	-38%	-26%	-39%
Asian turnout	-18%	-36%	-27%	-40%
White turnout	-22%	-35%	-28%	-38%
Share Nonwhite	-1%	-2%	-2%	-1%
Share Black	-1%	0%	0%	1%
Share Latino	0%	-1%	-1%	-2%
Share Asian	0%	0%	0%	-1%
Share White	1%	2%	2%	1%
Share Other	0%	0%	0%	0%
Mean age of voters	4	6	5	6
Share Democratic	2%	7%	6%	9%
Share Republican	11%	8%	6%	5%
Share 3rd Party	-1%	-1%	-1%	-1%
Share Unaffiliated	-11%	-15%	-12%	-13%
Share Female	0%	0%	0%	2%
Share <50k income	3%	1%	1%	1%
Share <100k income	0%	1%	1%	0%
Share >250k income	0%	0%	0%	0%
Share some college	-1%	0%	0%	0%
Share working-class	-2%	-2%	-1%	-2%
Share veteran	1%	0%	1%	1%

Each cell shows the average state primary turnout/electorate composition in that year - the average state general election turnout/electorate composition. For share rows, positive values indicate over-representation in the primary election relative to the general election and negative values indicate under-representation. All data is averaged at the state level.

A.3 Turnout and Compositional Effects - Congressional Democrat Type

Table A.3: Opening Primaries to Nonpartisans Increases Voter Turnout (Congressional Democratic Type)

	Turnout	Black Turnout	Asian Turnout	Latino Turnout	White Turnout
	(1)	(2)	(3)	(4)	(5)
Open To Unaffiliated	0.029 (0.039)	0.055*** (0.014)	0.023 (0.044)	0.020 (0.020)	0.032 (0.038)
State FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	195	195	195	195	195

Table A.4: Effect of Opening Primaries on Racial Composition of Electorate (Congressional Democratic Type)

	Black Share	Asian Share	Latino Share	Nonwhite Share	White Share
	(1)	(2)	(3)	(4)	(5)
Open To Unaffiliated	0.0001 (0.007)	0.001 (0.001)	0.001 (0.003)	0.003 (0.004)	-0.003 (0.004)
State FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	195	195	195	195	195

Table A.5: Effect of Opening Primaries on Partisan Composition of Electorate (Congressional Democratic Type)

	Nonpartisan Share	Third-party Share	Dem Share	Rep Share
	(1)	(2)	(3)	(4)
Open To Unaffiliated	0.103 (0.078)	0.001 (0.001)	-0.042** (0.018)	-0.062 (0.070)
State FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Observations	195	195	195	195

Table A.6: Effect of Opening Primaries on Demographic Composition of Electorate (Congressional Democratic Type)

	Male Share	Mean Age	Low-Income Share	WC Share	Low-Edu Share	Veteran Share
	(1)	(2)	(3)	(4)	(5)	(6)
Open To Unaffiliated	0.011* (0.006)	-1.736** (0.857)	0.001 (0.007)	-0.002 (0.001)	-0.001 (0.004)	-0.009*** (0.003)
State FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	195	195	195	195	195	195

A.4 Turnout and Compositional Effects - Congressional Republican Type

Table A.7: Opening Primaries to Nonpartisans Increases Voter Turnout (Congressional Republican Type)

	Turnout	Black Turnout	Asian Turnout	Latino Turnout	White Turnout
	(1)	(2)	(3)	(4)	(5)
Open To Unaffiliated	0.074** (0.031)	-0.016 (0.049)	0.086*** (0.025)	0.038* (0.021)	0.074** (0.030)
State FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	195	195	195	195	195

Table A.8: Effect of Opening Primaries on Racial Composition of Electorate (Congressional Republican Type)

	Black Share	Asian Share	Latino Share	Nonwhite Share	White Share
	(1)	(2)	(3)	(4)	(5)
Open To Unaffiliated	-0.012*** (0.004)	0.001 (0.002)	0.006** (0.002)	-0.005 (0.007)	0.005 (0.007)
State FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	195	195	195	195	195

Table A.9: Effect of Opening Primaries on Partisan Composition of Electorate (Congressional Republican Type)

	Nonpartisan Share	Third-party Share	Dem Share	Rep Share
	(1)	(2)	(3)	(4)
Open To Unaffiliated	0.151* (0.087)	0.0004 (0.001)	-0.023 (0.023)	-0.128* (0.067)
State FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Observations	195	195	195	195

Table A.10: Effect of Opening Primaries on Demographic Composition of Electorate (Congressional Republican Type)

	Male Share	Mean Age	Low-Income Share	WC Share	Low-Edu Share	Veteran Share
	(1)	(2)	(3)	(4)	(5)	(6)
Open To Unaffiliated	0.010 (0.006)	-1.286 (1.707)	-0.009* (0.005)	-0.002 (0.002)	0.002 (0.003)	0.005 (0.009)
State FEs	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	195	195	195	195	195	195