

# The Effect of State Electoral Institutions on Class and Racial Bias in Political Participation, 1978-2000

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*Updated Draft: November 19, 2007*

**Acknowledgement:** The authors are listed alphabetically and share equal responsibility for any errors and for the interpretations presented. We thank Robert Erikson, Jonathan Nagler, Caroline Tolbert, and other conference participations who provided helpful feedback on an earlier version of this paper presented at the 2007 Annual Meeting of the American Political Science Association, as well as Sarah Bruch for her research assistance and the Robert Wood Johnson Foundation Health and Society Scholar Program for its financial support of the first author.

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## Abstract

Research examining electoral institutions and participation typically predicts turnout at the individual-level. Instead, this paper examines participation at the aggregate level to better capture the racial and class-based bias in the composition of state electorates, as well as the relationship between bias and electoral institutions. Employing data from the Current Population Survey from 1978 to 2000, state-specific measures of bias in both registration and voting are compared with data capturing a set of state-level electoral institutions governing both registration and voting procedures. The findings identify a small decrease in registration bias after enactment of motor voter provisions but few other direct effects of electoral institutions. Instead, a conditional impact was found in which lenient voting procedures were found to decrease bias, but only when registration bias is already low. Lenient voting procedures paired with high bias in registration resulted in increased voting bias by both race and class.

## **Introduction**

The success of any democracy is fundamentally connected to the participation of those being governed. This is fitting, as democracy is defined, in large part, by representation, and true representation requires the participation of citizens in government. Yet a wide spanning literature on political participation in the United States challenges the notion of political equality by routinely demonstrating a steadfast relationship between an individual's social status and her tendency to participate in political activities. As a result, it is clear that voters are not a random subset of the population. In fact, the evidence wholly suggests that voters are wealthier and have higher levels of education than non-voters (Abramson, Aldrich, and Rohde 2005; Leighley 1995; Leighley and Nagler 1992; Nie and Verba 1972, 1999; Rosenstone and Hansen 1993; Wolfinger and Rosenstone 1980). Similarly, being a racial minority is often associated with decreased participation rates, particularly in the Southern states and states with large immigrant populations (Teixeira 1992; Rosenstone and Hansen 1993; Wolfinger and Rosenstone 1980). So, it seems that amidst a vast body of research examining individual-level voter participation and electoral behavior in the United States, there is a distinct tendency for income, class, and racial biases to flourish despite their incongruence with democratic ideals.

Apart from the inherent incompatibility that these biases have with democratic expectations, and the problems that one might anticipate them to generate from a normative standpoint, research on income or class-based bias reveals that this differential does, in fact, have real consequences for policy outcomes. In particular, scholars have determined that states with higher levels of bias in political participation tend to offer less generous welfare benefits, exhibit lower levels of state welfare spending, and often implement punitive welfare rules (Allen and Campbell 1994; Avery and Peveley 2005; Campbell, 2003; Fellowes and Rowe 2004; Hill and

Leighley 1992; Hill, Leighley, and Hinton-Anderson 1995; Ringquist et al. 1997). Furthermore, it seems that the limited participation rates of racial minorities could create distributive consequences similar to those found for income bias. Additionally, bias in political participation paired with demographic shifts towards greater income inequality and racial diversity ultimately raises questions about the health of our representative democracy in an era of social inequality (Jacobs and Skocpol 2005).

Given the perceived negative ramifications of these sorts of biases, many reformers have targeted their efforts towards equalizing the electoral playing field via state electoral institutions. From a reform standpoint, electoral institutions can be viewed simply as the rules of the game. They are the laws and procedures governing elections in the American states, and each state maintains control over its own institutional profile. Due to the American federal system, there is a great deal of variation in the rules of the game, as institutionalized by law, both between states and within states over time. By parameterizing the landscape wherein electoral activity takes place, the nature of state electoral institutions over time pertains directly on the question of voter bias. There is a presumption that restrictive, costly voting laws disproportionately affect those who demographically bear higher voting costs to begin with. As such, electoral reforms aimed at easing the costs of voting may increase participation rates and minimize voter bias within, and between, these classically disadvantaged groups. Furthermore, positive reform efforts aimed at minimizing the costs of registration and voting may be hampered in areas where easing the burden of voting for these groups is not, and has not historically been, a priority.

### **How are Electoral Institutions and Bias in Political Participation Connected?**

Research on voting and elections in the United States, and political participation more specifically, has comprised a vast amount of the scholarship in the field of political science. Yet,

most of the work on voting and elections has generally focused on the individual-level determinants of voting behavior (Avey 1989; Campbell et al. 1960; Calvert 1993; McDonald 2001; Miller 1996; Nagler 1991; Nie 1999; Teixeira 1992; Timpone 1998; Rosenstone 1978; Verba 1972; Wolfinger 1980) with less attention being paid to the institutional context of political behavior. This was noted early by Campbell et al. (1960) who observed that research embracing only individual-level variables ignores the elements that define the context of the behavior itself. Most notably, Jerrold Rusk (1970, 1974) further criticized this myopic perspective on the voting process and, in response, introduced the so-called “legal-institutional” theory of voting behavior which postulates that “the legal-institutionalist properties of the electoral system – ballot and registration systems, voting systems, suffrage requirements, and the like – have important effects in influencing and shaping voting behavior; in essence, they define the conditions and boundaries of decision-making at the polls. Often, though, they are taken for granted, [treated] as ‘givens’ instead of being probed for their effects on voting behavior” (1044).

Over the last two decades, federal intervention aimed at reducing the cost of voter registration in the United States has prompted many studies of how changes in particular electoral institutions affect participation rates (Boyd 1981; Brians 2001; Fenster 1994; Franklin 1997; Gans 1987; Hanmer 2005; Highton 1997; Karp 2000; Knack 1995, 2000, 2001; Mitchell and Wlezien 1995; Oliver 1996; Piven 2000; Rhine 1995; Stein 1998, 2005; Southwell 2000). For example, numerous studies over the last decade have focused on the independent effects of registration mechanisms, and revealed that less restrictive voter registration procedures can increase voter turnout (Brians and Grofman 2001; Fenster 1994; Gans 1987, 1990; Highton 1997; Kelley, Ayres, and Bowen 1967; Kim, Petrocik, and Enokson 1975; Knack 1995; Mitchell and Wlezien 1995; Piven and Cloward 1988, 2000; Rhine 1995; Rosenstone 1980; Rosenstone

and Wolfinger 1978; Wolfinger, Rosenstone, and Hansen 1993). Specifically, Rhine (1995) found that the elimination of voter registration programs entirely would increase state turnout rates by three percentage points, while the adoption of a motor voter provision increased turnout a small but significant amount. Additionally, Hanmer (2005) found that Election Day registration was more likely to increase turnout rates than motor voter programs, although the greatest increases in turnout seemed to occur in states where both motor voter and Election Day Registration programs were implemented.

While understanding the effects of particular electoral institutions on aggregate participation rates is important, most of this research utilizes a familiar cost-benefit framework, in which individuals are often assumed to experience voting costs in a uniform fashion (Downs 1957). Consequently, there has been less research aimed towards parsing out the effects of particular electoral institutions on specific groups of individuals. Though cost-increasing and cost-decreasing institutions are routinely demonstrated to have a somewhat marginal effect on influencing voting rates in the aggregate, it could be the case that the institutional effects of particularly restrictive laws are experienced disproportionately by certain groups of individuals rather than others. This is not inconsequential; namely, the political participation tendencies of low-income and minority citizens are directly related to normative concerns about the state of political inequality – and it seems that by establishing the electoral rules of the game, state electoral institutions could help remove (or exacerbate) these sorts of biases.

Furthermore, understanding these biases, or the distortion in the participation rates of certain groups (e.g. rich or poor), underlies most of the motivation for examining institutional effects on overall turnout in the first place. In fact, there is evidence to suggest that electoral institutions not only impact the overall number of voters, but they also affect the characteristics

of voters. For example, several scholars have concluded that later registration deadlines improve participation for low-turnout groups, such as the less educated (Mitchell and Wlezien 1995; Nagler 1991; Teixeira 1992; Wolfinger and Rosenstone 1980). Similarly, Knack and White (2000) examine Election Day Registration (EDR) and conclude that the adoption of EDR is associated with large and significant improvements in the turnout rates of young persons relative to older persons and of recent movers relative to non-movers; however, they find no differential impact by educational level. Of course, it is also possible that electoral reforms could increase class- or racial-bias in participation. For example, Berinsky, Burns, and Traugott (2001) examined the socio-economic characteristics of Oregon voters who took advantage of a new Vote-by-Mail (VBM) System. They concluded that the VBM provision increases, rather than diminishes, the resource stratification of the electorate by its disproportionate use among regular voters (who tend to be of higher income).

This paper extends this line of scholarship by examining the over-time relationship between a range of electoral institutions and the level of both class and racial bias in political participation rates. By testing this relationship at the aggregate level, we are able to more directly measure changes in the racial or class-based composition of the electorate rather than inferring changes in aggregate bias from changes in individuals' (or individuals with particular characteristics) propensity to turn out to vote.

### **Hypotheses**

In order to understand the complicated relationship between state electoral laws and class and racial bias in political participation rates, we combine comprehensive data on state electoral institutions with differential turnout data sorted by socio-economic and racial status across all fifty states and over more than two decades. This allows for a more direct focus on class and

racial biases within participation rates, over and beyond general reflections about effects on overall turnout. A differentiation is drawn between two forms of participation bias: bias in registration and bias in voting. Conceptualizing political participation as two-related stages provides additional insight into the specific form participation bias may take, as well as how bias in registration may feed bias in voting (Brown, Jackson, and Wright 1999).

In order to isolate the relationship between changes in electoral institutions and changes in class and race bias, we limit our focus to four key electoral institutions that experienced significant change during the time period of this study, 1978-2000.<sup>1</sup> These institutions are: Mail-in Registration, Motor Voter Registration, Elimination of the Non-Voting Purge and Early Voting. It is important to note that each of these electoral institutions is *not* expected to have the same effect on bias in political participation. In fact, the conceptual model distinguishes between institutions that govern *registration procedures*, and are, therefore, expected to directly affect registration bias (i.e. mail-in registration and motor voter registration), and institutions that govern *voting procedures* and would, therefore, effect bias in voting (i.e. elimination of purge and early voting). Furthermore, we expect that bias in registration will have a significant effect on bias in voting, and that the effect of the electoral institutions governing voting procedures may differ in states with high versus low bias in registration. The reason for this expectation is that electoral institutions that make it easier for the registered to vote will reduce the cost of voting for those already registered. When a state's registered voters represent a cross-section of social groups, this reduced cost is expected to increase voting for a cross-section of social groups. However, if a state already experiences high bias in registration, the groups more likely

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<sup>1</sup> Due to limited variation in our time-series, we intentionally excluded the following electoral institutions: poll hours, registration closing date, registration purge period, state and local residency requirements, and election day registration. These electoral institutions did not experience significant change between 1978 and 2000.

to be registered will receive a greater reduction in the cost of voting. These hypotheses are listed below and visually depicted in Figure 1.

- H1: When *registration procedures* are eased (i.e. enactment of mail registration and motor voter registration) we will see less bias in registration.
- H2: When *voting procedures* are eased (i.e. upon elimination of the non-voting purge and enactment of early voting) we will see less bias in turnout.
- H3: A reduced bias in registration will translate into reduced bias in turnout.
- H4: Changes in voting procedures will lead to more reduction in vote bias in states with low (versus high) bias in registration.

### **Data**

To test these hypotheses the data were pooled across all of the fifty American states and the twelve biennial election years from 1978-2000. This includes both presidential and non-presidential election years. In doing so, we created a pooled cross-section time-series dataset with 600 observations. In all of the analyses, fixed-effects are included for states and for election years in order to isolate the impact of change in one factor (i.e. a particular state electoral institution) on racial or income bias in participation. The variables are described in greater detail below and descriptive statistics are available in Table 1.

### **Measuring Participation Bias**

The key outcome examined in this paper – bias in political participation – is estimated two different ways using data from the November Supplement of the Census Bureau's Current Population Survey. The Current Population Survey (CPS) is a monthly survey of households conducted by the Census Bureau. Each month approximately 50,000 households are surveyed. Respondents are asked about the behavior of other household members, providing information

on approximately 90,000 ‘respondents’ per month. In November of even-numbered years (i.e. during election years), the CPS includes a short battery of questions on voter participation. In particular, respondents are asked whether or not they voted in that month’s election, and whether or not they were registered. By examining differential responses to these questions by race and income level, we estimated measures of racial bias in voter registration, racial bias in voting, income bias in voter registration, and income bias in voting.

The basic sample for all the analyses was restricted to individuals at least 18 years of age, or older, with data on either voting or registration. There is no restriction for citizenship because the citizenship indicator is not available for the years prior to 1994. Instead, we control for the percent immigrant in the state in all analyses. In addition to those reporting “yes” for the registration question, all those who voted are coded as registered. Additionally, those whose responses are coded as “don't know,” “refused,” or “no response” are also coded as not registered or not voting – but, those who are coded as “NA,” “NIU,” “non-interview,” or “not reported” are coded as missing. Prior to the generation of all measures, the data are weighted using the final individual weight supplied by UNICON.

Respondents were classified as *Rich* if their family income was equal to four or more times the poverty line for a family of that size for that year. *Poor* is defined as those individuals whose family income is equal to, or less than, one and a half times the poverty threshold. *White* is defined as those individuals who are not Hispanic in origin and select “white” as their race. *Minority* is defined as those individuals who are either Hispanic in origin, or select any racial category other than white. The percent of each group (e.g., rich, poor) that are registered or voted is calculated. These measures represent the voting, or registration, rates for each subgroup.

In the rare cases in which rates were either 0 or 1, meaning that none or all of the people in that subgroup voted, the state was assigned the next lowest or highest value for that year.

Ultimately, the *Registration Bias* measures were calculated by dividing the registration rates of whites by non-whites (for racial bias) and rich by poor (for class bias). Similarly, the *Vote Bias* measures are calculated by dividing the voting rates of whites by non-whites, and rich by poor.<sup>2</sup> Figure 2 illustrates the range and correlation among state values on these four participation bias measures.

### **Measuring State Electoral Institutions**

In order to isolate the relationship between changes in electoral institutions and changes in class and race bias, this paper focuses on four key state electoral institutions that experienced significant change during the time period examined, 1978-2000. These institutions are: Mail-in Registration, Motor Voter Registration, Elimination of Non-Voting Purge, and Early Voting.<sup>3</sup> Figure 3 illustrates the time trends for state adoption of each electoral institution.

**Mail-in Registration.** Since the early 1960s a majority of states have adopted some form of mail-in voter registration, but this has varied over time. Additionally, some states allow individuals to simply send in a postcard in order to register, while others require notarization or witnesses. *Mail-in Registration* indicates whether or not a state allows mail-in voter registration without limitation or cause.

**Motor Voter Registration.** Although first implemented by a handful of states in the 1970s, motor voter did not gain much prominence in the states until the late 1980s and early

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<sup>2</sup> It is worth noting the bi-variate relationships among the bias measures. In short, the income bias in registration and voting measures are highly correlated at 0.79. The racial bias in registration and voting measures are also highly correlated at 0.71. The income and racial registration bias measures are slightly correlated 0.14, and the income and racial vote bias measures are not correlated ( $r=.06$ ).

<sup>3</sup> Data on the state electoral laws included in this study were collected from the official state codebooks and state session laws for the relevant years. This is an original dataset created by the second author.

1990s. Under the 1993 National Voter Registration Act (NVRA), all non-exempt states were required to implement motor-voter programs by the 1996 presidential election.<sup>4</sup> *Motor-Voter Registration* is a dummy variable indicating whether or not the state allows individuals to register at motor vehicle offices.

**Elimination of the Non-Voting Purge.** In states with non-voting purge systems, non-voters are routinely purged from state registration rolls after a specified period of non-voting. Some states purge every two years, whereas other states never purge for non-voting although they often verify their lists. States that purge their registration rolls frequently may eliminate registered voters, and make the registration and voting process inherently more costly to the individual. Over time, purge periods have, on average, become longer and many states have completely eliminated the nonvoting purge. *Elimination of the Non-Voting Purge* is a dummy variable indicating the removal, or elimination, of a state's non-voting purge requirement.

**Early Voting.** By the 2000 election, several states allowed registered citizens to cast their ballots before Election Day. As such, *Early/Absentee Voting* is coded as a dummy variable indicating whether a state allows early voting. This includes the states that explicitly allow in-person early voting, in which voters can cast their ballots at community centers, fire stations, libraries, and other governmental agencies, well before an election, in addition to the states that allow no-excuse, or universal, absentee voting. In many ways, the cost-reducing benefits associated with early voting programs significantly overlap with universal absentee voting laws,

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<sup>4</sup> In addition to the motor-voter provision, the 1993 National Voter Registration Act also required states to allow voter registration at government agencies, such as welfare offices and public libraries. By allowing widespread access to voter registration materials, agency registration programs were expected to have a positive impact on voter registration and turnout; however, under the NVRA (1993), most states implemented agency-based registration at the exact same time they implemented motor voter programs. Therefore, the enactment of agency registration is almost perfectly correlated with the enactment of motor voter programs. Since both reforms reduced the cost of registration, and were enacted at generally the same time, only motor voter is included in this analysis.

in which voters are not required to justify their desire to vote by absentee ballot. In effect, both programs offer a means by which voters can easily cast their ballots prior to Election Day.

### **Additional Political Indicators**

Other measures that may affect the level of racial/class-based bias in political participation rates were also included in the analysis.

**Electoral Calendar.** Characteristics of the electoral calendar are important since the level of bias, particularly vote bias, may be affected by the level of public discussion and mass mobilization surrounding particular races (e.g., gubernatorial election), issues, or campaigns. As such, a series of dummy variables are included to identify years during which there is a concurrent *Presidential Election*, *Senatorial Election*, and/or *Gubernatorial Election*.

Additionally, having a large number of congressional seats up for grabs may positively impact voter turnout overall; as such, *Percent of Contested Congressional Seats* is included to control for the percentage of congressional seats contested by the two major parties during a congressional election year. Lastly, the *Number of Ballot Initiatives* on each states' ballot is included (Smith 2004; Smith 2007; Tolbert 2005; Tolbert 2006). Finally, we expect that as competitiveness increases, interest and mobilization increases which has the potential to affect the level of bias in participation. Therefore, the *Margin of Victory* of the highest race on the ballot is included.

**State Demographics.** Measures of state demographic characteristics are also included in the model. Demographic variables such as: age, education, per capita income, and race prove to be highly correlated with individual voter turnout rates at the national level. As such, it seems reasonable to expect these variables to influence turnout at the state-level – and possibly bias in turnout. A further reason for including these measures is to control for any changes in states'

racial or economic demographics. Any such demographic changes are expected to impact bias in voting by altering the characteristics of the state population – and therefore the electorate. As such, these changes should not be misinterpreted as changes due to electoral institutions, and, therefore, all of these factors are controlled for in all of the models.

Ultimately, four factors related to racial and income composition in the state are controlled for. These are: *per capita income in 2000 dollars* (in \$1,000 increments), *income inequality* (measured as the gini coefficient pre tax transfers), *percent non-white*, and *percent immigrant* in the state. Two other demographic factors typically associated with individual-level voting behaviors were also included. These are: *Education*, which controls for the percent of high school graduates among adults twenty-five years and older in a given state, and *Age* measured as the percent of a state's total population age sixty-five years and over.

## **Results**

Table 2 presents results for the models predicting class bias in registration and voting. The first three models test Hypothesis 1 – that more lenient laws governing registration will decrease registration bias. This relationship is modeled in the pooled sample of state-years, during Presidential election years, and during Midterm election years. We find quite limited support for Hypothesis 1. In all three samples (pooled, Presidential, Midterm) the coefficients tend to be negative, as expected, but not statistically significant. The only coefficient that is marginally significant, at the  $p < .10$  level, is motor voter registration in the pooled sample. This negative relationship is consistent with our expectation that the enactment of motor voter would lead to decreased class bias in registration.

The second set of models in Table 2 test Hypothesis 2 – that the enactment of less restrictive laws governing voting procedures will decrease class bias in voting. This hypothesis

is not supported by the data. In fact, the coefficients tend to be positive, although not statistically significant, suggesting that there is an increase in class bias in states post-enactment. The only statistically significant finding among the two voting procedures is associated with the enactment of early voting laws, which is positively related to class bias in voting during presidential election years.

Table 2 also includes coefficients for the state demographic and electoral calendar variables. A few relationships between these variables and the level of class bias in registration and voting were identified. One consistent finding is a decrease in both forms of class bias as state education rates increase. The opposite relationship was seen for income inequality – with class bias in registration *and* voting increasing as income inequality increased. Both forms of class bias appeared to be higher during presidential races, and during presidential election years, class bias in voting was lower when states had more initiatives on the ballot.

Table 3 presents parallel analyses for the measures of racial bias in registration and voting. This analysis provides more support for Hypothesis 1 for racial bias in registration, which is negatively related to motor voter registration. The coefficient of  $-.055$  represents a small effect of approximately a quarter of a standard deviation. This relationship is stronger, in terms of magnitude and statistical significance, during midterm election years than during presidential election years. No significant relationship was found between mail-in registration and racial bias in registration. For racial bias in voting, there is a continued negative association for motor voter suggesting that after the enactment of motor voter, states experienced a decrease in both racial bias in registration and racial bias in voting. Again, this effect is small – just over a quarter of a standard deviation in racial bias in voting. For racial bias in voting, we find a similar positive relationship between voting procedures and vote bias. In most cases the coefficients are

not statistically significant but positive; however, a state's elimination of the non-voting purge appears to be significantly related to increased racial vote bias during midterm election years.

Table 3 also includes coefficients for the state demographic and electoral calendar variables. A few relationships between these variables and the level of racial bias in registration and voting were identified. As with class bias, the most striking result is the decrease in both forms of racial bias as state education rates increased. Additionally, greater racial bias in voting was seen when income inequality increased, although a similar relationship was not found for class bias in registration. During midterm election years, racial bias was lower when more of the population was over 65 years of age, and, although only marginally statistically significant, the racial bias in voting decreased as the racial diversity in the state increased.

Overall the analyses presented in Tables 2 and 3 demonstrate minimal support for the expectation that electoral institutions have a direct effect on level of bias in political participation. In fact, motor voter was the only electoral institution governing registration that affected participation bias. Specifically, motor voter registration reduced racial bias in both registration and turnout, as well as class bias in registration, albeit marginally. Although typically negative, the coefficients for mail-in registration were rarely statistically significant. Additionally, even less support was found for our expectation that increased leniency in voting procedures would lead to less vote bias. In most cases, these coefficients were positive, although not statistically significant, and the statistically significant coefficient for early voting was positively related to class bias in voting, suggesting that it contributed to an increase in class bias in voting. In an attempt to reconcile these unexpected findings, we examined the degree to which voting bias is a function of both registration bias and the interaction between registration bias and these electoral institutions.

Tables 4 and 5 present the coefficients for the electoral institution and registration bias variables in the models testing Hypothesis 3 (that registration bias will predict vote bias) and Hypothesis 4 (that the effect of voting procedures will be conditioned by registration bias). These models also control for the state demographic, electoral calendar, and fixed-effects presented in the earlier models. Table 4 presents findings for class bias in voting. As expected, income bias in registration is related to income bias in voting. This finding holds across all of the specifications.

Table 4 also presents the results of interaction tests in which the two electoral institutions governing voting procedures (i.e. no purge and early voting) are interacted with the level of registration bias to test for differential effects between the voting procedures and vote bias in states with low versus high levels of registration bias. In the pooled sample, both interaction coefficients are positive and significant, in the case of the elimination of the non-voting purge, or marginally significant, in the case of early voting. Interestingly, the early voting interaction is stronger during presidential election years, while the non-voting purge interaction only appears during midterm election years. This suggests different effects for these different election cycles; however, due to our limited sample size in these sub-samples, we can not attest to the robustness of these differences. In all cases, statistically significant or not, these interactions are positive – suggesting that more lenient voting procedures heighten, or increase, the relationship between registration bias and vote bias. Therefore, the effect of more lenient voting procedures on vote bias depends on the level of registration bias in the state.

These interactions are depicted in Figure 4, which shows the expected impact of a state shifting from 0 (not having the electoral institution) to 1 (having it) if the registration bias is low (2 standard deviations below the mean), average (at the mean), or high (two standard deviations

above the mean). These estimates are drawn from the pooled models in which both presidential and midterm years are included. For the elimination of the non-voting purge, the expected impact of elimination is to decrease class bias in voting *if* the class bias in registration is particularly low. Under average levels of class bias in registration, elimination of the purge would have a small but positive impact on vote bias; whereas, under high levels of class bias in registration, elimination of the purge is expected to increase vote bias by more than half a standard deviation.

Table 5 presents parallel findings for racial bias in voting. Again, the level of registration bias is a major predictor of the level of vote bias. Also, in the pooled model, there are positive coefficients for the interactions between the voting procedures and registration bias. Figure 5, presents these interactions visually and reaches the same conclusion as we presented for class bias – easing voting procedures can actually lead to increased vote bias if there is a high level of bias in registration. This interaction is more pronounced for early voting with an expected increase in racial bias in voting of nearly half a standard deviation among states with high levels of racial bias in registration. The interaction between elimination of the no-voting purge and racial bias in registration is not significant in the pooled sample, although it is marginally so among midterm elections. Similarly, the early voting effect seems concentrated in midterm elections.

### **Discussion and Conclusions**

The structure of the American electoral system is one that places the burden of participation on the individual. The *individual* bears the responsibility for registering to vote in the United States, so the citizens themselves must have the skills, motivation, information, and time to complete the onerous bureaucratic task (Squire, Wolfinger, and Glass 1987). Over time

this two-step electoral process has fueled certain demographic biases in political participation; as such, many lament about voting inequality in the United States. Not only does the presence of consistent biases in registration and voting undermine the participatory tenet of democracy and jeopardize the legitimacy of elections and the power of political elites, but it may also fuel the polity's underlying apathy or disenchantment with the political system. None of this is good for democracy. As such, many efforts have been made to reform the electoral process in the United States to increase voter turnout more generally, and to mitigate participatory bias by class and race.

Overall, the findings presented in this work suggest that at least among the registration laws examined in this paper, only Motor Voter programs directly decreased bias. This is an important finding, since eliminating economic and racial biases in participation was one of the main motivations for motor voter reformers. At the time of its enactment, motor-voter was expected to have the greatest potential for adding new names to the voter rolls – and reformers championed motor voter specifically as a tool that would increase registration and voting among classic low voting demographic groups (Piven and Cloward 1998, 2000). Specifically, advocates of the bill touted the legislation as one that would put “ninety percent of eligible Americans on the registration rolls and increase participation among groups that are currently overrepresented in the nonvoting population” (Calvert and Gilchrist 1993, 696). Generally, the underlying assumption throughout the NVRA's controversial history was that by making registration easier, more citizens would be able to register and would subsequently vote on Election Day – and reformers hoped that the newly registered and voting individuals would come from classically underrepresented groups. Although we cannot determine directly whether or not individuals from classically underrepresented groups did, in fact, register via motor voter, our results suggest that

a state's implementation of the program decreased income and racial biases in registration – which was among the main goals of the reformers who touted its merits.

In contrast to our findings about motor voter, both of the voting laws we examined had some potential to decrease bias – but only when registration bias was low. In other cases, these voting laws had the reverse-effect of increasing bias in voting. These interactions between electoral laws and registration bias – as well as a large relationship between registration bias and vote bias – highlight the importance of considering participation bias as a two-step process. It also warns of electoral reform that only focus on voting procedures. Our findings suggest that lenient voting procedures paired with stringent registration requirements may actually exacerbate the racial and class bias in voting.

By exploring the relationship between the electoral laws that have shaped the realm of political participation in the states and the demographic characteristics of individual political actors, we are able to offer a preliminary assessment of the effect that five key electoral institutions have had on removing (or creating) bias in voter registration and voting in the United States over the last few decades. While our results indicate that the motor voter reform was the only institutional change that fulfilled its goal of decreasing class and racial bias in registration, this is a significant finding – and it underscores the importance of this project. In general, the broader goal of this work is to assess the context of voting in the American states. The notion that electoral laws may impact certain groups disproportionately today, and historically, and that there are clearly regional patterns to this occurrence, begs for a better understanding of the complicated relationship between electoral institutions and racial and class biases. In particular, this has important implications for understanding political representation among poor or racially

disadvantaged groups, and drawing a more nuanced connection between scholarship on voting behavior and political institutions.

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Table 1. Descriptive Statistics

	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b><i>Participation Bias</i></b>					
Registration Bias (by income)	600	1.40	0.20	0.96	2.44
Vote Bias (by income)	600	1.68	0.31	1.04	3.26
Registration Bias (by race)	552	1.22	0.21	0.76	2.61
Vote Bias (by race)	552	1.35	0.35	0.75	3.57
<b><i>Electoral Institutions</i></b>					
	600				
Mail-in Registration	600	0.59	0.49	0.00	1.00
Motor Voter Registration	600	0.47	0.50	0.00	1.00
Eliminated Non-Voting Purge	600	0.23	0.42	0.00	1.00
Early Voting	600	0.61	0.49	0.00	1.00
<b><i>State Demographics</i></b>					
	600				
Income Inequality	600	0.36	0.03	0.30	0.45
Per Capita Income (\$1K)	600	23.83	4.30	14.79	41.45
% Non-White	600	16.71	12.14	0.71	75.74
% Immigrants	600	2.77	2.68	0.33	15.93
% HS Graduates	600	75.47	8.71	50.18	92.00
% Over 65 years of age	600	12.07	2.15	2.88	18.81
<b><i>Electoral Calendar</i></b>					
	600				
Gubernatorial Race	600	0.48	0.50	0.00	1.00
Senate Race	600	0.67	0.47	0.00	1.00
Presidential Race	600	0.50	0.50	0.00	1.00
% Contested Cong. Districts	600	87.52	20.49	0.00	100.00
Vote Margin (Highest Race)	600	17.76	16.45	0.01	100.00
# of Ballot Initiatives	600	1.16	2.45	0.00	18.00

Note: N=600 except for measures of Racial Bias for which four states are omitted due to small samples (less than 40 on average) of non-white respondents in the November CPS.

Table 2. Electoral Institutions and Class Bias in Participation

	Registration Bias (by Income)			Vote Bias (by Income)		
	Pooled	Pres.	Midterm	Pooled	Pres.	Midterm
<b><i>Electoral Institutions</i></b>						
Mail-in Registration	-0.004 (0.020)	-0.005 (0.030)	0.002 (0.029)	-0.121 (0.079)	-0.162 + (0.095)	-0.010 (0.140)
Motor Voter Registration	-0.037 + (0.020)	-0.041 (0.030)	-0.026 (0.027)	-0.036 (0.034)	-0.040 (0.042)	0.008 (0.057)
Eliminated NV Purge				0.019 (0.036)	-0.007 (0.042)	0.071 (0.063)
Early Voting				0.130 (0.081)	0.179 + (0.099)	0.023 (0.140)
<b><i>State Demographics</i></b>						
Income Inequality	1.389 * (0.550)	2.179 ** (0.820)	0.567 (0.770)	2.562 ** (0.950)	3.533 ** (1.160)	1.695 (1.580)
Per Capita Income (\$1K)	0.004 (0.005)	-0.006 (0.008)	0.012 + (0.007)	-0.009 (0.009)	-0.013 (0.011)	-0.008 (0.015)
% Non-White	0.003 (0.007)	-0.003 (0.010)	0.012 (0.010)	0.008 (0.012)	-0.015 (0.015)	0.034 (0.021)
% Immigrants	-0.012 (0.013)	0.021 (0.019)	-0.049 ** (0.019)	-0.010 (0.023)	0.037 (0.027)	-0.073 + (0.040)
% HS Graduates	-0.018 ** (0.004)	-0.018 ** (0.005)	-0.022 ** (0.005)	-0.021 ** (0.006)	-0.028 ** (0.008)	-0.015 (0.011)
% Over 65 years of age	0.004 (0.015)	0.000 (0.022)	0.008 (0.020)	0.001 (0.025)	-0.007 (0.031)	-0.003 (0.041)
<b><i>Electoral Calendar</i></b>						
Gubernatorial Race	0.011 (0.013)	-0.086 (0.088)	-0.299 (0.180)	0.023 (0.023)	-0.033 (0.120)	-0.276 (0.370)
Senate Race	0.005 (0.011)	0.006 (0.016)	0.005 (0.016)	0.000 (0.019)	-0.016 (0.023)	0.017 (0.032)
Presidential Race	0.457 ** (0.110)			0.565 ** (0.190)		
Vote Margin (Highest Race)	0.000 (0.000)	-0.001 (0.001)	0.000 (0.000)	0.000 (0.001)	-0.001 (0.001)	0.001 (0.001)
Contested Cong. Districts	0.000 (0.000)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
# of Ballot Initiatives	-0.007 (0.004)	-0.013 * (0.006)	-0.002 (0.006)	-0.011 (0.007)	-0.023 ** (0.009)	0.002 (0.013)
Constant	1.623 ** (0.360)	2.099 ** (0.700)	2.016 ** (0.530)	1.821 ** (0.630)	3.281 ** (0.980)	1.602 (1.080)
Observations	600	300	300	600	300	300
R-squared	0.64	0.64	0.71	0.57	0.63	0.61

Notes: N=600. Coefficients are from LSDV fixed-effect models including state- and year-dummy variables

with standard errors in parentheses beneath each coefficient. + = p<.10, \* = p<.05, \*\*=p<.01.

Table 3. Electoral Institutions and Racial Bias in Participation

	Registration Bias (by Race)			Vote Bias (by Race)		
	Pooled	Pres.	Midterm	Pooled	Pres.	Midterm
<b><i>Electoral Institutions</i></b>						
Mail-in Registration	0.002 (0.025)	0.000 (0.029)	-0.018 (0.041)	-0.013 (0.100)	-0.013 (0.120)	0.027 (0.170)
Motor Voter Registration	-0.055 * (0.024)	-0.031 (0.029)	-0.078 * (0.039)	-0.093 * (0.043)	-0.082 + (0.048)	-0.119 + (0.066)
Eliminated NV Purge				0.056 (0.045)	-0.003 (0.048)	0.146 + (0.075)
Early Voting				0.075 (0.110)	0.056 (0.120)	0.037 (0.170)
<b><i>State Demographics</i></b>						
Income Inequality	0.952 (0.670)	0.545 (0.800)	0.882 (1.070)	2.601 * (1.170)	1.150 (1.350)	2.350 (1.810)
Per Capita Income (\$1K)	0.004 (0.006)	0.004 (0.008)	0.012 (0.010)	0.010 (0.011)	0.006 (0.013)	0.025 (0.017)
% Non-White	-0.009 (0.009)	-0.006 (0.010)	-0.019 (0.014)	-0.026 + (0.015)	-0.029 + (0.017)	-0.025 (0.024)
% Immigrants	-0.002 (0.015)	0.000 (0.018)	-0.005 (0.026)	0.004 (0.028)	0.012 (0.030)	-0.021 (0.045)
% HS Graduates	-0.011 * (0.005)	-0.007 (0.005)	-0.021 ** (0.008)	-0.022 ** (0.008)	-0.020 * (0.009)	-0.028 * (0.013)
% Over 65 years of age	-0.026 (0.018)	0.020 (0.021)	-0.071 * (0.028)	-0.049 (0.031)	0.024 (0.036)	-0.145 ** (0.047)
<b><i>Electoral Calendar</i></b>						
Gubernatorial Race	-0.028 + (0.016)	-0.174 * (0.082)	-0.125 (0.250)	-0.017 (0.027)	-0.068 (0.140)	0.114 (0.560)
Senate Race	-0.002 (0.013)	-0.028 + (0.016)	0.025 (0.022)	-0.031 (0.023)	-0.052 * (0.026)	-0.008 (0.036)
Presidential Race	0.017 (0.037)			-0.007 (0.064)		
Vote Margin (Highest Race)	0.000 (0.000)	-0.001 (0.001)	0.000 (0.001)	-0.001 (0.001)	0.001 (0.002)	0.000 (0.001)
Contested Cong. Districts	-0.001 (0.001)	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
# of Ballot Initiatives	-0.009 + (0.005)	-0.007 (0.006)	-0.010 (0.008)	-0.014 (0.009)	-0.009 (0.010)	-0.008 (0.014)
Constant	1.908 ** (0.460)	1.255 * (0.560)	3.188 ** (0.770)	2.678 ** (0.810)	2.405 * (0.930)	3.714 ** (1.170)
Observations	552.000	276.000	276.000	552.000	276.000	276.000
R-squared	0.570	0.630	0.620	0.530	0.550	0.650

Notes: N=552 (exclude four states IA, ME, NH, VT) with small samples of non-white respondents in the November CPS (less than 40 per year). Coefficients are from LSDV fixed-effect models including state- and year-dummy variables with standard errors in parentheses beneath each coefficient. + = p<.10, \* = p<.05, \*\*=p<.01.

Table 4. Indirect Impact of Electoral Institutions on Class Bias in Participation

Income Vote Bias	Pooled			Presidential Elections			Midterm Elections		
Registration Bias	1.199 ** (0.054)	1.152 ** (0.058)	1.115 ** (0.072)	1.154 ** (0.052)	1.138 ** (0.057)	1.054 ** (0.072)	1.289 ** (0.100)	1.223 ** (0.110)	1.169 ** (0.130)
Mail-in Registration	-0.066 (0.057)	-0.088 (0.058)	-0.057 (0.057)	-0.045 (0.054)	-0.050 (0.054)	-0.037 (0.054)	-0.049 (0.110)	-0.090 (0.110)	-0.028 (0.110)
Motor Voter	0.014 (0.025)	0.013 (0.025)	0.012 (0.025)	0.011 (0.024)	0.011 (0.024)	0.008 (0.024)	0.040 (0.044)	0.036 (0.044)	0.039 (0.044)
Eliminated Purge	0.036 (0.026)	-0.258 + (0.130)	0.029 (0.026)	0.006 (0.023)	-0.081 (0.130)	-0.002 (0.024)	0.082 + (0.049)	-0.342 (0.240)	0.073 (0.049)
Early Voting	0.070 (0.058)	0.080 (0.058)	-0.151 (0.140)	0.052 (0.056)	0.054 (0.056)	-0.192 (0.130)	0.064 (0.110)	0.085 (0.110)	-0.280 (0.250)
Reg. * No Purge		0.210 * (0.094)			0.062 (0.092)			0.302 + (0.170)	
Reg. * Early Voting			0.154 + (0.085)			0.169 * (0.084)			0.236 (0.150)
Observations	600	600	600	300	300	300	300	300	300

Notes: N=600. Coefficients are from LSDV fixed-effect models including state- and year-dummy variables with standard errors in parentheses beneath each coefficient. All models also include state demographic and electoral calendar variables included in earlier models.

+ = p<.10, \* = p<.05, \*\*=p<.01.

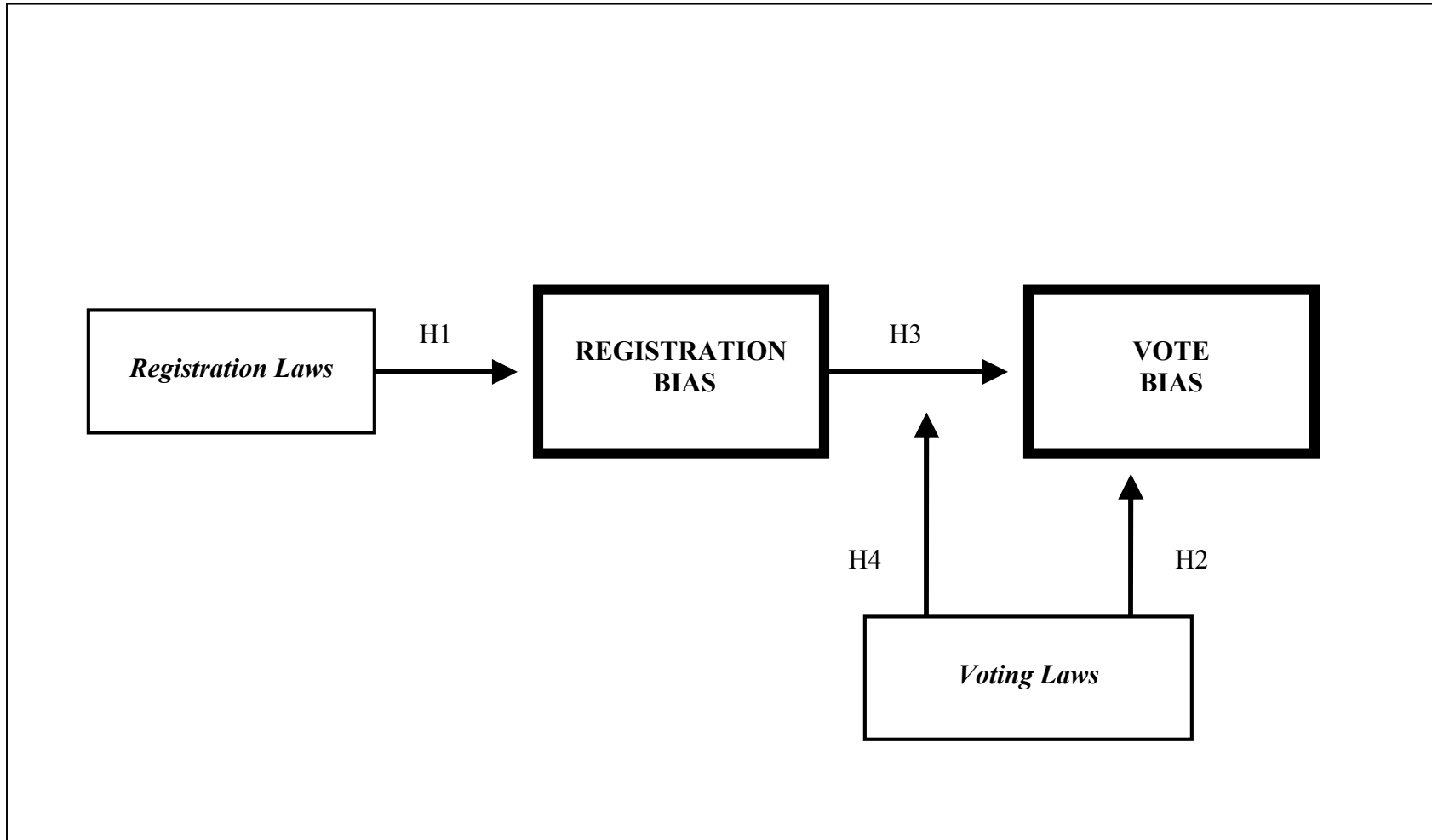
Table 5. Indirect Impact of Electoral Institutions on Racial Bias in Participation

<b>Racial Vote Bias</b>	<b>Pooled</b>			<b>Presidential Elections</b>			<b>Midterm Elections</b>		
Registration Bias	1.272 ** (0.054)	1.229 ** (0.061)	1.145 ** (0.075)	1.380 ** (0.063)	1.409 ** (0.071)	1.372 ** (0.084)	1.128 ** (0.085)	1.062 ** (0.094)	0.905 ** (0.120)
Mail-in Registration	-0.004 (0.071)	-0.013 (0.071)	-0.006 (0.071)	0.009 (0.065)	0.016 (0.066)	0.009 (0.066)	0.013 (0.130)	0.002 (0.120)	0.014 (0.120)
Motor Voter	-0.029 (0.029)	-0.031 (0.029)	-0.029 (0.029)	-0.044 (0.027)	-0.043 (0.027)	-0.044 (0.027)	-0.039 (0.049)	-0.043 (0.049)	-0.040 (0.049)
Eliminated Purge	0.018 (0.031)	-0.191 (0.140)	0.022 (0.031)	-0.030 (0.027)	0.110 (0.160)	-0.030 (0.027)	0.098 + (0.055)	-0.235 (0.210)	0.106 + (0.054)
Early Voting	0.060 (0.073)	0.070 (0.074)	-0.203 (0.130)	0.027 (0.069)	0.019 (0.069)	0.010 (0.140)	0.072 (0.130)	0.086 (0.130)	-0.393 + (0.210)
Reg. * No Purge		0.168 (0.110)			-0.115 (0.130)			0.258 + (0.160)	
Reg. * Early Voting			0.218 * (0.090)			0.014 (0.100)			0.384 ** (0.140)
Observations	552	552	552	276	276	276	276	276	276

Notes: N=552 (exclude four states IA, ME, NH, VT) with small samples of non-white respondents in the November CPS (less than 40 per year). Coefficients are from LSDV fixed-effect models including state- and year-dummy variables with standard errors in parentheses beneath each coefficient. All models also include state demographic and electoral calendar variables included in earlier models.

+ = p<.10, \* = p<.05, \*\*=p<.01.

Figure 1. Conceptual Model linking Electoral Laws with Bias in both Registration and Voting



Note: Bold boxes are the dependent variables in these analyses. Each arrow represents one of the paper's hypotheses (labeled H1 for Hypothesis #1 etc).



Figure 3. Change in State Electoral Institutions

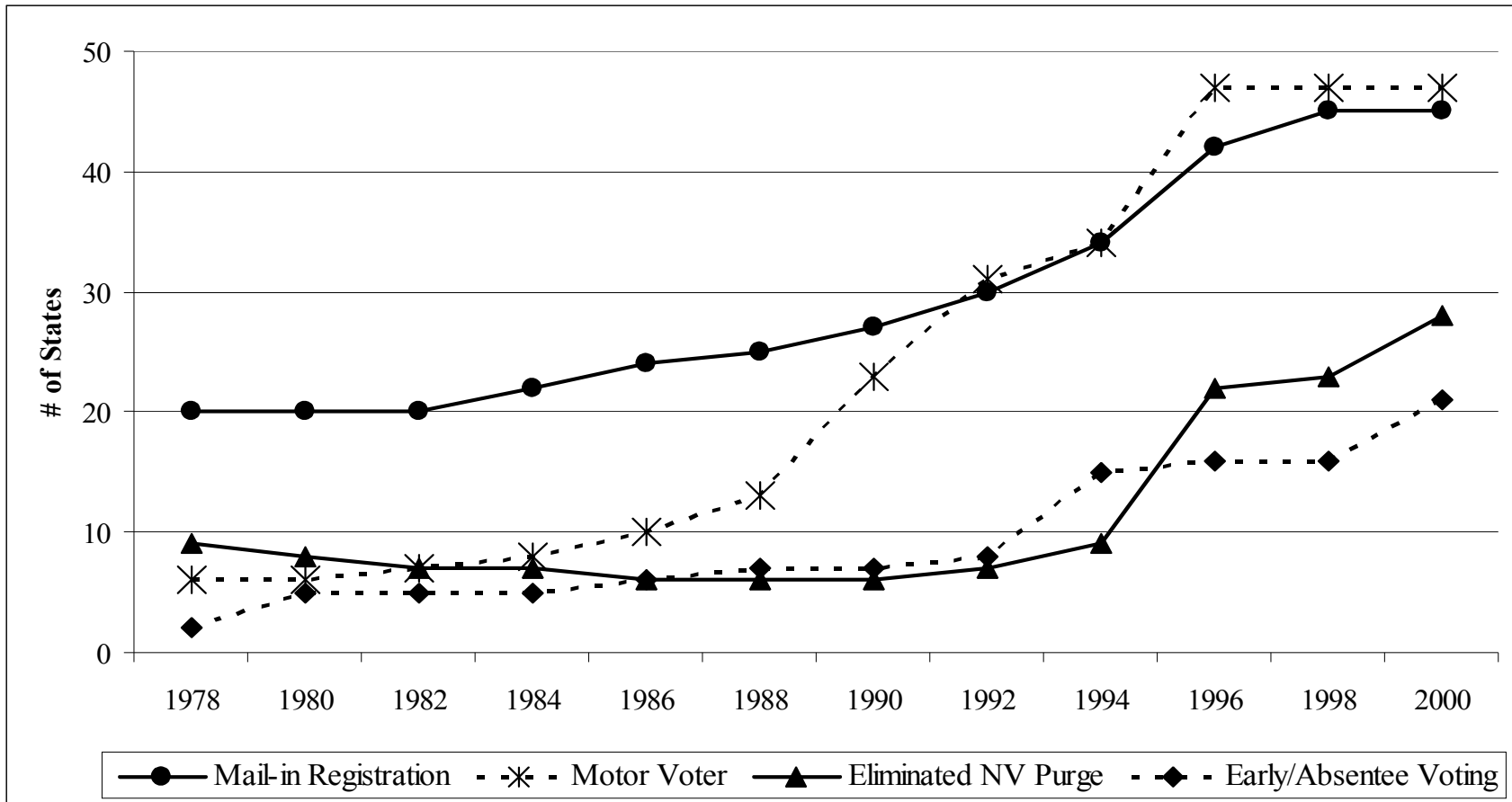
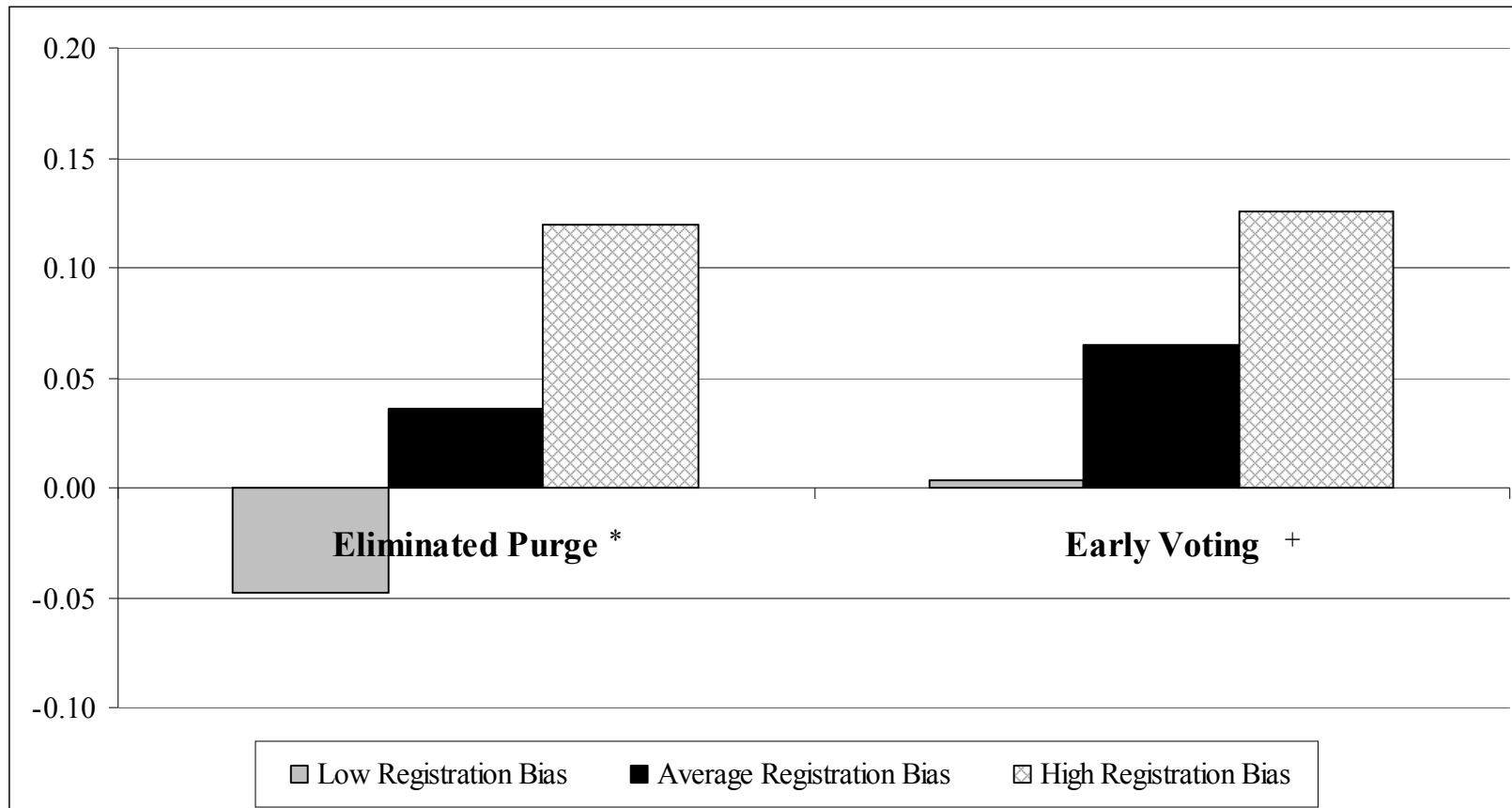
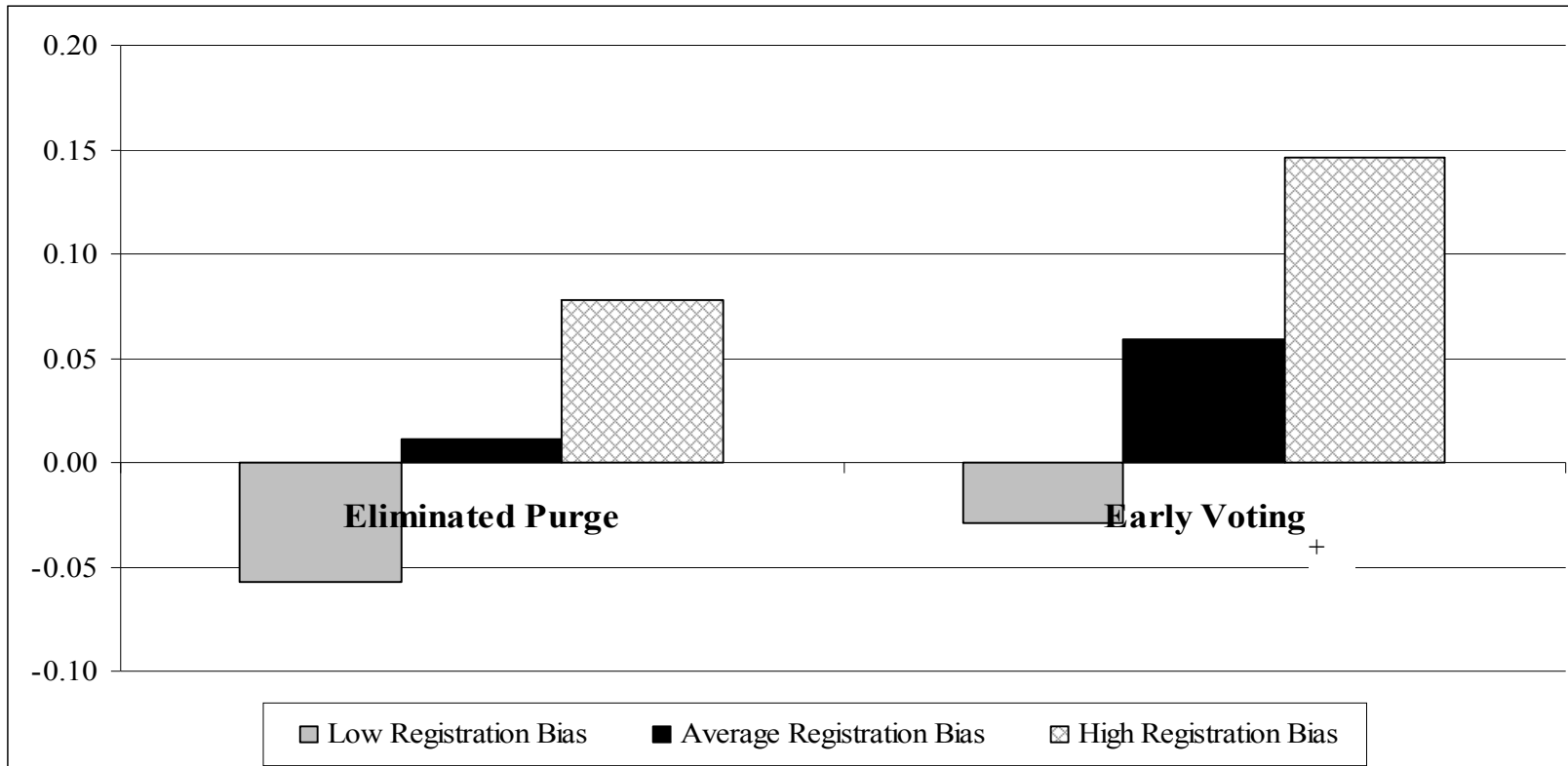


Figure 4. Impact of Electoral Institutions on Class Bias in Voting by Level of Income Bias in Registration



Notes: Bars represent the difference in predicted vote bias between a state with the electoral law and a state without the law. These estimates were calculated from the pooled data with different values of registration bias. Low bias is estimated as two standard deviations below the mean, moderate as the mean value, and high as two standard deviations above the mean. += interaction significant at  $p < .10$ , \*= interaction significant at  $p < .05$ , \*\*=interaction significant at  $p < .01$ .

Figure 5. Impact of Electoral Institutions on Racial Bias in Voting by Level of Racial Bias in Registration



Notes: Bars represent the difference in predicted vote bias between a state with the electoral law and a state without the law. These estimates were calculated from the pooled data with different values of registration bias. Low bias is estimated as two standard deviations below the mean, moderate as the mean value, and high as two standard deviations above the mean. + = interaction significant at  $p < .10$ , \* = interaction significant at  $p < .05$ , \*\* = interaction significant at  $p < .01$ .