

# Voter Registration Policy: Effects and Potential for Increasing Electoral Equity

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## About CIRCLE and the Authors

CIRCLE (The Center for Information & Research on Civic Learning and Engagement) is a nonpartisan, independent, academic research center that studies young people in politics and presents detailed data on young voters in all 50 states. CIRCLE is part of the Jonathan M. Tisch College of Civic Life at Tufts University.

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## Abstract

In the past two decades, voter registration policies have changed to provide more options for citizens to register to vote through state elections websites, automatically through interactions with state agencies, on the day of elections or early voting, and before they turn 18 years of age. Despite these expansions in the methods available for citizens to register to vote, voter registration has remained significant barrier to participation for young voters and voters from historically underrepresented backgrounds. In this study, we seek to evaluate the extent to which expansions in voter registration policies in recent years have impacted voter registration and turnout in the United States, especially among young voters and racial or ethnic minority voters.

Using a nationally-representative voter file sample and an analysis of state-level policies, we conduct an empirical, multi-level analysis to estimate the potential impacts of expanded voter registration policies (specifically Automatic Voter Registration (AVR), Online Voter Registration (OVR), Same-day Voter Registration (SDR), and pre-registration of youth before they turn 18 (pre-reg)) on voter registration and turnout while controlling for both individual and contextual state- and county-level factors that are known to impact voting behavior.

We find that although there is a correlation between SDR and turnout, and between OVR and registration rates, these relationships are not significant after controlling for confounding factors at the state and county level. However, when we look at subgroups of interest, there are significant relationships between policy and outcomes. For youth, same day registration is positively associated with voting, but negatively associated with registration, which may indicate that SDR is supporting those voters most susceptible to being dropped from the rolls. OVR is associated with higher registration rates among youth and negatively associated with turnout. This suggests that while OVR makes registration more accessible to young people, it is not mobilizing them to get to the polls. For people of color, we see a similar negative relationship between SDR and registration, which again may mean that the most vulnerable parts of the population are not staying on the rolls between elections. While these findings are somewhat complex to parse, they do offer some initial evidence for the role that expansive registration policies can play in reaching traditionally underrepresented voters and merit further study.

## Introduction

Despite the founding principles of American democracy that establish each person has an equal voice and vote, there are deeply entrenched disparities in electoral participation. These gaps have serious consequences for the long-term well-being of democratic institutions and the American people, as low participation can erode trust and credibility while deepening existing inequalities in society across economic, social, and demographic groups. Further complicating matters is the system of voting in the United States, which in most states requires that individuals register to vote ahead of the election—in some cases weeks in advance, with deadlines often coming before interest in the campaigns is at its peak. That system of voter registration itself may be one of the most important barriers to civic participation (Ansolabehere & Konisky, 2004) that drives aforementioned disparities.

Recently, there have been efforts to pass policies that would remove some of these barriers to participation related to voter registration. Unlike some policies that seem to have more impact on

stimulating already-registered voters rather than compelling new voters (Berinsky, 2005), a slate of new policies may provide inroads among some groups that have encountered hurdles to registration.

In this paper, we seek to evaluate the extent to which expanded voter registration policies have already begun to impact voter registration and turnout in the United States. First, we summarize the long-established indicators that describe variation in voter turnout and the theoretical underpinnings of these patterns. Next, we draw on existing research to discuss the potential of four voter registration policies—Automatic Voter Registration (AVR), Online Voter Registration (OVR), Same-Day Voter Registration (SDR), and pre-registration of youth before they turn 18 (pre-reg)—to increase registration and turnout rates among traditionally underrepresented members of electorate. We then conduct an empirical analysis using a nationally representative, multi-level dataset to estimate policy impacts on registration and voting while controlling for both individual and contextual factors that are known to impact voting behavior.

We find that, among those most marginalized, some policies do appear to have significant potential for increasing representation. Finally, we conclude with the implications of our findings and discuss possible avenues for future study.

## Inequitable Participation

Despite repeated progress toward extending enfranchisement to a broader proportion of the population, voter turnout in the United States remains relatively low, with between 50%-65% of the voting eligible population turning out to the polls in any given national general election. These rates vary considerably, however, by a number of individual and contextual factors which have been observed to be correlated with or potentially cause lower voting rates among certain groups in the electorate, with the most marginalized individuals often being the least likely to vote. Many researchers have boiled down these differences in civic participation to a triad of individual characteristics: education, age, and residential stability. When each of these is higher, so is the probability of voting (Rosenstone & Hansen, 1993; Squire et al., 1987; Wolfinger & Rosenstone, 1980). However, these indicators also tend to be highly correlated with other demographic correlates of socioeconomic status, including family structure and race/ethnicity. Below, we review the core individual characteristics which predict voting behavior.

One of the most established relationships in the voting behavior literature is the strong positive correlation between voting and educational attainment (Schlozman et al., 2005). One of the long-standing theories for why this connection exists is that education helps to foster the kinds of skills and knowledge necessary for participation in democratic life (Rosenstone & Hansen, 1993; Verba et al., 1995). While there is some empirical evidence in favor of this theory (Gallego, 2010), more recent work that is able to draw on advanced statistical methods calls into question whether this relationship is causal and instead posits that education is likely a proxy for other kinds of social, political, and economic capital that facilitate electoral participation (Berinsky & Lenz, 2011; Kam & Palmer, 2008; Lindgren et al., 2019; Persson, 2015).

Another individual characteristic associated with voting rates is also race or ethnicity, though the relationship is more complicated. Turnout among people of color is generally lower, although it rises when communities of color make up a larger share of a given geography and in cases where there are

co-ethnic candidates who are of the same race as the voter (Fraga, 2016). When people of color make up a larger share of a district, among Black people in particular, voter turnout increases, and a district's demographic composition is more important for increasing minority turnout than the race of those seeking office (Fraga, 2016). Other research shows that these disparities exist for similar reasons to other turnout disparities: socioeconomic status, political interest, and social connectedness—factors that would also exist for younger and less educated voters (Leighley & Vedlitz, 1999).

Age is also a strong correlate with voting behavior. Theoretical explanations for this include less-established voting patterns, apathy about the democratic system, a tendency toward non-conformism which fades with age, and a lack of knowledge necessary for participation. However, some research posits that the lack of residential stability is the cause of the disparities in voting rates among young people (Ansolabehere et al., 2012). For example, Ansolabehere, Hersh and Shepsie (2012) find that although there is a large registration gap between young people and the older population, this gap can be almost entirely explained by the place-based registration system and residential mobility.

Because place-based registration is a feature of the electoral system in the United States, we see a very strong correlation between voting and residential stability (Cassel & Hill, 1981; Verba & Nie, 1987; Wolfinger & Rosenstone, 1980). Mobility leads to a need to regularly update registration, which often comes with administrative paperwork and deadlines with a significant lead time before Election Day. Research by Squire, Wolfinger and Glass (1987) suggests that it is the fact of moving itself, rather than any systemic differences in demographics or attitudes, that explains lower turnout rates among people who have recently moved. In addition, this impact appears to be even larger among those who were already less likely to vote. At the same time, homeownership, a longstanding indicator of socioeconomic status in the United States, also correlates with higher turnout (Jiang, 2018). This is further evidenced by disruptions in housing: there is evidence that in areas with a high number of evictions, when controlling for other factors, voter turnout decreases (Slee & Desmond, 2021). There were similar findings related to the home foreclosure crisis in 2008 (Estrada-Correa & Johnson, 2012).

Although these issues of residential mobility compound to the community level, other community factors—often closely tied to issues of housing stability and infrastructure—also impact turnout at a community level. For example, researchers have found that increased distance to a polling location can also depress turnout (Haspel & Knotts, 2005). The studies are limited to individual geographies, so it's uncertain if that linear relationship exists in far-flung rural areas. A recent paper suggests that the difference in turnout can be attributed to lack of car ownership (Benedictis-Kessner & Palmer, 2021). There is also some evidence that local civil society, including non-profit presence and outreach, might have an impact on turnout and voter mobilization (LeRoux & Krawczyk, 2014; Waddington, 2011).

## Policy Factors as Potential Strategies to Mitigate Inequity

Recently, there have been efforts to pass policies that would remove barriers to participation, especially related to the voter registration process. As early as the 1970s, several states have allowed people to register and vote at the same time through what's alternatively known as Same-Day Registration (SDR) or Election Day Registration (EDR). That policy effectively removes deadlines that force people to register weeks ahead of the election. This policy has been shown to increase overall turnout among the

general population (Burden, 2009), and by 3 to 7 percentage points among young people (Grumbach & Hill, 2022).

Online Voter Registration (OVR) is also thought to make it easier to register to vote and is now available in most states. The people that are registering online tend to be disproportionately young, and OVR may be reaching more low-income voters than other registration methods (Garcia Bedolla & Velez, 2013). However, unlike EDR/SDR, the online registration process is disconnected from that of actually voting. Despite that, some evidence suggests that it increases voter registration and turnout, especially for people ages 18-29 (Pellissier, 2014; Yu, 2019).

Pre-registration, which allows young people to register before they are eligible to vote (at age 16 or 17, depending on the state) has been found to increase electoral participation in states where it is available and where there is active programming to promote pre-registration. One study estimates it increases voter turnout by 2 percentage points, while other research shows a more pronounced effect among African-American youth (Fowler, 2017; Holbein & Hillygus, 2016). As mentioned above, implementation of pre-registration can vary, and requires a lot of investment from election officials and schools to be successful (McDonald, 2009).

Lastly, Automatic Voter Registration (AVR), which as the name suggests automatically registers people to vote through state agencies such as the DMV, can be a seamless way for eligible individuals to become registered. While it's a relatively newer policy, research from the states that have implemented AVR show that it brings young people and/or people with lower educational attainment onto the voting rolls who may not have registered otherwise (Griffin et al., 2017). Other estimates suggest a large impact in the states that have passed AVR, with registration increases ranging from 9 to 94 percent (Morris & Dunphy, 2019). However, the particular method used for AVR may be important: systems that use a "front-end" opt in, in which voters are asked to register, sees high rates of people declining to register, compared to "back-end" systems in which voters are automatically registered if they are eligible (Grimmer & Rodden, 2022).

## Methods

### Sample & Data

This study combines a one-percent sample of the national voter file aggregated by Catalist with publicly available county and state data into a three-level clustered dataset: individuals within counties within states. This allows us to estimate the effect of state-level policies while controlling for some of the individual and local contextual factors that also influence registration and voting behavior.

Individual-level data comes from the Catalist voter file 1% sample. This is a random sample of about 3.6 million records drawn from the Catalist national database in early May 2021. Catalist collects and compiles records from election officials in all 50 states and the District of Columbia and organizes them into a single national voter file that includes voter history across past cycles as well as current registration and voting records. This includes administrative data such as registration form fields; vote history including voting methods and eligibility; and some variables modeled by Catalist either to fill in missing data or to estimate voter propensity metrics like partisanship, education levels, and income bracket.

County-level data generally centers on demographic trends and comes from a variety of public and otherwise publicly available sources, including the American Community Survey (ACS), the Senate Joint Economic Committee, the Robert Wood Johnson Foundation, and the American Center for Charitable Statistics. State-level measures tend to focus on policy levers and are also drawn from publicly available sources including the Annie E. Casey Foundation, the Brennan Center, the Cook Political Report, news sources, and scans of state department websites for state voting laws and policies.

### Descriptive Statistics

Variable	Mean – Full sample	Mean – Youth sample	Mean – POC sample
Voted	0.4315	0.2276	0.3450
Registered	0.5346	0.7865	0.5387
Age	53.04	21.46	47.39
Black	0.1189	0.1579	0.4652
White	0.7234	0.5880	-
Asian	0.0316	0.0366	0.1236
Hispanic	0.1011	0.1804	0.3958
Indigenous	0.0015	0.0018	0.0058
Married	0.5120	0.0136	0.3828
Single	0.4879	0.9864	0.6172
Female	0.5401	0.5235	0.5510
Male	0.4599	0.4765	0.4490
	N=3,602,078	N=225,670	N=915,039

### Measures

#### Outcomes

**Voting:** This is a binary indicator of whether or not an individual voted in the 2020 election, which comes from the voter file to the Catalist 1% sample.

**Registration:** This is a binary indicator from the voter file of whether or not an individual was actively registered to vote on state rolls at the time of the sample extraction in Spring 2021.

#### Policies

**Online Voter Registration (OVR):** This is an indicator of whether the state had implemented online voter registration as of the 2020 election cycle. Online voter registration allows people to be added to their state's voter rolls or update their registration online. How OVR is implemented varies state-by-state. For example, in many states, to fully complete the process online, a voter must have a state-issued ID card. If they do not, a form has to be printed and mailed to an elections office or county clerk. In a small number of states, no in-state identification is required.

There are also differing levels of integration with third-party online voter registrations platforms (i.e., Rock the Vote or vote.org) and a state's registration database system. At the highest level of integration, voter registration data can be automatically transmitted to a state's registration system, creating a seamless process that, in theory, facilitates the highest rate of successful voter registrations. Other

states permit some information, such as name and address, to be passed from the third-party registration platform to the state elections site, so the registrant doesn't have to enter it multiple times. The number of states that provide Online Voter Registration has grown rapidly in the past decade. In 2008, Arizona and Washington were the only states to have online voter registration. That number has increased substantially, with 41 states plus Washington, D.C., offering OVR before the 2020 election.

**Automatic Voter Registration (AVR):** This is an indicator of whether the state had implemented AVR of any kind as of the 2020 election cycle. AVR allows data to be shared between voter registration databases and other state agencies in order to create alternative and automatic pathways to registration.

Beginning in 1993 with the National Voter Registration Act (NVRA), states were required to provide eligible citizens with an opportunity to register to vote when applying for or renewing a driver's license at the Department of Motor Vehicles or other state agencies (such as the Social Security Administration). Known as the "motor voter" law, nationally this has become the method through which the majority of voter registrations are processed. Automatic voter registration goes a step further by making voter registration "opt-out" instead of "opt-in" and by electronically transferring voter registration information and name/address updates from the DMV or participating agencies to election officials. Like OVR, implementation varies from state to state.

Some states do the automatic registration using a front-end opt out system (in which you can check a box to opt out when you get/renew your license) versus a back-end opt out that opts people in by default, but allows individuals to opt out later. Additionally, the agencies that participate in the automatic registration system vary by state, with the DMV being the primary agency. In 2020, 18 states had some form of automatic voter registration.

**Same-Day Registration (SDR):** This is an indicator of whether the state had implemented SDR of any kind as of the 2020 election cycle. Same-day registration (SDR) allows citizens to register to vote (or update their registration) and cast a ballot at the same time, provided they are eligible to do so. There are different versions of the policy; most states allow people to register during all voting periods including on Election Day, while others have a more restrictive policy that only allows people to register and vote during the early voting period. Twenty-one states had some form of SDR in place as of the 2020 election cycle.

**Pre-registration (Pre-reg):** This is an indicator of whether the state had a pre-registration policy in place by the 2020 election cycle. All states allow citizens to register to vote if they will turn 18 before the next general election. A more expansive policy, which is referred to here as pre-registration, allows eligible citizens ages 16 or 17 (depending on the state) to register to vote even if they will not turn 18 before the next election. Once they turn 18, they are officially added to the voter registration list. A growing number of states allow pre-registration, but implementation varies widely. For the 2020 general election, 17 states allowed 16- or 17-year-olds to pre-register to vote.

*Number of policies.* This is a count variable, ranging from 0-4, which indicates the number of the above policies a state had implemented by the 2020 general election. This represents an overall measure of the extent to which the state has inclusive and facilitative election policies in place.

## Covariates

### Individual

**Age:** This is an indicator variable for individuals who were 18-29 years old at the time of the 2020 election, based on date of birth data as included in the voter file. In cases where age data is missing, values are imputed using Catalist proprietary models.

**Race:** We include a series of indicators, with white as a reference category, for whether an individual is identified as being Black, Hispanic, Asian, or Indigenous. This is based on a five-category mutually exclusive model of race drawn from data in the voter file. In cases where data is missing, values are based on Catalist proprietary models.

**Family structure:** We include interacted indicators of gender and marital status, using married men as a reference category, to account for voting differences across family structure. Data on gender and marital status are drawn from the voter file; in cases where data is missing they have been imputed using Catalist proprietary models.

### County

**Infrastructure index:** This is an index designed to capture the level of infrastructure in a county that supports voting and electoral engagement. It is composed by averaging five standardized indicators:

1. A five-year estimate of the percentage of households in the county with broadband access from the American Community Survey (ACS).
2. A measure of social capital from the US Congress Joint Economic Committee (2018)
3. A social association rate from the Robert Wood Johnson Foundation (2021)
4. The proportion of non-profits serving youth from the National Center for Charitable Statistics (2020)
5. A residential stability index that combines ACS data on youth to adult ratios and the proportion of people moving from a different state who have changed addresses in the last 12 months.

**Poverty index:** This is an index designed to account for relative poverty levels in the county by averaging four standardized indicators. The indicators, drawn from data from the Robert Wood Johnson Foundation (2021) and the 2019 ACS, are:

1. County unemployment rate
2. Percentage of children living in poverty
3. Percentage of children eligible for free and reduced-price lunch
4. Inverse median household income (where above-average median income is associated with negative standardized scores, rather than positive).

**Gini coefficient:** The Gini coefficient is a measure of economic inequality expressed as a ratio of income distribution across a population. It ranges from 0 to 1, with higher values indicating greater inequality. These county-level measures are taken from 2019 ACS data.

**POC:** This is a measure of the proportion of the county population who are people of color (non-white), based on data from the 2019 ACS.



**Rural:** The proportion of county residents who are classified as living in a rural area according to ACS five-year pooled estimates.

**Non-English proficient:** The proportion of adults in the county who are not proficient in English, according to ACS five-year pooled estimates.

**Completed HS:** The proportion of adults in the county who have at least a high school degree or equivalent, according to ACS five-year pooled estimates.

## State

**Opportunity Youth:** This is a measure, drawn from the Kids Count Data Center at the Annie E. Casey Foundation (2019), of the percentage of youth ages 16-19 who are not attending school and not working.

**Key states:** This is a binary indicator of whether the state was considered a “battleground” state or a state of key political interest in the 2020 general election as determined by *FiveThirtyEight*.

**Competitiveness:** This is a scaled measure ranging from 0-3 of state electoral competitiveness in the 2020 presidential election, based on the Cook Political Report. States classified as “solid” Democrat or Republican are coded as 0, “likely” states are coded 1, “leaning” states are coded 2, and states classified as “toss up” are coded 3.

**Voting cuts (mail and in-person):** This is an indicator for whether the state enacted policies restricting voting access, either for those voting by mail or in-person, during the lead-up to the 2020 election. It is based on data from the Brennan Center for Justice.

## Analysis

In order to estimate the impact of state voter registration policies on registration rates and voter turnout, we use a series of multi-level linear probability models. First, we use bivariate models to identify whether there are basic correlational relationships between state policies and our outcomes of interest: registration and voting. Next, we estimate baseline models of registration and voter turnout without including state voter registration policies, using a set of covariates drawn from theory and existing literature to produce baseline estimates for predicting registration and turnout with state-, county-, and individual-level variables. Then we add the state policies to the models, individually and in combination, to produce more robust estimates of policy impact that account for other determinants of registration and voting. Finally we repeat this process, restricting our sample to youth and people of color, to see if these patterns and estimations of impact differ for these subsets of the population.

## Results

### Baseline Estimates

These models include only the core set of estimators predicting turnout. Here they are presented as baseline estimates of voter turnout and registration rates without including any voter registration policies. Later, we use them as covariates in the multivariate models to help produce more precise estimates of policy effects. These baseline estimates are intended to provide an overall sense of model fit.

The model explains 2.65% of the individual-level variance in voter turnout, 58.45% of county-level variance and 59.53% of state-level variance. For registration, it explains 1.75% of individual-level variance, 24.90% of county-level variance and 17.17% of state-level variance. Individual-level covariates including age, race, gender, and marital status are strong predictors of both registration and turnout, while contextual factors are generally more predictive of turnout in terms of both the strength and magnitude of associations. For ease of interpretation, these same covariates are not presented in tables of results for the full multivariate models, but only here as baseline estimates.

Linear Fixed Effects	Null model – voting	Baseline model – voting	Null model – registration	Baseline model - registration
Intercept	0.444*** (0.006)	0.205*** (0.030)	0.532*** (0.008)	0.376*** (0.045)
State level-3				
Opportunity youth		-0.011*** (0.002)		0.002 (0.004)
Key state		-0.04*** (0.012)		-0.044 (0.023)
Competitiveness		0.16*** (0.005)		0.023* (0.010)
Mail voting cuts		-0.024* (0.010)		0.0004 (0.018)
In-person voting cuts		0.025* (0.011)		-0.018 (0.021)
County level-2				
Infrastructure index		0.008*** (0.002)		0.003 (0.002)
Poverty index		-0.021*** (0.001)		-0.018*** (0.001)
Gini coefficient		0.004*** (0.001)		-0.004*** (0.001)
Percent POC		0.079*** (0.007)		0.037*** (0.008)
Percent rural		0.0004*** (0.00003)		0.001*** (0.00004)
Percent non-proficient in English		0.002*** (0.0004)		0.001* (0.001)

Percent completed high school		0.003*** (0.0002)		0.001* (0.0001)
Individual level-1				
Youth		-0.158*** (0.001)		0.277*** (0.001)
Black		-0.061*** (0.001)		-0.002* (0.001)
Asian		-0.140*** (0.002)		-0.002 (0.002)
Hispanic		-0.114*** (0.001)		-0.010*** (0.001)
Indigenous		-0.043*** (0.007)		0.069*** (0.007)
Married female		0.009*** (0.001)		-0.003*** (0.001)
Single female		-0.065*** (0.001)		-0.024*** (0.001)
Single male		-0.112*** (0.001)		-0.013*** (0.001)
<i>Variance components</i>				
State intercept	0.0016	0.0006483	0.0030	0.002455
County intercept	0.0019	0.0007807	0.0018	0.001354
Residual	0.242	0.2355388	0.245	0.241120
<i>Model Fit</i>				
PRE level-1		0.02653022		0.01751298
PRE level-2		0.584513		0.2490294
PRE level-3		0.5953184		0.1717274
Deviance	5151843	5017242	5203263	5102564
AIC	5151851	5017290	5203271	5102612
BIC	5151903	5017604	5203324	5102927

### Full Sample Estimates

Initial bivariate estimates with the full sample suggest some positive relationships between facilitative election laws and voter registration and turnout. First, online voter registration is associated with a 4.2-percentage-point increase in registration rate but has a null relationship with voter turnout. This suggests that while the ease of the online process may lead to a direct increase in registration, that does not necessarily translate to higher voting rates. It may be that those who register easily online are not as willing or able to make it to the voting booth in person, which may require more time and effort.

In contrast, same-day voter registration is associated with a 3.7-percentage-point increase in voter turnout but has a null relationship with registration rates. This suggests that, while it may not expand the rolls, effectively making voting a one-step process by allowing registration and voting to happen simultaneously does make electoral participation more accessible in a way that increases turnout significantly.

However, after controlling for potential confounders in a full multivariate model, the relationships between same-day voter registration and voter turnout, and between online voter registration and voter registration were no longer statistically significant. After controlling for individual and contextual factors that determine registration and voting, there does not appear to be a significant impact of facilitative election laws on registration and voting behavior.

#### Full sample bivariate estimates

	Voting	Registration
AVR	0.006 (0.012)	0.017 (0.016)
OVR	0.003 (0.015)	0.042* (0.019)

SDR	0.037*** (0.011)	-0.028 (0.015)
Pre-reg	0.002 (0.012)	0.021 (0.015)
# policies	0.008 (0.005)	0.007 (0.007)

Full sample multivariate estimates

	Voting	Registration
AVR	-0.008 (0.010)	-0.0001 (0.019)
OVR	0.014 (0.010)	0.031 (0.019)
SDR	0.002 (0.009)	-0.029 (0.016)
Pre-reg	0.012 (0.009)	0.013 (0.018)
# policies	0.004 (0.004)	0.001 (0.008)

Youth Sample

Next, we restrict the sample to only those aged 18-29 in order to see if these patterns differ for younger potential voters. Again, bivariate estimates suggest a significant relationship between OVR and SDR policies and voting and registration outcomes. For youth, online voter registration is associated with a 10.3-percentage-point increase in the registration rate, but it has a negative relationship with voter turnout. Meanwhile, same-day voter registration is associated with a 5.6-percentage-point increase in voter turnout, it has a negative relationship with registration rates.

While the magnitude of these associations is slightly smaller after adding covariates to the model, the relationships remain statistically significant. In the full models, OVR is associated with a 10.1-percentage point-increase in registration but a 4.4-percentage-point decrease in voting. One possible explanation is that, although OVR makes the registration process easier and more accessible, allowing more young people to get on the rolls, the voting process (which is not connected to the moment when youth register) may still present obstacles for young people. Some of these barriers may include having to present an ID, or to change their registration and find a different polling place in a new neighborhood if they moved (which youth are more likely to do) between the time they registered online and Election Day.

In contrast, SDR is associated with a 3.9-percentage-point increase in voting but a 5.9-percentage-point decrease in registration. There are a number of possible explanations for this. For instance, in states where individuals do not have to get registered well in advance of the election, there may be less investment in registering voters. In addition, individuals who know they can wait until Election Day to register may not do so beforehand and face unexpected circumstances that prevent them from doing registering at the last possible moment. As with other policies, the fact that youth are more likely to change residences and may need to update their registration more frequently may also play into the negative effect on registration rates. Declining registration rates between elections is part of the natural cyclical nature of elections, and youth who rely or intend to “fall back on” SDR may be most likely to be dropped from the rolls between election cycles.

Youth bivariate estimates

	Voting	Active Reg
AVR	-0.007 (0.016)	0.048 (0.026)
OVR	-0.047* (0.019)	0.103*** (0.031)

<b>SDR</b>	0.056*** (0.014)	-0.076** (0.025)
<b>Pre-reg</b>	-0.022 (0.015)	0.031 (0.026)
<b># policies</b>	-0.0004 (0.007)	0.013 (0.011)

Youth multivariate estimates

	<b>Voting</b>	<b>Registration</b>
<b>AVR</b>	-0.019 (0.016)	-0.006 (0.029)
<b>OVR</b>	-0.044* (0.018)	0.101*** (0.028)
<b>SDR</b>	0.039** (0.014)	-0.059* (0.024)
<b>Pre-reg</b>	0.004 (0.016)	0.003 (0.027)
<b># policies</b>	0.001 (0.007)	0.001 (0.012)

**POC Sample**

Finally, we conduct the same analysis on the subset of the sample that contains only people of color. In this case, bivariate estimates suggest policy impacts on registration but not voting rates. As with youth, OVR appears to be positively correlated with registration rates, and SDR has a negative relationship with registration. In addition, there is a positive association between registration rates and pre-registration policies which allow youth to register before turning 18.

However, after adding covariates to the model, only the negative relationship between SDR and registration remains statistically significant. SDR is associated with a 5.3-percentage-point decrease in registration. As with the youth sample, this may be an indication that those most vulnerable to being dropped from the rolls are taking advantage of the ability to register at the time of election, which is leading to lower registration rates at other times of the year.

POC bivariate estimates

	<b>Voting</b>	<b>Active Reg</b>
<b>AVR</b>	0.017 (0.014)	0.039 (0.025)
<b>OVR</b>	0.021 (0.018)	0.077* (0.030)
<b>SDR</b>	0.005 (0.014)	-0.069** (0.024)
<b>Pre-reg</b>	0.009 (0.014)	0.048* (0.024)
<b># policies</b>	0.008 (0.006)	0.012 (0.011)

POC multivariate estimates

	<b>Voting</b>	<b>Registration</b>
<b>AVR</b>	-0.009 (0.014)	0.006 (0.025)
<b>OVR</b>	0.028 (0.015)	0.049 (0.027)
<b>SDR</b>	-0.015 (0.013)	-0.053* (0.022)
<b>Pre-reg</b>	0.009 (0.014)	-0.005 (0.025)
<b># policies</b>	0.002 (0.006)	-0.004 (0.011)

## Discussion

This study makes an important contribution to the existing literature by taking a multi-level approach that controls for the characteristics of individual voters and draws on their synthetic voting behavior rather than relying on geographic trends and survey data. This allows us to more precisely estimate policy effects and to specifically focus on individual populations. We find that these policies do in fact have important relationships with registration and voting for populations traditionally underrepresented in the electorate: young people and people of color. While we are not able to replicate the estimated effects of prior studies of AVR and pre-registration (Fowler, 2017; Griffin et al., 2017; Holbein & Hillygus, 2016; Morris & Dunphy, 2019), our findings do strengthen prior work on the importance of SDR for youth, and provide some support to prior studies on OVR (Garcia Bedolla & Velez, 2013; Grumbach & Hill, 2022; Pellissier, 2014; Yu, 2019).

As discussed above, prior evidence and theory suggest that place-based voter registration is one of the largest hurdles to participation that disenfranchised communities may face. Millions of dollars from campaigns, organizations, and election officials are spent every year trying to address these barriers. This analysis finds that among communities that have lower registration rates, policy changes could be effective time- and cost-saving measures. This is especially true for young people. While media narratives tend to focus on how young people don't vote, the combined impact of place-based voter registration and young people's higher mobility mean that youth are registered to vote at lower rates than older adults. Therefore, increasing youth registration rates with common-sense reforms is one step toward addressing historically lower levels of youth electoral participation. As we see above, same-day registration policies are particularly effective as a means of enfranchising youth and enabling more robust turnout among young people. This is in keeping with prior work by Grumbach and Hill (2022) and strengthens existing evidence on the importance of SDR for making voting more accessible to youth and ultimately increasing youth turnout and representation at the polls.

Among people of color there is less evidence for the efficacy of facilitative registration policies in increasing registration and turnout, and future research should investigate why these policies aren't more effective at improving electoral participation of people of color. It may be that older voters within communities of color who have already been presented with different opportunities to register and vote have made a decision about whether they want to participate that is not affected by the ease of the registration process. In addition, these policies still rely heavily on government systems as a means of enfranchisement, whether that's going to a polling place to register to vote or getting a driver's license. This necessarily requires some level of engagement and trust in governmental institutions that may be lacking in some marginalized communities.

It is also worth noting that, although these estimates do not reach the level of statistical significance, there is still some promising evidence of impact—especially for OVR. Prior research has shown that OVR tends to expand registration primarily to “low-propensity voters,” so it is not surprising that gains in registration rates as a result of online access might only have a small positive impact on voter turnout (Garcia Bedolla & Velez, 2013). Changing voting and registration behavior is difficult and often happens in incredibly small margins of less than 1 percentage point. This means that some of the effect sizes we

see among youth are particularly large, and higher than any well-funded campaign could achieve. Similarly, an effect of nearly 5 percentage points on the registration rate of people of color in states with OVR also suggests a very large potential impact. While these estimates are not causal and may overestimate effects due to unobserved confounders, their magnitude nonetheless provides evidence in favor of a strong positive relationship.

## Implications and Future Directions

Although the evidence of policy impacts for the full population is somewhat weak, this paper does provide evidence for the value of facilitative election laws, especially SDR and OVR, to reach low-propensity voters. While OVR is now widespread and available in most of the country, states should continue to invest in improving their OVR systems to allow for fully paperless registration and to ensure all eligible voters know that OVR is available to them.

Among the policies we considered, SDR appears to be the most promising for promoting young people's political participation. However, fewer than half of U.S. states have enacted some form of same-day registration. This policy has the potential for significant growth and our evidence, as well as prior studies, suggest that expanding access to SDR could have significant impact on young people's electoral participation and on resultant outcomes that could shift the political landscape as a result of increased youth voter turnout. Researchers should continue to look for opportunities to study the impacts of SDR if and when policies expand to new states, in order to better understand how removing registration barriers and deadlines can help make it easier for young people to make their voices heard at the polls.

Future research in this area should seek to address methodological challenges and, if possible, look for causal methods that can estimate the impacts of voter registration policies. In addition, while the use of synthetic voter data from the national voter file represents a significant improvement to validity in our measures of voting behavior beyond self-reported survey data, there are limitations to the data that may make analysis difficult. For example, the voter file significantly underrepresents unregistered voters, especially youth who have not yet registered for the first time. In our data, for example, 78% of youth are registered to vote, which means that many of the youth who are likely to be most effected by voter registration policies—first time registrants who have not yet interacted with state political institutions—are not accurately represented in the data. Research that continues to develop our understanding of how, when, and why young people come to register for the first time could help inform empirical work on a population that is often missing from public and administrative data sources. This is also true for individual characteristics like race, marital status, and education level that are closely tied to voting behavior. Innovative methods of combining synthetic vote history with other kinds of data on individual traits and demographic markers could help strengthen our ability to tease out policy impacts, both separate from or in interaction with individual predictors of registration and voter turnout.

In addition, deepening and refining our contextual models in order to better capture local political culture and climate, which is a confounding determinant of both policy and turnout, would strengthen our ability to isolate and describe policy impacts. Future work could develop a robust empirical model of political culture building on prior literature (Campbell, 2006; Springer, 2014) and thus get closer to

causal estimates of policy impacts.

## Conclusions

Overall, our analysis underscores that policy alone (and certainly not any single policy) is not a silver bullet for closing gaps in civic participation due to historic barriers and disenfranchisement. Policy is an important mechanism for beginning to curtail the systemic underpinnings of political inequities, but they cannot close historic deficits alone. They must be complemented by effective programming to register and turn out voters. There is promise in getting voters on the rolls with policies that ease voter registration like OVR and AVR, but that does not seem to translate to voting on its own. This could be due to voting barriers, or because these new registrants who lack a vote history are often considered low-propensity voters are not being communicated with by organizations or campaigns. As such, Election-Day policies that address issues of polling place accessibility may be an important complement to facilitative registration policies. Additionally, the need to maintain active registration among highly mobile populations still necessitates ongoing registration activity or mobilization pushes in SDR states. While emergent facilitative policies may not be a panacea for addressing the inequities of place-based voter registration, they do appear to be an important component of addressing long-standing gaps in electoral equity and facilitating democratic participation.



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