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ORIGINAL ARTICLE

The Obama effect? Race, first-time voting, and future participation

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Abstract

Did the 2008 United States presidential election produce stronger future mobilization for Blacks than non-Blacks? First-time voting influences long-term political behavior, but do minority voters see the most powerful effects when the formative election is tied to their group's political empowerment? I test this hypothesis in the context of the election of the first Black president in United States history, using voting eligibility discontinuities to identify the effect of voting in 2008 on future voting for Blacks, Hispanics, and Whites. Voting in 2008 caused a greater increase in the likelihood of voting in 2010 for Blacks than for other new voters, but there is no evidence of a sustained mobilizing advantage in subsequent elections. Furthermore, 2008 was not a unique formative voting experience for new Black voters, but rather produced similar effects on future voting as other presidential elections. These results signal that group political empowerment does not drive habitual voting.

Keywords: Class and ethnicity; political participation and turnout; race; voting behavior

1. Introduction

Fluctuations in racial group turnout are increasingly decisive in United States elections, bringing renewed importance to the study of why some groups vote more than others, and how group identity structures political behavior. Racial identity is one of the most influential determinants of political behavior in the United States, shaping political attitudes, partisan identification, public opinion, and voting (Dawson, 1995; Hutchings and Valentino, 2004). To explain patterns in minority group voting, scholars put forth numerous theories, including the effect of political empowerment (Browning *et al.*, 1984; Bobo and Gilliam, 1990), considerations of electoral influence (Gay, 2001; Fraga, 2018), and targeted mobilization (Leighley, 2001; Bedolla and Michelson, 2012).

These theories primarily focus on explaining why racial groups vote in a given moment: They are mobilized to vote in response to the candidacy of in-group members (Gilliam, 1996; Barreto, 2007), they are more likely to turn out as their share of the electorate (and thus influence) increases (Spence and McClerking, 2010; Fraga, 2016*b*), or they are specifically mobilized by group-targeted Get Out the Vote campaigns (Green, 2004; Valenzuela and Michelson, 2016). These theories generally do not address, however, how racial identity structures patterns of participation over the life-cycle, particularly whether racial identity influences the development of persistent attachments to politics that produce regular voters. Some studies of voting behavior argue that internal consistency in voting behavior is due to voting itself being habit forming (Green and Shachar, 2000; Plutzer, 2002). Consistent participation develops through psychological mechanisms—voters develop an attachment to political participation that augments the utility of future engagement—and environmental mechanisms—voters are persistently mobilized by political campaigns or government institutions (Gerber *et al.*, 2003; Meredith, 2009;

Mullainathan and Washington, 2009; Dinas, 2012, 2014*a*; Coppock and Green, 2016). But studies of voting's effect on future voting have not yet considered how these effects vary across voter groups, or what kinds of voting experiences spur the greatest future mobilization.

Here, I build on past understandings of group political empowerment and political participation to test whether voting produces stronger future mobilizing effects—whether voters are more likely to vote in later elections as a result of voting in a previous one—when first-time voting is linked to group political empowerment. I theorize that racial identity should interact with electoral context to shape the effect of voting on future voting. Specifically, formative voting experiences in which a candidate from a minority group is elected and where the group plays a pivotal role in the electorate should produce the strongest effects on voting in later elections for that group. This effect should be augmented if the election sets a historical precedent for minority group political empowerment. Research in the comparative literature provides some evidence for this model of empowerment-driven first time voting effects (see de Kadt, 2017). Does this pattern hold in the United States?

The election of the first Black president in United States history offers a unique opportunity to test this hypothesis. The election of President Barack Obama was a landmark election, both as a symbol of racial progress, and because the election featured unprecedented levels of turnout from young minority voters. By many accounts, this first-time voting experience carried special significance. For example, racial justice activist Samuel Sinyangwe (2019) reflected: "First election I voted in was '08. Seeing Obama win helped establish a confidence in political engagement. When I hear younger folks say they're done voting after their candidate lost in '16/'18 I'm reminded how voter suppression impacting one election shapes long-term engagement."

I measure whether Blacks who voted for the first time in the 2008 election experienced a greater increase in their likelihood of voting in future elections compared to voters of other racial groups. Comparing voters born just before and just after the voting eligibility cutoff, I identify the causal effect of voting in 2008 on voting in future elections. I estimate these effects for Blacks, Whites, and Hispanics, comparing voters in each racial group to just ineligible voters of the same race. Next, I compare the future mobilizing effects of the 2008 election to other presidential elections, to test whether 2008 was a uniquely mobilizing election for Blacks.

This study addresses a question of general theoretical importance: Whether formative political experiences produce stronger mobilizing effects when they are tied to identity and group empowerment, and one of contemporary relevance: Did voting for President Obama durably increase the political participation of Black voters? Minority turnout is pivotal to the outcomes of American elections, as Democratic Party success often hinges on Black and Hispanic voters (Jackman and Vavreck, 2010). In the 2008 election, unprecedented numbers of young and minority voters—especially young Black voters—were mobilized to vote (McDonald, 2017). If voting in the election of the first Black president led to stronger patterns of participation for young Black voters, then the 2008 election altered the shape of future electorates.

The data, however, show that this is not the case. While the results demonstrate that Blacks, Whites, and Hispanics all saw sizeable increases in the likelihood of voting in future elections as a result of voting in 2008, the effects for Blacks do not exceed, and in some cases are smaller than, those for other racial groups. Voting in the 2008 election caused a larger increase in the likelihood of voting in the 2010 midterm elections for Blacks compared to other racial groups, but this advantage disappears in subsequent elections. By 2012, the effect is largest for Hispanic voters. By 2016, the effect for Blacks lags behind the effect even for White voters. What's more, the 2008 election appears to have produced similarly sized mobilization effects for Blacks as the 2000, 2004, and 2012 elections. Thus, voting for the first time in the election of President Obama did not produce larger increases to future voting for Blacks compared to other racial groups nor did it drive greater future mobilization for new Black voters than other recent presidential elections.

These results indicate that racial group political empowerment is not a major determinant of the effect voting in one election on voting in subsequent elections. The 2008 presidential election

is an exceptional case: a formative voting experience strongly linked to Black political empowerment from which we would expect to observe greater effects for Blacks if group empowering political experiences drove first-time voting effects. While formative voting experiences tied to political empowerment may produce larger mobilizing effects for the empowered group in the short-term, persistent mobilizing advantages do not result from such first-time voting experiences. These findings are contrary to evidence from outside the United States showing that formative voting experiences can produce more persistent participation effects when tied to identity and group empowerment (de Kadt, 2017), but consistent with evidence from the United States that the election of Black mayors provides only temporary boosts to Black turnout (Gilliam, 1996; Gilliam and Kaufmann, 1998). Given the centrality of race in American politics, these findings are both surprising and important. The significance of the first Black president to Black Americans should not be understated, but it did not produce unique persistence in political behavior. Black political empowerment at the national scale appears insufficient to durably increase Black political participation.

2. The empowerment model of first-time voting

In this study, I put forth a model of empowerment-driven first-time voting—the extent to which formative voting experiences produce the strongest attachments to politics, and the strongest future effects on participation, when they are tied to group political empowerment. This theory is an extension of Black political empowerment as conceptualized by Bobo and Gilliam (1990), considering it as a mechanism by which early political attachments are formed, and testing it on the national electoral scale.

2.1. Formative voting experiences and the effect of voting on future voting

An individual who votes in one election is likely to have voted in previous elections, and is likely to vote in future ones (Plutzer, 2002; Denny and Doyle, 2009). What factors drive this consistency in voting? One theoretical strand argues that voting is best theorized in the context of habit formation (Green and Shachar, 2000; Plutzer, 2002; Fowler, 2006; Denny and Doyle, 2009; Dinas, 2012). Research in American politics consistently demonstrates that voting in an election causally increases the likelihood of voting in future elections (Meredith, 2009; Dinas, 2012, 2014*a*; Coppock and Green, 2016). These effects can persist, dependent on context, for multiple elections cycles (Meredith, 2009; Dinas, 2012; Coppock and Green, 2016). Voting has been further linked to persistence in partisan identification and candidate assessment, as voting for a candidate or party reinforces a voter's attachment to that candidate or party (Mullainathan and Washington, 2009; Dinas, 2014*a*).

Early political experiences can strongly influence the formation and persistence of voting behavior, political attitudes, partisan identification, and ideology (Campbell *et al.*, 1960; Butler and Stokes, 1971; Dinas, 2013, 2014*b*). Partisan identity and political ideology are remarkably consistent over life course (Green *et al.*, 2002), and people are most susceptible to attitudinal change when they are young, before they have developed strong political attachments and accumulated prior political experiences and information (Schuman and Scott, 1989; Sears and Valentino, 1997; Dinas, 2013). First-time voting experiences can be catalyzing events that shapes voters' attachment to political participation moving forward (de Kadt, 2017) and provides the context in which they are first added to voter registration lists and campaign databases (Hersh, 2015). Such formative experiences may be particularly important to young Black voters, who exhibit higher rates of political distrust and alienation than other racial groups—attitudes which have been shown to solidify and worsen from teenage years to mid-20s (Cohen, 2010).

Elections vary in salience, the candidates, relevant issues, relative strength of political parties, scandals, and other characteristics. But even conditional on electoral context, elections mean different things to different groups of people. Sears and Valentino (1997) acknowledge that

pre-adult political socialization can be catalyzed by political events, but argue that these events socialize political attitudes and behaviors selectively, within the domains they make salient. Elections that make racial identities salient may structure political attitudes and behaviors differently across racial groups (Walton, 1997). These differences may be especially pronounced when one group experiences considerable political empowerment—the emergence of the group as a pivotal voting bloc and/or the election of political leaders of that group (Bobo and Gilliam, 1990). For example, de Kadt (2017) analyzes the 1994 South African presidential election, the first in which Black South Africans were allowed to vote, finding persistent participatory effects for Blacks caused by voting in the election[1]. In the American context, Jesse Jackson's 1984 presidential candidacy was followed by a surge in Black voter registration (Walton, 1985), but this surge did not manifest into heightened voting in later elections (Alt, 1995). In city elections, the election of Black mayors is generally followed by increased political participation by Blacks, but with diminishing returns the longer the period of political empowerment (Gilliam, 1996; Gilliam and Kaufmann, 1998; Spence and McClerking, 2010).

2.2. Empowerment and first-time voting in the 2008 presidential election

Political empowerment is "the extent to which a group has achieved significant representation and influence in political decision making" (Bobo and Gilliam, 1990, p. 378–379). This theory argues that racial group turnout is a product of political context, and turnout is highest where groups have the highest levels of political empowerment or political incorporation (Browning *et al.*, 1984; Walton, 1997). In such contexts, minority voters perceive that their vote will have an impact on politics and feel more trusting of the political process, and this heightened feeling of political efficacy will spur greater voting (Bobo and Gilliam, 1990; Gay, 2002; Nunnally, 2012). Bobo and Gilliam (1990) explicitly argue that Black political empowerment should cause not just heightened Black political participation, but participation rates that equal or exceed that of Whites.

In this study, I operationalize political empowerment as a bundled treatment: A political experience is characterized by group political empowerment if (1) the election has symbolic significance for the group, (2) features the election of an in-group candidate, (3) the group wields significant electoral influence, and (4) campaigns devote special attention to registering and turning out minority voters. The 2008 election was characterized by all of these components of political empowerment. The election resulted in the election of Barack Obama, the first Black president in United States history. On top of that, the election saw unprecedented Black turnout, with the largest increases among young Black voters (CPS, 2014). Not only were young Black voters voting to elect the first President who shared their racial makeup, they were doing so alongside record numbers of their age demographic and racial group (Cohen, 2010). Thus, voting for the first time in this historic election should be a meaningful and strongly positive formative voting experience for Black voters. Furthermore, the pivotal role of Black voters in the election should incentivize political campaigns to mobilize such voters in future electoral cycles, and the new voters who voted in 2008 should be the first targets of these mobilization efforts. Through these mechanisms, I expect voting for the first time in the 2008 election to produce larger effects for Black voters than for voters of other racial groups. I further expect that voting in 2008 should influence future mobilization more than voting in other recent presidential elections.

The treatment here is not just the experience of the 2008 election, but voting for the first time in the election. To varying degrees, elections are experienced by both voters and non-voters. The symbolic significance of the election of President Obama was inspiring to many people who did not or could not participate in the election. However, if someone is eligible and planning to vote

[1]There are key contextual differences that separate the 1994 South Africa and 2008 US examples, particularly that the 1994 South African election featured a much broader change in the political status quo.

in an upcoming election, they will likely be far more engaged in the election, and more deeply internalize its significance, than someone who is not going to be able to vote in the election. Contributing directly to the election of the empowering candidate can reinforce political efficacy and attachment to politics. This heightened trust may be particularly important for Black political socialization, as previous work demonstrates that Black political distrust is inextricably tied to a history of racial discrimination and disempowerment (in particular, see Nunnally (2012)). These emotions become connected to the act of voting, and future voting can be a way to re-invoke these emotions (de Kadt, 2017).

Additionally, when a formative voting experience is linked to racial group political empowerment, voting in that election may more closely link political identity to racial identity, and future voting will be viewed as function of these identities, as well as a mechanism for realizing future empowerment. This logic follows psychological theories of *self-perception* (Bem, 1972), which posit that individuals learn and reinforce their identity through information gained from their behaviors and actions. Previous work (see Dinas, 2014*a* or Lupu, 2017) has combined these theories with constructivist approaches to the formation of ethnic identity (Fearon and Laitin, 2000; Posner, 2004) to argue that voting reinforces group belonging. Voting in the 2008 election, from this perspective, should strengthen young Black voters self-identification with their racial group and with civic engagement, which in turn reinforces the mechanism to vote at greater rates in the future.[2]

2.3. Registration and mobilization

Political empowerment does not just function through psychological mechanisms, it also provides the energy and means to overcome structural and institutional barriers to voting (Walton, 1985, 1997). In the United States, registration is required to vote, and the registration system can exert strong depressive effects on turnout (Powell, 1986). Throughout American political history minority voting has faced barriers to registration and voting (Walton, 1985). One channel through which political empowerment can durably increase minority voting is by boosting minority registration. The 2008 election brought a wave of young Black and minority voters into the electorate, overcoming a key obstacle to sustained participation and offering the opportunity for persistent mobilization of these new voters moving forward.

Mobilization by political institutions likely influences the persistence of voting across multiple election cycles (Aldrich, 1993). Consider two individuals, one just old enough to vote in the 2008 election, versus one just too young to be eligible. The eligible individual is more likely to be targeted by campaigns and entered into campaign databases. These databases are recycled in future election cycles, so the individual is now more likely to be contacted by a campaign moving forward. If the individual votes in the election, then he or she is marked as a likely voter for future elections, further increasing the chances of being contacted by a campaign. Thus, subsequent campaigns are more likely to target the first individual, the potential voter for which they have more information, than the second individual (Hersh, 2015).

In the context of the 2008 election, I expect that minority voters, and Black voters especially, should be most affected by persistent mobilization efforts in later elections. The 2008 election brought unprecedented numbers of first-time Black voters into the electorate, and minority turnout was instrumental in the electoral outcome. Therefore, political campaigns should be incentivized to capitalize on these new voters in later elections. Mobilization in this respect represents an alternative mechanism, distinct from psychological mechanisms, by which voting for the first time in the 2008 election could produce stronger effects on future voting for Blacks than for

[2]In the Supporting Information (Figures S3 and S4) I show that voting in the 2008 election produced a durable increase in the likelihood of Blacks being registered and specifically registered to the Democratic party in future elections. This finding supports the idea of group belonging being reinforced by voting and further demonstrates the importance of actually participating the election for this reinforced group belonging.

other racial groups. These mechanisms could work in tandem, and together strengthen the expectation of a stronger sustained mobilizing advantage for Blacks.[3]

3. Data

Data for this study come from 2017 voterfiles for 25 states. Each voterfile consists of a list of every registered voter in the state, with information on their partisanship, place of residence, date of birth, and whether or not they voted in past elections. The data are collected by state governments, and organized, maintained, and provided to the researcher by L2, a nonpartisan firm that supplies researchers, candidates, political parties, and consultants with voterfile data for use in campaigns and other ventures.

The regression discontinuity design employed in this study requires precise date of birth data. The quality of these data varies by state, and the 25 states in this analysis are those that provide accurate to-the-day dates of birth. In total, the data contain lists of every registered voter in Alabama, Arkansas, California, Connecticut, Florida, Illinois, Indiana, Kansas, Kentucky, Massachusetts, Maryland, Missouri, Nebraska, Nevada, New York, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Virginia, Washington, and West Virginia.

All of the state voterfiles contain information on the race of the individual voters. For most states, the race of a voter is imputed by L2, using a model based on a voter's name, age, gender, and demographic data on their residential location. Three of the states in this analysis, Alabama, Florida, and South Carolina, require that registrants identify their race. Imputation methods for race are consistently used by researchers in studies of voter turnout for racial groups (Enos, 2016; Fraga, 2016*a*; Imai and Khanna, 2016). L2 imputes race by combining information on the frequency that people of different races and ethnicities have a voter's first name, surname and age with information on the percentage of the population comprised by each racial group in the Census block, the smallest census geography, where the voter lives, to produce probabilities that the individual is a member of different racial groups. L2 selects the racial group (out of White, Black, Hispanic, Asian, and Other) for which a person has the highest probability, and provides that information as a field in the data provided to the researcher. Imai and Khanna (2016), in developing the imputation method currently used by L2, show a false-positive rate in identifying Black registrants using the Florida voterfile of less than 3 percent. In the Supporting Information, I show that the patterns observed in the main analysis are similar as those using just self-reported race.

Each state's voterfile contains information on past voting behavior of individual registrants, but the quality and extent of voting history data varies by state. Some states purge inactive voters from lists after repeated election cycles where they do not vote. Others only keep track of voting history contingent on the voter registration not changing due to an out-of-state residential move. This under-counting of past voting will weight my results toward residentially stable voters. In general, the number of movers in and out of states from 2008 to the present is small in comparison to total state populations, and in-migration tends to match out-migration (Coppock and Green, 2016). Additionally, so long as voter purging or mobility is orthogonal to the 2008 eligibility cutoff date, it does not inhibit identification of the effect estimates.

However, variation in vote history data quality presents a challenge to this analysis in two ways. First, it makes it difficult to compare the effect of voting in different elections because vote history quality is correlated with how close the election in question is to the date of the voterfile. For example, in a 2017 voterfile, turnout in 2016 is measured more precisely than turnout in 2008. Voting in previous elections is undercounted. As shown in the Supporting Information, this

[3]It is also possible that the empowering features of the 2008 election brought many young Black voters to the polls who otherwise would have been non-voters, and thus comparisons across racial groups may be influenced by different distributions in pre-treatment voting propensity than to the downstream influence of voting in 2008. I return to this alternative explanation in the discussion of the results.

undercounting tends to produce larger, albeit less precise, estimates of the effects on future voting for treatment elections that are further in the past. This is likely due to less active voters who voted in the treatment election being dropped from the lists, biasing the results upwards. Thus, it is difficult to directly compare, say, the effect of voting in 2000 to the effect of voting in 2008, or whether 2008 had a stronger effect on voting in 2012 or 2016, without accounting for trends in measurement quality. In the analysis, I compare across treatment elections by weighting by the precision of the estimates and by controlling for the years of the treatment and outcome elections. Given the data, this approach allows for a best possible comparison.

Second, it is possible that voters of different racial groups are more or less likely to be purged from voterfiles, either due to differences in mobility rates or failure to vote in multiple election cycles. To the best of my knowledge, there are not yet conclusive empirical tests of the extent to which differences in voter purging across racial groups exist across states, but there are at least examples where minority voters are more likely to be removed from voter rolls for inactivity than White voters (Casey, 2019). If true, it would make cross-group comparisons, even within the same treatment election, difficult. If Blacks were being undercounted relative to other racial groups, we might expect their estimates to be inflated, because the sample of Blacks for whom I observe 2008 voting would consist of the most politically active of the group.[4]

The data in this analysis demonstrate that the effect of voting for the first time in 2008 on future voting for Blacks is not overall greater than the effect on future voting for Whites or Hispanics. For differential changes in registration status to spuriously generate the observed patterns in the data—to incorrectly find that first-time 2008 Black voters had lower effects on future participation than other racial groups—if those patterns did not exist in the full population, it would have to be the case that (1) Blacks who voted in 2008 were disproportionately removed from voter lists at greater rates than Whites and Hispanics, and (2) that this removal was *inversely* correlated with voter inactivity. If Blacks who had voted in 2008 and wanted to vote in later elections but could not due to removal from voter lists were removed at greater rates than other racial groups, then the effects for Blacks would be under-estimated. This scenario seems unlikely, as voters are generally removed from voter lists after periods of inactivity—non-participation in multiple election cycles. So, if Blacks are disproportionately removed from voter lists compared to Whites and Hispanics, this is more likely to understate the extent to which Whites and Hispanics saw a larger increase on future voting compared to Blacks.[5]

To test this concern directly, I obtained a 2009 Florida voterfile, and in the Supporting Information (Figure S9) I re-estimate the main effects for Florida using this older voterfile to measure 2008 turnout. I find that the sign and magnitude of the effects on future voting in this state are consistent using this older voterfile, as is the effect for Blacks relative to other racial groups. This consistency suggests that differential changes in registration status are unlikely to spuriously generate the observed patterns in the data.

4. Empirical strategy

I offer the following testable hypotheses derived from theories of first-time voting and group political empowerment:

H1: Voting in the 2008 election produced a larger increase in the probability of voting in later elections for Blacks than it does for other racial groups.

[4]The removal of voters who voted in 2008 but are not present in the 2017 voterfile leads to an undercounting of compliance with treatment, or an undercounting of voting in 2008. This undercounting should increase the ratio of votes cast in later elections to votes cast in 2008, thus potentially producing a larger estimate of the effect of 2008 voting on future voting.

[5]Alternatively, if removal from voter lists is positively correlated with voter inactivity, then Blacks would have to be removed from voter lists at lower rates than Whites and Hispanics to incorrectly make the inference that they were not seeing as strong effects of 2008 voting on future voting. While it is possible that Blacks are removed from voter lists at comparable or lower rates than Hispanics, it seems unlikely that Whites are removed at greater rates than Blacks.

H2: Voting in the 2008 election produced a larger increase in the probability of voting in later elections for Blacks compared to the effect of voting for the first time in other recent presidential elections.

To test these hypotheses, I employ a fuzzy regression discontinuity design. The 2008 presidential election was on 4 November 2008. Anyone born 4 November 1990 or earlier was eligible to vote in the 2008 general election. Anyone born 5 November or later was ineligible to vote. This voting age restriction creates a fuzzy discontinuity, wherein passing the eligibility threshold increases an individual's probability of voting in 2008, while all those ineligible to vote have $\mathbb{P}(\text{Vote}_{2008}) = 0$. This design is useful because it isolates the causal effect of voting in 2008 on future voting. My theory of empowered habitual voting predicts that voting in an empowering election should produce a strong positive effect on future participation, all else held equal, and that this effect should be most pronounced for the empowered group. Thus, testing the theory requires isolating the effect of voting in 2008 on future voting.[6]

The optimal design would analyze individual citizens as the units of analysis. However, the data only contain registered voters. To the extent that 2008 voting prompts future political participation, it should also affect future registration, and conditioning on registration introduces post-treatment bias into the design (Nyhan *et al.*, 2017). In the context of this study, an analysis that looked only at registered individuals would observe a treated group (voters eligible to vote in 2008) that consists of voters that otherwise would not be registered in 2017 but were influenced to remain registered based on having been eligible in 2008, and voters who would have been registered regardless of their eligibility status. The control group, however, would only consist of voters who were zealous enough about politics that they registered without having experienced the treatment. Thus, the results would be downward biased because the treated group contains an increased proportion of lower propensity voters than it would if the samples were not contaminated by post-treatment conditioning. This downward bias in the analysis of age eligibility discontinuity designs with voterfile data is formalized in Nyhan *et al.* (2017). While this might stand as a hard test of the hypotheses, it makes it harder to interpret the magnitude of the effect, and limits the generalizability of a null or negative finding.

To address this concern, I employ a design similar to Coppock and Green (2016) and Meredith (2009), aggregating the data in the voterfile by date of birth, to produce daily counts of voting around the election eligibility cutoff. Each birth-day cohort represents the universe of United States citizens born on that day, and the measure of the predictor and outcome variables are the counts of votes produced in a given election by each birth-day cohort.[7] I transform the data for each of the 25 states in my dataset. Figure 1 visualizes daily vote counts around the cutoff for the pooled sample of each state, demonstrating that people who came of age in time to vote in 2008 voted at higher rates than those who came of age just after the 2008 election.

I estimate the complier average causal effect (CACE) of voting on future voting—the average treatment effect for units around the eligibility cutoff whose treatment status depends on whether they are eligible to vote. To calculate the CACE, I estimate a two-stage least squares (2SLS) estimator.[8]

[6]I only test the effect of voting in 2008 on future voting for first-time voters who are 18 in 2008. I am not able to test the effect of first-time voting for voters of other ages because the estimation of causal effects relies on the age eligibility discontinuity. Thus, these results are limited to first-time young voters.

[7]Previous studies (see Meredith, 2009) account for birth trends using Natality data from the Center for Disease Control, analyzing rates of cohort voting rather than counts. The availability of these data is restricted for cohorts born in 1990 and later, so this approach is not possible. Instead, I account for variation in birth trends by including lagged measures of the dependent variables (as in Coppock and Green, 2016)

[8]The results are consistent across varying bandwidths and higher-order polynomials, as shown in the Supporting Information

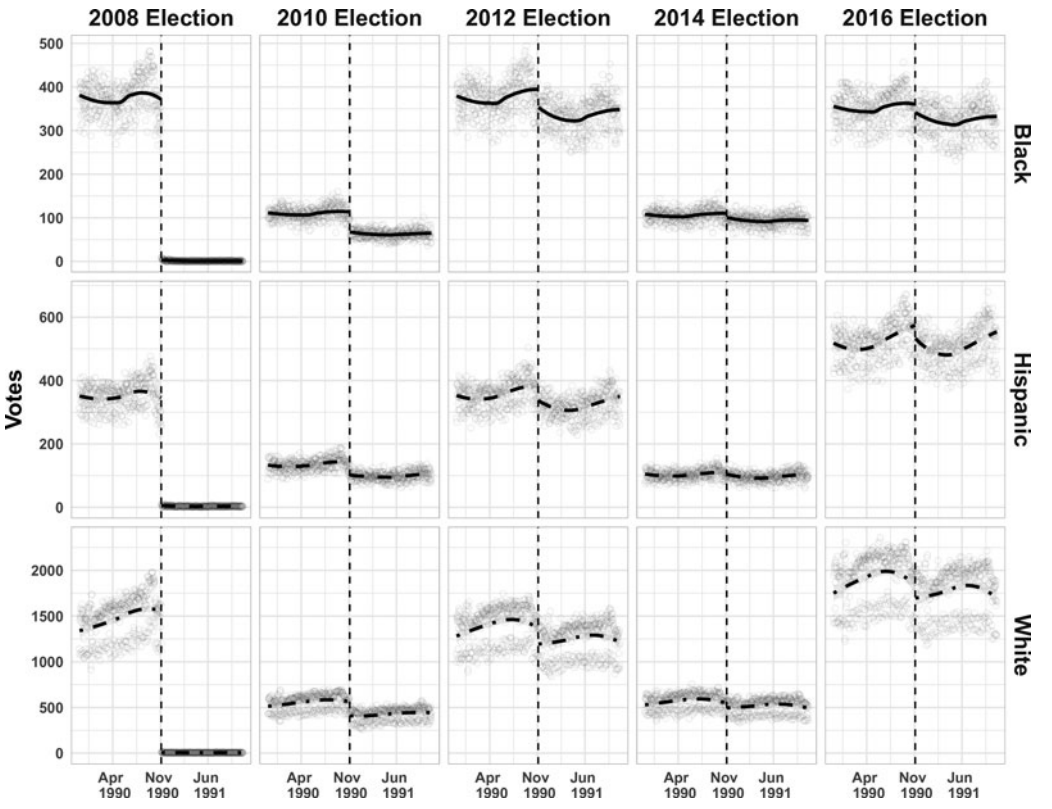

Figure 1. Voting by birthdate cohort, Y-axis is the number of votes in the election for each birthday cohort. Lines are locally weighted smoothing models.

$$(1)\ \text{Vote}_{1,i} = \alpha_0 + \alpha_1 Z_i + \alpha_2 X_i + \alpha_3 Z_i * X_i + \alpha_4 \text{Lagged Vote}_{2,i} + \epsilon_{1,i}$$
$$(2)\ \text{Vote}_{2,i} = \beta_0 + \beta_1 \widehat{\text{Vote}}_{1,i} + \beta_2 X_i + \beta_3 \widehat{\text{Vote}}_{1,i} * X_i + \beta_4 \text{Lagged Vote}_{2,i} + \epsilon_{2,i}$$

where $\text{Vote}_{t,i}$ is the number of votes cast by birth-day cohort i in election t and Z_i is whether the birth-day cohort i is eligible to vote in election 1. X_i is the running variable, the number of days that birth-day cohort i is from the election eligibility cutoff.[9] To account for seasonal and day-of-the-week birth trends, I include Lagged $\text{Vote}_{2,i}$, which represents the total number of votes cast in the outcome election by the birth-day cohort one year older than birth-day cohort i.[10] Births are not distributed evenly across days of the week and time of year, and larger birth cohorts will likely have larger vote counts. Including the lagged variable controls for these patterns, conditional on the assumption that they are consistent in the immediate preceding year.

To determine treatment effects for different racial groups, I run separate 2SLS calculations on the data subset by racial group. This is done by constructing daily counts of votes by each racial

[9]I use a 365-day bandwidth on either side of the eligibility cutoff. This bandwidth is consistently less than the bandwidth derived from the Imbens–Kalyanaraman method, across states and racial groups, but I use the 365-day bandwidth because larger bandwidths would not allow for inclusion of the Lagged Vote covariate. A bandwidth over 365 days would cause the lagged outcome to contain values from birth cohorts on the opposite side of the eligibility cutoff

[10]The corresponding Lagged $\text{Vote}_{1,i}$ for a given birth-day cohort is the birth-day cohort approximately a year older than birth-day cohort i, but adjusted to match the day of the week upon which birth-day cohort i was born. Leap days make this construction difficult and are not included in this analysis.

group. The Wald estimator for a given racial group gives us the CACE for members of that racial group. For example, the CACE for Blacks is a result of comparing the future voting behavior of Blacks just too young to vote in the 2008 election to the future voting behavior of Blacks just old enough to vote in the election.

States differ in the norms and protocols for collecting and maintaining voter lists, so I conduct separate analyses for each state rather than run a pooled analysis or one where the unit of analysis is state-birthday cohort. I then calculated a fixed-effects meta analysis weighted average of the CACE estimates, weighting them by the inverse of their variances, to estimate across states the effect of 2008 voting,

$$\bar{\text{CACE}}_j = \frac{\sum_{s=1}^{S} \frac{1}{\hat{\sigma}_{js}^2} \widehat{\text{CACE}}_{js}}{\sum_{s=1}^{S} \frac{1}{\hat{\sigma}_{js}^2}}$$

where $\widehat{\text{CACE}}_{js}$ is the CACE estimate for outcome j for state s, and $\hat{\sigma}_{js}$ is the standard error of the CACE estimate for outcome j for state s. The fixed-effect meta analysis model assumes that the CACE estimates come from a single population, but accounts for different data generation processes by calculating the average of the estimates weighted by the inverse of their variances (Schwarzer *et al.*, 2015). This approach is employed in previous studies of voting habits (Coppock and Green, 2016), and places greater emphasis on the states with the largest voting populations for each racial group and the most precisely estimated effects. In the results section, I present this estimate and the individual state results.

To compare the effect of 2008 voting to the effect of voting in other presidential elections, I also calculate the state-level CACE estimates of voting in the 2000, 2004, and 2012 presidential elections on voting in all subsequent elections. The ideal comparison is whether the effect of voting in 2008 on voting in the next election (2010) was greater than the effect of voting in, say, 2000, on voting in the next election (2002). Directly comparing these coefficients can be mis-informative, however, because quality of vote history is correlated with how much time has past between the treatment election and the year of the voterfile.

Additionally, changes in electoral context further challenge comparisons between treatment elections. To make the most informed comparison, I use meta-analysis techniques to model the state-level CACEs in a weighted ordinary least squares regression, weighting by the inverse of the variance of the estimates. In the model, I test whether larger CACEs are correlated with a dummy variable for the 2008 election, and interact that variable with a dummy variable for Black CACE. I further account for the year of the treatment and outcome elections, as well as whether the later election is a presidential election. I estimate this model on the subsample of Black state-level CACEs to test if 2008 was a uniquely mobilizing election for new Black voters (model 1). I also estimate the model on the full sample of Black, White, and Hispanic state-level CACEs to see if Blacks enjoyed a unique mobilizing advantage over other racial groups in 2008 compared to other presidential elections (model 2). Both models include state fixed effects to make within-state comparisons of different voting effects.

(1) $\text{CACE}_{s,t,j} = \beta_0 + \beta_1 2008\ \text{Election}_t + \beta_2 \text{Presidential}_j + \beta_3 \text{Treatment Election Year}_t + \beta_4 \text{Outcome Election Year}_j + \lambda_s + \epsilon_{s,t,j}$

(2) $\text{CACE}_{s,t,j} = \beta_0 + \beta_1 2008\ \text{Election}_t + \beta_2 \text{Black}_{s,t,j} + \beta_3 2008\ \text{Election}_t * \text{Black}_{s,t,j} + \beta_4 \text{Presidential}_j + \beta_5 \text{Treatment Election Year}_t + \beta_6 \text{Outcome Election Year}_j + \lambda_s + \epsilon_{s,t,j}$

where subscript s denotes the state, subscript t denotes the treatment election, subscript j denotes the outcome election, λ_s is the state fixed effect, and $\epsilon_{s,t,j}$ is the error term.

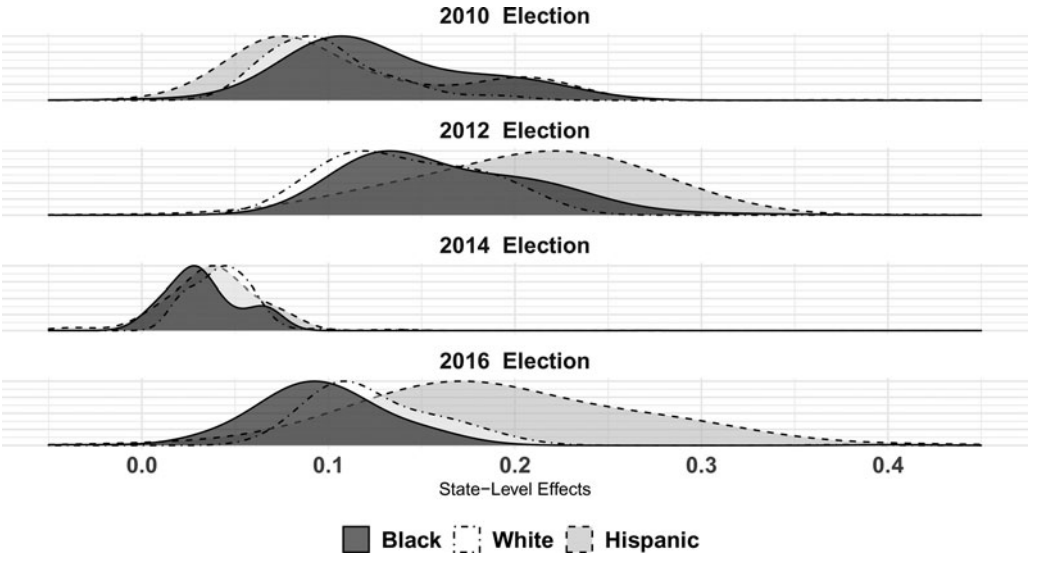

Figure 2. Weighted distributions of state-level voting effects, distributional density of state-level CACEs, weighted by the inverse of the variance of the estimates.

5. Results

5.1. Was voting in 2008 most mobilizing for Blacks?

Voting in 2008 produced positive effects on voting in the 2010, 2012, 2014, and 2016 elections for all racial groups. The results demonstrate that Black voters who voted in 2008 initially received the largest boost to their likelihood of voting in the next general election, but this advantage disappeared in subsequent elections. Figure 2 presents the distributions of the the state-level CACEs of 2008 voting on future voting, weighted by the inverse of the estimates' variances. The distributions illustrate the shift from a Black mobilizing advantage in 2010 to the effects for Blacks lagging behind those for Whites and especially those for Hispanics in ensuing elections. Tables 1 and 2 present the estimated CACE of voting in 2008 on voting in the 2010, 2012, 2014, and 2016 general elections for each state and racial group. The estimates measure the increase in the number of votes in the later election that a birth-day cohort gains for each additional predicted vote in 2008 (from the first stage equation). This translates to the percentage point increase in an individual's probability of voting in the later election. For each racial group, voting in 2008 increases the likelihood of voting in future elections. The results are generally statistically reliable, although we do observe estimates for Blacks and Hispanics that are not significant at conventional thresholds in states with low Black or Hispanic populations.

In 2010, we observe higher CACE estimates for Blacks than for other racial groups across states. The meta-analysis weighted average for Blacks was 0.128 with a standard error of just 0.003, measurably distinct from the effect of 0.110 for Hispanics (0.004 standard error) and the effect of 0.101 for Whites (0.002 standard error). So, for at least one election cycle, Blacks who voted in 2008 experienced a larger increase in their likelihood of future voting than White or Hispanics.

In 2012, the effect for Blacks is still on average larger than the effect for Whites, but the effect for Hispanics is the largest. These effects are generally larger than the effects on 2010 voting. Midterm elections see substantially lower turnout than presidential elections, which may depress results. Additionally, the marginal voter mobilized in a presidential election may be particularly unlikely to vote in a midterm election. Regardless, Black voters no longer see the highest effects, largely due to the increase in the CACE estimates for Hispanics.

Table 1. Effect of 2008 voting on 2010 and 2012 voting

	2010						2012					
	White		Black		Hispanic		White		Black		Hispanic	
AL	0.135	(0.014)	**0.176**	**(0.014)**	0.115	(0.061)	0.165	(0.027)	0.151	(0.028)	0.212	(0.101)
AR	0.107	(0.021)	**0.215**	**(0.04)**	0.182	(0.099)	0.199	(0.04)	**0.334**	**(0.08)**	-0.008	(0.213)
CA	0.191	(0.011)	0.191	(0.019)	0.204	(0.009)	0.177	(0.019)	**0.220**	**(0.033)**	0.209	(0.017)
CT	0.101	(0.013)	**0.109**	**(0.035)**	0.092	(0.026)	0.209	(0.023)	**0.226**	**(0.064)**	0.217	(0.052)
FL	0.094	(0.008)	**0.101**	**(0.01)**	0.067	(0.01)	0.106	(0.02)	**0.130**	**(0.023)**	0.126	(0.024)
IL	0.096	(0.008)	0.129	(0.014)	0.133	(0.015)	0.087	(0.018)	0.128	(0.028)	0.162	(0.031)
IN	0.077	(0.009)	0.07	(0.02)	0.047	(0.029)	0.118	(0.018)	0.142	(0.044)	0.289	(0.069)
KS	0.108	(0.012)	0.055	(0.044)	0.025	(0.038)	0.090	(0.024)	0.125	(0.111)	0.159	(0.08)
KY	0.135	(0.017)	0.128	(0.035)	0.101	(0.084)	0.135	(0.03)	0.179	(0.066)	0.46	(0.156)
MA	0.074	(0.011)	**0.136**	**(0.035)**	0.095	(0.031)	0.158	(0.024)	0.131	(0.077)	0.141	(0.066)
MD	0.118	(0.013)	**0.147**	**(0.014)**	0.144	(0.03)	0.119	(0.027)	0.115	(0.03)	0.187	(0.064)
MO	0.092	(0.012)	**0.218**	**(0.029)**	0.024	(0.052)	0.183	(0.022)	0.281	(0.057)	0.293	(0.086)
NE	0.062	(0.013)	0.005	(0.035)	0.052	(0.041)	0.15	(0.025)	0.204	(0.116)	−0.101	(0.118)
NV	0.144	(0.025)	0.177	(0.05)	0.23	(0.03)	0.159	(0.036)	0.095	(0.11)	0.254	(0.054)
NY	0.100	(0.007)	**0.103**	**(0.01)**	0.075	(0.01)	0.195	(0.017)	0.207	(0.024)	0.269	(0.025)
OH	0.091	(0.008)	**0.101**	**(0.014)**	0.043	(0.033)	0.111	(0.019)	**0.123**	**(0.029)**	0.076	(0.077)
OR	0.105	(0.017)	0.034	(0.101)	0.125	(0.041)	0.115	(0.025)	0.145	(0.153)	0.122	(0.067)
PA	0.136	(0.007)	**0.216**	**(0.013)**	0.104	(0.017)	0.154	(0.016)	0.185	(0.027)	0.264	(0.04)
RI	0.065	(0.025)	−0.127	(0.069)	0.154	(0.042)	0.119	(0.041)	0.075	(0.209)	0.271	(0.073)
SC	0.162	(0.014)	0.188	(0.014)	0.192	(0.065)	0.185	(0.028)	0.117	(0.031)	0.254	(0.11)
TN	0.069	(0.011)	**0.104**	**(0.013)**	0.068	(0.049)	0.112	(0.024)	**0.179**	**(0.032)**	0.044	(0.118)
TX	0.068	(0.009)	**0.112**	**(0.015)**	0.074	(0.012)	0.127	(0.02)	**0.237**	**(0.031)**	0.23	(0.024)
VA	0.068	(0.008)	**0.100**	**(0.011)**	0.081	(0.022)	0.126	(0.023)	0.130	(0.029)	0.225	(0.053)
WA	0.611	(0.043)	−0.01	(0.267)	0.386	(0.084)	0.406	(0.065)	−0.878	(0.516)	0.208	(0.142)
WV	0.06	(0.019)	0.073	(0.076)	0.108	(0.154)	0.092	(0.032)	0.072	(0.138)	−0.014	(0.251)
Meta	0.101	(0.002)	**0.128**	**(0.003)**	0.11	(0.004)	0.143	(0.005)	0.162	(0.008)	0.205	(0.009)

Robust standard errors in parentheses.
Black CACE estimates are bolded when they are the largest significant estimate for the state-outcome.

The estimates for 2014 are much lower than the estimates for 2012 or 2010. This may be a function of lower turnout in this election compared to the other post-2008 elections. Generally, there is no distinguishable differentiation between racial groups in the effect of 2008 voting on 2014 voting. In 2016, we observe results closer in magnitude to 2010 and 2012, but 16 of the 25 states have the largest effects for Hispanics. There are only two states where Blacks have the largest effects and 7 with largest effects for Whites. The weighted average for Hispanics is the largest, followed by Whites, then Blacks. Each of these weighted averages is statistically distinct.

The results show that voting in 2008 increased the likelihood of voting in future elections for each racial group. The state CACE estimates fall within the range seen in Coppock and Green (2016). Figure 3 shows the CACE estimates and 95 percent confidence intervals for the meta analysis weighted averages. While I do observe stronger mobilizing effects for Blacks in the 2010 election, this relative hierarchy does not persist. Hispanics experience on average the largest future mobilizing effects as a result of voting in the 2008 election. Thus, the evidence does not support the hypothesis that voting for the first time in the 2008 election produced greater mobilizing effects for Blacks compared to voters of other racial groups.

5.2. Was 2008 a uniquely mobilizing election for Blacks?

While the 2008 election did not produce stronger mobilizing effects for Blacks compared to other racial groups, perhaps the election was uniquely mobilizing, in that Blacks who voted for the first time in 2008 experienced a greater increase in their likelihood of voting in the future compared to those who voted for the first time in other presidential elections. Additionally, perhaps the

Table 2. Effect of 2008 voting on 2014 and 2016 voting

	2014						2016					
	White		Black		Hispanic		White		Black		Hispanic	
AL	0.029	(0.013)	0.019	(0.015)	0.041	(0.055)	0.110	(0.037)	0.067	(0.027)	0.180	(0.134)
AR	0.075	(0.032)	0.054	(0.063)	0.070	(0.163)	0.177	(0.050)	0.126	(0.088)	0.747	(0.298)
CA	0.059	(0.009)	0.019	(0.018)	0.035	(0.008)	0.167	(0.025)	0.150	(0.034)	0.17	(0.023)
CT	0.066	(0.016)	0.019	(0.040)	0.037	(0.031)	0.105	(0.03)	0.148	(0.064)	0.264	(0.065)
FL	0.047	(0.012)	**0.067**	**(0.012)**	0.048	(0.015)	0.101	(0.027)	0.11	(0.022)	0.114	(0.032)
IL	0.058	(0.011)	0.059	(0.017)	0.061	(0.018)	0.124	(0.025)	0.086	(0.027)	0.227	(0.045)
IN	0.037	(0.008)	0.001	(0.02)	0.000	(0.029)	0.107	(0.022)	0.091	(0.046)	0.231	(0.082)
KS	0.047	(0.017)	0.04	(0.047)	-0.040	(0.054)	0.099	(0.029)	-0.031	(0.093)	0.195	(0.103)
KY	0.094	(0.022)	0.052	(0.046)	0.255	(0.130)	0.098	(0.040)	0.102	(0.074)	0.513	(0.225)
MA	0.046	(0.014)	0.033	(0.043)	0.001	(0.035)	0.159	(0.033)	0.103	(0.082)	0.179	(0.077)
MD	0.028	(0.017)	0.030	(0.015)	0.076	(0.036)	0.117	(0.031)	0.094	(0.03)	0.273	(0.077)
MO	0.043	(0.010)	0.037	(0.025)	0.058	(0.045)	0.150	(0.03)	0.177	(0.058)	0.399	(0.113)
NE	0.041	(0.017)	−0.066	(0.052)	0.007	(0.064)	0.189	(0.034)	**0.409**	**(0.121)**	0.107	(0.168)
NV	0.033	(0.020)	0.036	(0.041)	0.049	(0.022)	0.201	(0.046)	0.032	(0.128)	0.300	(0.064)
NY	0.041	(0.009)	0.010	(0.011)	0.014	(0.011)	0.152	(0.024)	0.089	(0.024)	0.174	(0.035)
OH	0.020	(0.007)	**0.029**	**(0.013)**	−0.035	(0.032)	0.083	(0.02)	0.074	(0.028)	0.018	(0.081)
OR	0.070	(0.019)	**0.273**	**(0.124)**	0.077	(0.059)	0.138	(0.032)	**0.391**	**(0.169)**	0.125	(0.089)
PA	0.053	(0.008)	0.028	(0.015)	0.041	(0.019)	0.108	(0.023)	0.118	(0.028)	0.192	(0.051)
RI	0.041	(0.028)	0.05	(0.099)	0.135	(0.049)	0.089	(0.049)	0.083	(0.181)	0.296	(0.086)
SC	0.059	(0.015)	0.047	(0.016)	0.081	(0.068)	0.175	(0.040)	0.040	(0.028)	0.289	(0.177)
TN	0.019	(0.012)	**0.037**	**(0.013)**	0.036	(0.064)	0.102	(0.034)	**0.112**	**(0.028)**	0.113	(0.15)
TX	0.048	(0.010)	0.069	(0.018)	0.073	(0.014)	0.126	(0.031)	0.149	(0.031)	0.284	(0.037)
VA	0.027	(0.010)	0.028	(0.012)	0.049	(0.024)	0.112	(0.028)	0.072	(0.029)	0.137	(0.061)
WA	0.141	(0.038)	0.080	(0.254)	0.036	(0.078)	0.379	(0.079)	−1.133	(0.618)	0.410	(0.188)
WV	0.041	(0.020)	−0.123	(0.083)	0.047	(0.142)	0.119	(0.042)	0.025	(0.135)	-0.102	(0.303)
Meta	0.043	(0.002)	0.033	(0.004)	0.039	(0.004)	0.126	(0.006)	0.098	(0.008)	0.193	(0.012)

Robust standard errors in parentheses.
Black CACE estimates are bolded when they are the largest significant estimate for the state-outcome.

disadvantage in mobilizing effects between Blacks and other racial groups observed above is smallest from the 2008 election compared to other elections, indicating that, while Blacks are still experiencing smaller effects, 2008 may still be more potent for Blacks than other groups conditional on baseline mobilizing effects. To test this, I compare the effect of voting in 2008 to the effect of voting in other recent presidential elections (2000, 2004, 2012) on all subsequent elections from 2002 through 2016. I estimate these effects with the same voterfile data as the 2008 effects. The full results for each election year are presented in the Supporting Information, but here I present two analyses to directly test if (1) Blacks who voted for the first time in 2008 experienced a greater mobilizing boost than Blacks who voted for the first time in other presidential elections, and (2) how the comparison between Blacks and other racial groups in 2008 looks in reference to other presidential elections.[11]

I estimate models predicting state-level CACEs as a function of whether the treatment election of the CACE is 2008, and that variable interacted with the corresponding racial group of the CACE. To test whether 2008 was a uniquely mobilizing election for Blacks in absolute terms, I estimate the model on the subset of state-level CACEs for Blacks. A positive and significant coefficient on the 2008 Treatment Election variable would indicate that 2008 did produce a larger mobilizing effect for Blacks than other elections. To test whether the gap between Black mobilizing effects and non-Black mobilizing effects is smallest for 2008, I estimate the model on the full sample of Black, White, and Hispanic state-level CACEs, focusing on the coefficient on the interaction of 2008 Treatment Election dummy variable and Black dummy variable. I estimate each

[11]Turnout history in 2000 is not recorded in the Kentucky, Rhode Island, and Virginia voter data. The model thus does not include estimates from these states for the effect of first-time voting in the 2000 election.

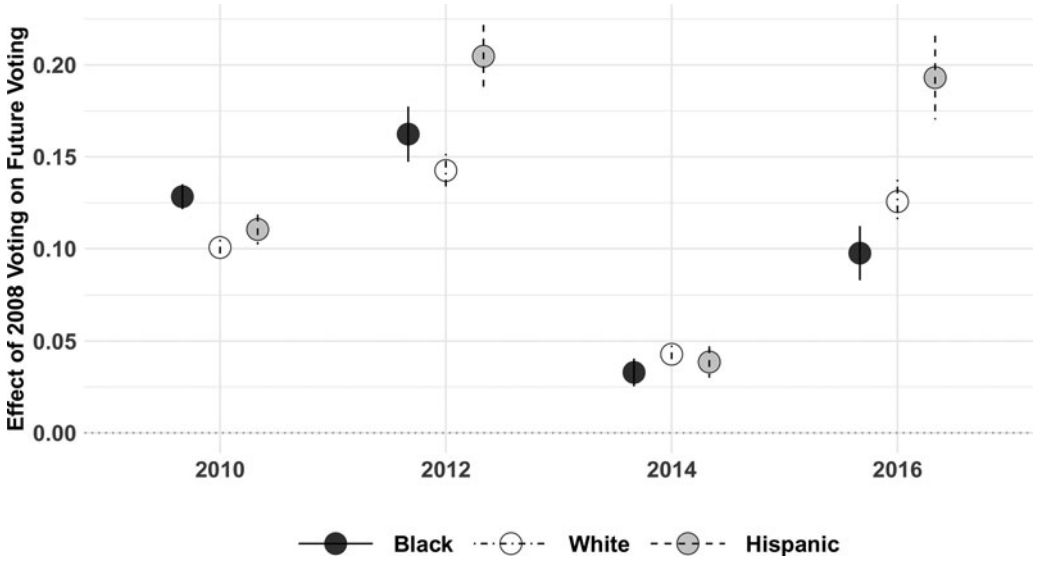

Figure 3. Weighted averages of state-level effects, points represent the meta analysis weighted average of state-level CACE estimates, weighted by the inverse of the variance of the estimates. Bars represent 95 percent confidence intervals.

Table 3. Modeling state-level effects to compare 2008 to other presidential elections

	Dependent variable: effect of voting on future voting			
	Black CACEs		All CACEs	
	WLS	*OLS*	*WLS*	*OLS*
2008 Treatment election	0.013	−0.021	0.0010	0.005
	(0.010)	(0.027)	(0.006)	(0.045)
Presidential outcome election	0.076	0.089		
	(0.009)	(0.030)		
Black			−0.002	−0.039
			(0.007)	(0.026)
Outcome election year	−0.012	−0.009	−0.004	0.002
	(0.006)	(0.002)	(0.003)	(0.001)
Treatment election year	0.005	−0.007	−0.001	−0.017
	(0.004)	(0.004)	(0.003)	(0.006)
2008 Treatment election * Black			0.009	−0.008
			(0.008)	(0.026)
Fixed effects	State	State	State	State
N	464	464	1,391	1,391

Weighted OLS models are weighted by the inverse of the variance of the estimates. Controls include whether the outcome election is a Presidential election (mobilizing effects are larger in these elections) and the years of the treatment and outcome elections (to account for how age of vote history influences measurement of CACEs). All models use state-fixed effects to make within-state comparisons. Standard errors clustered at the treatment election year to account for correlated error that may come from measuring turnout history for past treatment elections using a contemporary voterfile.

model using Weighted Least Squares, weighting by the inverse of the variance of the estimates, but also report the models from unweighted Ordinary Least Squares models. Standard errors are clustered at the treatment election year to account for correlated error that may come from measuring turnout history for past treatment elections using a contemporary voterfile.

Across models, 2008 is not statistically distinguishable from other presidential elections in its mobilizing effects for Blacks. Table 3 reports the results for the four models. On the subsample of Black state-level CACEs, the coefficient on the 2008 treatment election is not statistically

distinguishable from zero. On the full sample the interaction of 2008 treatment election and Black CACE is similarly not statistically distinguishable from zero. Thus, the evidence indicates that, despite its nominally empowering features, voting for the first time in 2008 was not uniquely mobilizing for Blacks.

6. Conclusion

This study presents the first test in the United States context of whether minority voters experience stronger effects of voting on future voting in response to a first-time voting experience linked to their group's political empowerment. The 2008 election is the election most prominently tied to Black political empowerment, and thus represents an exceptional case from which we might expect empowerment-driven persistence in political participation. Yet, 2008 was not a unique formative voting experience for new Black voters, producing enduring participatory effects that lagged behind those of other racial groups and spurring similar effects on future voting for Blacks as other presidential elections. Given the wealth of prior evidence that racial identity influences political behavior, it is noteworthy that empowerment on this scale does not produce enduring patterns of political participation.

Together, these results suggest that group empowerment does not influence the effect of first-time voting experiences on future political participation. First-time voting experiences with strong connections to racial group empowerment are not sufficient to produce heightened rates of political participation among the empowered group. Furthermore, these findings demonstrate that voting in the election of President Obama has not durably increased Black political participation in comparison to other groups. While President Obama's campaign was successful in mobilizing unprecedented numbers of young Black voters, these voters saw a smaller increase in the likelihood of voting in later elections than their peers in other racial groups. As America's political parties and presidential vote choice increasingly sort by race, electoral outcomes may increasingly be decided by racial group turnout. The 2016 presidential election was in part decided by reduced Black turnout in key states (Fraga *et al.*, 2017). A sustained mobilizing advantage for Black voters from the 2008 election could have swung the election.[12]

This study finds that Black political empowerment does not drive habitual voting, but the limitations of the analysis leave important questions for future research. First, the results in this analysis can only directly speak to the effect of voting for young voters. To what extent do the results extend to older first-time voters, or to voters generally? There are to date no empirical tests of age differences in voting habits, but younger voters may be at the life-cycle point where events most impact habit formation, so the effects for older first-time voters might be lower. With respect to the general effect of voting on future voting, it seems likely that the reifying effect of voting in an election when you have already voted before is not going to exhibit as strong an effect on future voting as a first-time voting experience. However, given that the effect of voting for the first time on future voting is large in magnitude, there is still room for smaller effects to have significant electoral consequences. Most importantly for the conclusions of this paper, I cannot rule out that voting in the 2008 election produced meaningfully different effects on future voting for voters of older ages, nor that these effects were stronger for Black voters than for voters of other racial groups.

Second, while this paper's theoretical motivation argues that 2008 is a most likely case for political empowerment at the national level, it may be the case that both Black voters and non-voters in 2008 experienced its empowering effects. Given the lack of a black mobilization advantage observed in the data, this alternative explanation cannot be fully ruled out. Additionally, Black voters who were not eligible to vote in 2008 may still have experienced the empowering effect of voting for the first Black president by voting in the 2012 election, in which President

[12]It may be the case that voting habit stems more from automaticity derived from the repetition of contextual stimuli (Aldrich *et al.*, 2011). Within this framework, the uniqueness of 2008 for Black voters could reduce automaticity effects, as later elections may be notably different in their implications.

Obama was re-elected. To test this potentiality, in the Supporting Information, I test for an empowering effect of the 2012 election, measuring the effect of voting for the first-time in that election on future voting. I find that 2012 also did not produce stronger mobilizing effects for Blacks. This indicates that the empowering effects of 2008 voting on future voting are likely not obscured by an empowering effect from 2012. In addition, this provides further evidence against the model of empowerment-driven first-time voting, as the 2012 election, the only other presidential election that resulted in the election of a Black president, should be another likely case to produce greater effects for Black, should the theory put forth in this paper hold.

Third, the larger effects for Hispanics are not congruent with the theory and hypotheses tested in this analysis. While I am hesitant to speculate post-hoc as to what drives the larger effects for Hispanics, I at least note that the striking results for Hispanic voters could be the result of mobilization efforts being most effective for this otherwise lower participation group. This explanation is in line with a mobilization-based (Fraga, 2016*a*, 2018), rather than an empowerment-based, effect. The effects on future registration in the Supporting Information further support this alternative model, as the larger voting effect for Hispanics could have been driven by larger effects on future registration, as new voters were brought into the electorate who otherwise would not have become regular voters. Additionally, distributional differences in voting propensity across racial groups for 2008 voters may influence the results, particularly if the smaller sample of first-time Hispanic voters in 2008 had on average higher voting propensity than the larger (and thus containing more marginal voters) Black sample. From that perspective, the habit forming effects of the 2008 election are not sufficiently strong to overcome any distributional differences across racial groups.

Fourth, it is possible that there was an empowering effect of the 2008 election on political attitudes or preferences, but any shifts did not translate into greater behavioral effects. Evidence from across the behavioral sciences demonstrates that attitudes do not necessarily predict behavior, as behavioral choices require deliberation between multiple, often competing interests—such as social norms or institutional contexts—that may limit the influence of attitudinal change (Tankard and Paluck, 2017; Enos and Gidron, 2018). Future work can further disentangle which of these factors matter most for habitual voting.

Lastly, while I find no evidence of a Black political empowerment effect on voting habit at the national level, political empowerment may be a localized phenomenon. The first Black President, while an important milestone, may not represent the same level of political incorporation and control as a Black mayor and a majority Black city council represent to Black voters in municipal elections. Still, the best evidence of the effects of empowerment at the local level suggest that the mobilizing effect of empowerment is short-lived (Gilliam and Kaufmann, 1998; Spence and McClerking, 2010). The evidence presented here suggests that the limitations of empowerment at the national level are even more pronounced.

Supplementary material. To view supplementary material for this article, please visit https://doi.org/10.1017/psrm.2023.9. To obtain replication material for this article, https://doi.org/10.7910/DVN/SYNIET.

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