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TITLE   **Voter Opinions about Election Reform: Do They
Support Making Voting More Convenient?**

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Abstract

We study public opinions about convenience voting reforms, using a unique state-by-state survey conducted in the 2008 presidential election. Our analysis of the American voting public's support for potential convenience voting reforms provides a variety of important insights into the potential direction of innovations in the electoral process in the near future. First, we find that the most prominent convenience voting reforms have mixed support. These include attitudes toward automatic voter registration, Election Day voter registration, and moving Election Day to a weekend. These reforms do not have majority support among all voters in the United States but there are some states where these reforms do have majority support and could be implemented. Second, we find that Internet voting and voting-by-mail do not receive a great deal of support from American voters. There was no state where Internet voting was supported by a majority of voters and there were no states that do not already have expanded vote by mail (Washington and Oregon) where expanded vote by mail had majority support.
Finally, we find that a majority of Americans support requiring showing photo identification (overwhelming support) and making Election Day a holiday (bare majority support).

Across the past 150 years, the manner of conducting elections in the United States has changed considerably.[1] The eligible population has more than doubled, as race, sex, and residency qualifications have vanished and the voting age has been lowered. States have adopted practices to guard against voter intimidation and to ensure that votes are cast away from the prying eyes of parties and candidates (see Bensel 2003, 2004). Voting systems have changed to the point that virtually every ballot in the U.S. is counted, if not cast, by computer. Voter registration has been instituted and, after a century of being highly restrictive, reforms are making the registration process much more convenient for potential voters (e.g., Wolfinger and Rosenstone 1980; Keyssar 2000). The time period during which voting is allowed has been expanded. Absentee voting has moved from being rare to being common. In short, voting is easier, for more people, than ever.

If reformers have their way, these will not be the last of the changes in how Americans vote. For instance, in 2001, the National Commission on Federal Election Reform proposed that Election Day be made a national holiday (Carter et al. 2002). Congress recently passed a law to facilitate participation by overseas and military voters.[2] States continue to debate whether to adopt reforms like Election Day Registration (EDR) and instant run-off voting (IRV). These, and many other reforms, all aim at making the voting process easier and more convenient for voters.

Viewed generally, the long list of reforms currently being considered by Congress and state legislatures cluster around three general types of change.[3] First, some reforms are intended

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[1] There is a lengthy literature regarding the evolution of elections in the United States. For three overviews, see Ewald 2009, Keyssar 2000, and Saltman 2006.

[2] This provision was included in the National Defense Authorization Act for Fiscal Year 2010 (PL 111-84).

[3] Whether or not these various types of election reform actually make the process more convenient, or whether they increase registration and turnout rates, are the subjects of lively debate. See Fortier (2006), Gronke (2008), Gronke, Galanes-Rosenbaum and Miller (2007, 2008), and Kousser and Mullen (2007) for examples of this debate.

to make voter registration easier. These include efforts to promote a national voter registration system or to institute EDR. Second, there are efforts to reform the voting process, by eliminating or reducing costs associated with going to the polls on Election Day. Such efforts include allowing remote voting over the Internet or in all vote-by-mail elections. They also include reforms to move Election Day to a weekend or make it a holiday. Finally, there are efforts to increase the integrity of the voting process by requiring voters to authenticate themselves more rigorously before they vote. The best known of these efforts would require that voters show government-issued photo identification at the polls.

Given that we live in a convenience-driven society, fueled by access to cheap digital technologies, it is somewhat ironic that most of these changes have not only been difficult to enact, but in some cases difficult to even be seriously considered by lawmakers. The slow pace of election reform in national and state legislatures is no doubt due to multiple causes, including the low salience of election reform in the face of other governing crises, the inertia of elected officials who have succeeded under current electoral rules, economic factors, and uncertainties about the political consequences and political costs of each reform.[4]

The factor we focus on in this article is public opinion. Based on data derived from a unique national survey, we show that a major hurdle many election reforms face is public opinion. Only one prominent reform proposal, requiring photo identification, is supported overwhelmingly nationwide. Other reforms—reforms that are justified based on convenience— at best divide the public, and are generally opposed by them.

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[4] See, for example, Gronke, Galanes-Rosenbaum, and Miller, 2003 for a discussion of the lack of clarity regarding the costs associated with early voting for election administrators and Gronke et al. 2008 for a discussion of how early voting has affected the costs of campaigning.

To paint with broad brush, nationwide policymaking enthusiasms tend to correspond with mood shifts among the public.[5] With that in mind, this paper characterizes public opinion about prominent election reform. In particular, our goal is two-fold. First, we describe the degree of nationwide public support for a variety of commonly discussed election reforms. Second, we identify geographic, demographic, and political correlates that predict support. In general, we find that registered voters are the most supportive of a prominent reform that is generally believed to make voting more *inconvenient:* requiring voters to show photo identification at the polls. Registered voters are somewhat less supportive of efforts to increase voting convenience by time-shifting the vote, and much less supportive of the introduction of new digital technologies into voting. Convenience-related reforms that have already been adopted in a few locations, such as all-mail voting, are supported where they have been adopted and opposed elsewhere. Finally, reflecting the heightened partisanship of election administration for the past decade, we find that partisan identification has a strong influence on opinions about photo identification, which has been the most intensely contested of the reforms we consider.

The data we use is from a unique survey about the conduct of elections conducted immediately after the 2008 presidential election. It consisted of a sample of 10,000 registered voters, 200 from each of the fifty states. This survey was conducted via the Internet, but in the interest of cross-validating these results, a parallel survey was conducted in ten states, with the same instrument, using telephone sampling.

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[5] For a review of the literature regarding how public opinion affects policy makers and their decision making processes and decisions regarding policy priorities, see Jones and Baumgartner (2005). For a discussion of these dynamics the state level, see Erikson, Wright, and McIver (1993).

Background

During the work of the National Commission on Federal Election Reform (known as the "Carter-Ford Commission"), President Jimmy Carter noted that an election system can be judged by its ease and convenience: whether it is easy to register to vote, easy to vote, and easy to count the votes.[6] Various reforms to the electoral system in the United States have been proposed to achieve this goal, and some have been implemented. For example, the National Voter Registration Act (NVRA, also known as "Motor Voter") was passed in 1993 with the goal of making it easier to register to vote. The Help America Vote Act (HAVA) also reformed voter registration systems in the United States, required the use of provisional ballots as a "fail safe" method to guard against registration glitches, and encouraged states to modernize their voting systems by getting rid of outmoded technologies, such as punch cards, and using newer optical scan or electronic voting technologies. The NVRA and HAVA are both examples of national-level reforms to the electoral process, enacted by Congress to make the voting process more uniform across the states and convenient.

In many cases, national election reforms are critical because the government wants to achieve a broad goal, such as enfranchising populations of voters nationally, as was done through the Voting Rights Act. National reforms have the advantage of promoting uniformity of election administration, ensuring that all individuals have the same rights and ability to participate in the electoral process, regardless of the state in which they live.[7]

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[6] One of the authors worked for the Commission. This comment was made during a meeting of the Commission members.

[7] For a discussion of these issues, see the report of Dan Ortiz in Carter et al. 2002. Also, while reforms like NVRA and HAVA are federal reforms, they often leave substantial discretion to the states in detailed implementation of their mandates. See, for example, Alvarez and Hall (2005) for discussion of how Georgia and California differ in their implementation of HAVA. See also Liebschutz and Palazzolo (2005), Palazzolo and McCarthy (2005), MacManus (2005), Krutz (2005) and Liebschutz (2005).

The history of election reforms, especially those that promote procedural ease in voting, has more commonly been one of reforms at the state level, with states implementing changes to their election laws to address particular political concerns and desires of their populations for innovation. As Ewald (2009) notes, election laws are idiosyncratic to states, reflecting the preferences of a state at a particular time when they were enacted, but not necessarily updated to reflect current practice or preferences. In many cases, election laws have been changed in order to secure specific partisan advantages (Keyssar 2000).

Absentee voting, one convenience voting procedure, is an example of how states have implemented election laws quite differently, Absentee voting was first used in the United States during the Civil War; its use and the state laws governing it have evolved over time (Harris 1934; Alvarez, Hall, and Roberts 2007). Some states, such as Massachusetts and New York, still have very restrictive absentee voting laws. Other states, such as California and Washington, have adopted very liberal, no-excuse absentee voting laws.[8] These differences presumably reflect the political calculations of state legislators, as well as public desires for reform. Absentee voting is not the only prominent election practice whose adoption seems associated with political culture and traditional practices interacting with the political calculations of state legislators. The adoption of restrictive voter identification laws in conservative states of the South and Midwest likely has both a partisan and cultural component to it, too (e.g., Alvarez, Bailey, and Katz 2008).

In general, the diffusion of policy can lead to regional or ideological clustering of policies across states (e.g., Karch 2007; Shipan and Volden 2008; Volden, Ting, and Carpenter 2008). This is especially true across states with similar political cultures and traditions, as has been found in the cases of economic development (e.g., Boeckelman 1991) and hate crime legislation

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[8] For a discussion of these laws, see the Early Voting Information Center http://www.earlyvoting.net/home.php

(Grattet, Jenness, and Curry 1995). For example, the diffusion of expanded vote-by-mail elections has a strong regional focus, with west coast states adopting no-excuse absentee voting that some other states have subsequently adopted (Fortier 2006). However, the political sensitivity of legislators toward voter demands and their need to explain why they have adopted a new reform means that they consider public opinion in their decision making processes (see Ray 1982; Kingdon 1989). Given the political debates that have occurred in the area of election administration since the 2000 elections, changes to the rules that govern elections have the potential to mobilize interests on either side of the political divide. These debates have occurred over such issues as which voting technologies states and local governments should adopt and whether voters should have to show photo identification at their polling place prior to voting.[9]

We are interested in determining contemporary public support for three specific types of reforms, two of which promote voting convenience. The first reforms concern the voter registration process. The United States is one of the few advanced democracies that does not pro-actively register voters (Powell 1986; Alvarez and Hall 2009). Registration reforms have been recognized in the United States as being important for lowering the costs of voting, especially when the deadline for registration is moved closer to Election Day or eliminated entirely (e.g., Fenster 1994; Highton 1997; Knack 2001; Knack and White 2000; Rhine 1995, 1996; Wolfinger and Rosenstone 1980).

Two ways of making it more convenient to register are (1) to allow people to register at the polls on Election Day and (2) to automatically register all citizens over the age of 18. Nine

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[9] An overview of this debate can be found at
http://www.brennancenter.org/content/resource/crawford_v_marion_county_election_board/ in conjunction to the United States Supreme Court case *Crawford v. Marion County Election Board.*

states have adopted Election Day voter registration (EDR) over the past twenty years.[10] This

reform has been touted by many interest groups as being a way of ensuring that all voters who

want to vote on Election Day can do so.[11] More recently, there have been discussions regarding

how all individuals who are eligible to vote can be added to the registration rolls automatically,

such as through the use of motor vehicle data and other, related data sources (See Hasen 2005;

Alvarez and Hall 2009).

The second set of reforms we study center on making Election Day itself more

convenient. One way of making Election Day more convenient is to make it a holiday or move it

to a weekend. Most European countries, for example, hold their elections on Sunday.[12] The

benefit of doing so is that it moves the election to a day when schools and other public buildings

are not in use and many Americans do not have to work. In 2001, the Carter-Ford Commission

suggested making the first Tuesday of every federal election year a national holiday. The

Commission's report argued, "Holding national elections on a national holiday will increase

availability of poll workers and suitable polling places and might make voting easier for some

workers" (Carter et al. 2002, 40).

Another approach to making participation more convenient is to shift voting away from

the traditional polling place, by voting over the Internet or voting entirely by mail. In the case of

all vote-by-mail elections, ballots are sent to all voters, which in essence brings the polling place

to their mailbox and kitchen table. The voter only has to fill out the ballot and send it back in the

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[10] Although it is often claimed that North Dakota does not have voter registration, it in fact does have a central voter registry and creates poll books for elections. As 16.1-02-03 of the North Dakota statute notes, "Any individual… who voted at either of the general elections in the two previous election years must be designated as "active" …[and] any individual …who did not vote at either of the general elections in the two previous election years must be designated as "inactive" in the initial central voter file." This central file is used to create poll books for the election, which are then supplemented by individuals who are added to the poll book on Election Day who were not previously in it, much as would be the case in an EDR state.

[11] A discussion of Election Day Voter Registration can be found at http://archive.demos.org/page18.cfm

[12] See http://www.dw-world.de/dw/article/0,,4293353,00.html for a discussion of this point in a discussion of the European Parliamentary elections.

allotted time to participate in the election. Voting over the Internet, either at a voting location that has Internet voting kiosks or through an individual's own household computer, has been used in the United States in primary elections and for overseas "UOCAVA" voters, in various Swiss cantons for their elections, and in the country of Estonia for recent national and local elections. Voting online has been asserted to have the potential to make voting easier for individuals who have access to the Internet (Alvarez and Hall 2004; Alvarez, Hall, and Trechsel 2009).

The third set of reforms is intended to improve the security of elections and ensure that all voters are properly authenticated when they vote. Responding to concerns about vote fraud from mail-in voter registration forms, HAVA required that all first-time voters who register by mail must present some form of identification when they first vote. Some states (notably, Georgia and Indiana) have gone well beyond the minimum HAVA requirement, by requiring all in-person voters to show officially issued photo identification.[13] The efficacy of this requirement in reducing vote fraud has been disputed by a series of studies, but the Supreme Court decision in *Crawford* vs. *Marion County Election Board*, which supported photo identification requirements as a method of reducing *perceived* dangers of vote fraud, has prompted other states to consider this reform.[14]

In addition to making voting more convenient or secure, there are many administrative reasons for why a given state or jurisdiction might adopt some of these reforms. For example, voting-by-mail might be adopted so that election officials no longer have to operate polling

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[13] Florida, Hawaii, Louisiana, Michigan, and South Dakota all request photo identification, too, but they allow voters without such identification to sign an affidavit and then vote. Georgia and Indiana require such voters to cast a provisional ballot and then later produce the identification before the ballot may be counted.

[14] There is a growing research literature on the various impacts that voter identification requirements might have on voter perceptions, voting behavior, and the political process. For examples of recent published research, see for example, Ansolabehere and Persily (2008), or Atkeson et al. (2009) and the sources they cite.

places and deal with the recruiting of poll workers, the conduct of training, and the identification

of sites for polling places (Alvarez and Hall 2006). Likewise, as the Carter-Ford Commission

noted, there may be many administrative advantages associated with having Election Day as a

holiday. What we are interested in investigating, however, are the public's attitudes toward these

reforms and the factors that shape these attitudes. In the next section, we consider the individual

level factors that shape public support for these reforms and identify the states in which each

reform has the highest and lowest levels of support.

Methodology and Research Design

Our analysis of voter opinions about future election reforms is based on a set of seven questions

about a variety of election reforms in the three areas we discussed above, reforms that have all

been the subject of recent discussion. The question posed to survey respondents asked, "Do you

support or oppose any of the following proposals for new ways of voting or conducting

elections?" Respondents were then given the chance to state whether they supported or opposed

the following reforms:[15]

- Allow absentee voting over the Internet.
- Run all elections by mail.
- Automatically register all citizens over 18 to vote.
- Allow people to register on Election Day at the polls.
- Require all people to show government issued photo identification when they vote.
- Move Election Day to a weekend.
- Make Election Day a national holiday.

These questions were included in the context of a study of voter attitudes and opinions

about election administration, the 2008 *Survey of the Performance of American Elections*.[16] This

first-of-its-kind survey was developed to provide a comprehensive national assessment of the

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[15] The order of these reform questions rotated across respondents.
[16] Complete details of this survey are available in the survey report,
http://vote.caltech.edu/drupal/files/report/Final%20Report20090218.pdf.

experience with the electoral process in the 2008 presidential election. This survey,

implemented the week after the election, had been extensively pilot tested in gubernatorial

elections in the fall of 2007 (Mississippi, Kentucky and Louisiana) as well as in the 2008 "Super

Tuesday" presidential primary states. The survey interviews we use in this paper were

conducted online, with 200 interviews from registered voters in every state (yielding a total

sample of 10,000 responses from registered voters nationally). These interviews were

administered by YouGov/Polimetrix, using matched random samples of registered voters in each

of the fifty American states. Weights were developed so that on a number of demographic

characteristics the samples matched the national demographic profile of registered voters. With

these weights used, the external validity of the online survey results was quite strong: the state-

by-state correlation between the Obama vote estimated by the online survey was strongly

correlated with the actual state vote (0.94).

A telephone survey was also implemented, with a sample of 200 registered voters in ten

states, and these interviews were conducted using computer-assisted random digit dialing

techniques. The telephone survey was conducted to provide an assessment of the online sample

and survey response, and comparative analysis of the two methods produced a conclusion that

overall the two methods produce results that are largely consonant with each other.[17] Our

analysis makes use only of the responses of the large, national, online sample. A replication of

our analysis using data from the telephone sample is available from the authors upon request.

The research design of our study is straightforward. We begin by presenting the response

frequencies from the election reform questions. We also consider the response frequencies by

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[17] The survey report summarized the results from this analysis by noting that there were observed differences between the online and telephone survey results, and that: "These differences between Internet and phone respondents offer reassurance and suggest cautions in using the data from the survey. Overall, the samples in both surveys are similar to the population as a whole and to each other in terms of demographics and political attitudes and behaviors" (Ibid, page 8).

state. Then, we examine these same response frequencies by a variety of theoretically-interesting covariates, including age, gender, race and ethnicity, income, home ownership, disability, education, partisanship, ideology, and 2008 presidential voting behavior. We also examine how opinions about election reform are associated with voter confidence, and the method the voter used to cast their ballot in the 2008 election.

Finally, in order to better understand which of these various covariates might have the most statistically robust relationship with each type of election reform, we use a multivariate statistical model. Specifically, the type of model we employ is hierarchical binary logit. As we discuss below, this method is appropriate for addressing both the binary nature of the choice between supporting or opposing each election reform, as well as the fact that we have a dataset that is constructed from fifty state samples. The latter point is important to keep in mind, as there is likely to be significant heterogeneity in voter opinion across the states about election reform.

Survey Results

We begin in Table 1 by presenting the simple survey frequencies, the weighted percentages of voters in our online sample who said they supported or opposed each of the seven election reform measures. The greatest support is for requiring all voters to show government issued photo identification when they go to vote, with 75.6% of respondents supporting this reform. There is more mixed support for changing voter registration in the United States, with only 48.3% of registered voters supporting automatic government efforts to register voters and 43.7% supporting Election-Day Registration.

[Table 1 about here]

The two reforms related to making voting more convenient by changing the day of voting have different levels of support. We find that 57.5% of respondents support making Election Day a holiday but only 41.8% support the notion of moving Election Day to a weekend. The final two election reforms are received with the least enthusiasm. Absentee voting over the Internet was supported by roughly a third of the sample (30.1%), and voting by mail received even less support, 14.7%.

Next, we look at the support for each of these election reforms by state. (See Table 2.) When we do, we see a great deal of variation in geographic support for each reform. Majorities in every state support requiring voter identification in order to vote. Support is lowest in Massachusetts, with 60.9% of registered voters expressing support and highest in Hawaii (88.3%) and Indiana (84.8%). A majority of respondents in twenty-six states support government efforts to automatically register voters. New York, Vermont, and Michigan have the highest levels of support for this reform (60%, 58%, and 58%, respectively); seven states have support levels below 40%. Election Day voter registration has majority support in only ten states, nine of which either already have EDR or lack formal voter registration.

[Table 2 about here]

There is also very strong support for making Election Day a holiday. This reform fails to garner majority support in only seven states, with three upper Midwest states—South Dakota, North Dakota, and Minnesota—having the lowest levels of support. It is the most strongly supported in North Carolina and Delaware, with greater than 70% support. On the other hand, moving Election Day to a weekend garners majority support in only five states, with support in the most enthusiastic state, Louisiana, coming in at a tepid 55%.

Turning to the two election reforms that center on making participation convenient, we see that there is majority support for voting by mail only in the two states that already have voting by mail, Washington and Oregon. The last reform, voting over the Internet, has no majority support in any state. Support for voting over the Internet is 40% in two states, California and South Carolina. In nine states, support for voting over the Internet is below 25%.

In Table 3, we examine support for these reforms by various demographic categories. Younger voters are generally in favor of reform, except for universal vote-by-mail and moving Election Day to a weekend. Women are more supportive than men for all reforms, except moving Election Day to a weekend, where men were more supportive, and requiring photo identification, where both sexes were equally supportive. Whites tend to be less supportive of reforms than Black and Hispanics, except for requiring photo identification, where Whites and Blacks hold similar opinions, and Hispanics are slightly more supportive. Lower-income respondents are more likely to support absentee voting by Internet, universal vote-by-mail, automatically registering all citizens to vote, and Election Day registration. Income bears no relationship with attitudes about requiring all voters to show photo identification or making Election Day a holiday.

[Table 3 about here]

Higher-income respondents were more likely to favor moving Election Day to a weekend. Respondents with higher education were more likely to support moving Election Day to the weekend or to make it a holiday, lower-education respondents were more supportive of Internet absentee voting, automatic voter registration, Election Day registration, and requiring everyone to show photo identification to vote. Homeowners were generally less likely to support all the reforms, except for requiring photo identification and moving Election Day to a weekend,

where there was no association between home ownership and reform opinions. Finally, disabled respondents were more supportive of universal vote-by-mail, automatic registration, and Election Day registration; there was no relationship between disability status and support for the other reforms.

We examine the simple relationships between political characteristics of respondents and support for these seven reforms, shown in Table 4. Unlike the demographic effects, which were varied across categories, the effects of political affiliations on reform attitudes are clear and consistent. In general, Obama voters, Democrats, and liberals are more supportive of the reform proposals, with the exception of requiring photo identification, where McCain voters, Republicans, and conservatives are more supportive. On this last point, though, it is striking that even a majority of Obama voters, strong liberals, and Democrats support the proposition that everyone who should show a government-issued piece of photo identification in order to vote.

[Table 4 about here]

Finally, in Table 5, we turn our attention to the relationship between attitudes about reform proposals and other attitudes and experiences related to voting in 2008. Voters were asked whether they were confident that their vote would be counted as cast. Answers to this question were generally unrelated to reform attitudes, except that voters that are more confident were more likely to support Election Day registration and less likely to support laws requiring the showing of photo identification. Voters who went to the polls on Election Day, as opposed to voting early and/or by mail, generally took a more traditional attitude toward election reform. Voters who waited a long time in line to vote were generally more likely to support reforms intended to make voting more convenient.

[Table 5 about here]

The 2% of voters who reported a problem with their registration when they tried to vote were more supportive of Internet voting, automatically registering all citizens to vote, Election Day registration, and making Election Day a holiday. Voters who were asked for a photo ID in order to vote were more supportive of all the reform proposals, except for Election Day registration, about which they were less supportive. Respondents who said their polling place was well run were generally more supportive of the convenience-related reforms.

Multivariate Results

In order to understand more completely the factors that lead to support for the various convenience voting reforms among registered voters, we conduct a multivariate analysis that uses the various socio-political variables as independent variables in a model where the dependent variable is a binary choice of support or opposition to each reform. We estimate a series of Bayesian hierarchical binary logit models, assuming that the utility perceived from any of the election administration reforms is a linear function of socio-demographic variables, political attitudes, and previous voting experiences, and that parameters vary randomly across states.[18]

Specifically, we specify the utility of supporting reform as $U_i = X_i' B_{s(i)} + \varepsilon_i$, where X_i is a vector of individual characteristics, $B_{s(i)}$ is a vector of coefficients corresponding to the state of residence of individual i, and ε_i is a logistically distributed disturbance term. Further, we

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[18] Specifically, we estimate the models using a hybrid algorithm developed by Rossi and implemented through R's *bayesm* package.

assume the individual is supportive of election reform if $U_i > 0$, and otherwise opposes.[19] Instead of making the common assumption that coefficients are constant across individuals (that is, instead of setting $\mathrm{B}_{s(i)} = \mathrm{B}$), we let all model parameters vary by respondents' state of residence, $s(i)$. This random effects procedure is an intermediate approach between a completely pooled national-level analysis, which would not allow capturing the heterogeneity of effects across states, and the inefficient alternative of estimating separate logistic regressions for each state. In the presence of hierarchical data, assuming parameters are constant across states would allow learning about average behavior but might result in inaccurate estimates of state-level effects and poor model fit. Thus, our model admits for a more flexible characterization of voter behavior, by letting parameters change according to respondents' state of residence.

In our analysis, we estimate two different models, because we wish to focus on the correlates of election reform attitudes for the population of registered voters and the population of those who voted in a precinct location during the 2008 general election. Examining the former allows us to understand the how election reforms are viewed by the broader population of registered voters, including those who did not vote in 2008. The latter model lets us focus on those who voted, and to include as covariates in our multivariate model a variety of measures for the voter's experience at the polling place in the 2008 election. Our model for all registered voters includes the following covariates: age, gender, race, income, home ownership, disability, educational attainment, presidential vote, ideology, partisanship, voter confidence and mode of

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[19] Suppose y_i is a binary variable indicating agreement or disagreement with election reform. Since we assume the error term follows a standard logistic distribution, the probability of support equals: $P(y_i = 1) = \dfrac{e^{X_i' \mathrm{B}_{s(i)}}}{1 + e^{X_i' \mathrm{B}_{s(i)}}}$.

voting. The model for only precinct voters includes those variables (except mode of voting), and

adds whether they voted early, if they reported having a registration problem, if they had

difficulty finding their polling place, if the lines were long, if they had a problem with their

voting equipment, if they knew the poll workers, if they were asked for voter identification, and

if the precinct was well run.

We begin by presenting the results for all registered voters, showing the estimated

coefficients from our hierarchical binary logit model in Figure 1. This figure plots the

coefficients and their associated confidence intervals; a coefficient with confidence intervals to

the right of zero indicates an estimate with a positive association with supporting the particular

reform, and a coefficient with confidence intervals below zero indicates an estimate with a

negative associate with supporting the particular reform.

Overall, Figure 1 shows that election reform is polarized along partisan and ideological

divides. We find that Obama supporters in 2008 were more likely, *ceteris paribus*, to support

voting online and by mail, to support automatic and Election Day registration, to make Election

Day a holiday or to hold it on a weekend; they were less likely to support voter identification

requirements. For every election reform, we see that the coefficient on the conservative dummy

variable had the opposite sign, and was significant in each case. This documents the partisan and

ideological polarization associated with election reform in the United States.

In this model, we also see that regarding some reforms, voter demographic attributes are

associated with support for or opposition to a particular reform. First, we see that holding other

factors constant, non-white voters are less likely to support voting by mail, but are more likely to

support automatic and election day registration. We also see that nonwhite voters are marginally

more likely to support voter identification policies than white voters.   Also, the younger the

voter, the less likely they are to support automatic and Election Day registration, making Election Day a holiday, and voter identification. We also see that method of voting was associated with support for reform; mail voters are more likely to support voting online (and not surprisingly voting by mail); early voters were more supportive of voting by mail and making Election Day a holiday.

Unfortunately, like any discrete choice model, the coefficients presented in Figure 1 cannot be easily interpreted in terms of their marginal effects. In Table 6, we present the first differences in probabilities of support for a hypothetical voter with median characteristics.[20] Table 6 gives the baseline estimate for support of each reform in the first row, and then subsequent rows provide estimated changes in that probability based on the particular counterfactual for that row. What this table demonstrates is the predominance of partisan and ideological polarization in opinions about election reform. Some of the changes in probability of supporting or opposing a particular reform are very sizeable, both for the presidential voting and ideological change counterfactuals. We also see that voting mode has sizeable effects, regarding voting online, by mail, and making Election Day a holiday. In contrast, the statistically significant effects for race and age that we discussed above for Figure 1 are here seen to be relatively minor in magnitude.

In Figure 2, we present the coefficients and confidence intervals for our model that focuses only on precinct voters, and which includes covariates that control for their reported voting experiences in 2008. This model again provides strong evidence that election reform opinions in the U.S. are highly polarized along partisan and ideological lines; the results here are

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[20] Our hypothetical voter is middle-aged, female, white, income ranging between $60,000 and $70,000, is a home owner, has no disabilities, has some college education, voted for McCain, is a non-conservative republican, is very confident that her vote will be counted, and voted in-person on Election Day. Also, when the hypothetical respondent is a precinct voter she had the following voting experience: had no registration problems, was asked for identification, and thought that the precinct was "very well run."

the same as in the previous model (Figure 1). We again see results are similar to those presented

earlier regarding age and race, with nonwhites supporting automatic and Election Day

registration, favoring making election day a holiday and voter registration requirements, but

opposing voting by mail.

Regarding how the voting experience is associated with opinions about election reforms,

we provide estimates in Figure 2 that are quite interesting. Keeping in mind that these estimates

hold other factors like partisanship, voting behavior, ideology and voter attributes constant, it is

fascinating to see that voters who said they had a registration problem are significantly in favor

of both proposed registration reforms, automatic and Election Day registration. Voters who had

difficulty finding their polling place support convenience voting reforms, including voting online

and by mail, as well as making election day a holiday. Voters who said they had equipment

problems support Election Day reforms, including making election day a holiday or holding it on

the weekend. Thus, we find strong support here for the hypothesis that a voter's experience on

Election Day in the polling place is associated with their opinions about election reforms.

To assess the magnitude of these effects, we present in Table 7 another first-difference

analysis, conducted identically to that presented earlier. Again, the baseline probabilities are

given in the first row of Table 7, and then each successive row presents probability differences

based on each successive counterfactual. Table 7 again documents the strength of the partisan

and ideological polarization of opinions regarding election reform; we will have more to say

about that below in our conclusion. Here we would like to focus on two of the results we found

to be statistically significant in Table 7: how having a problem with one's voter registration or

voting equipment might affect opinions about election reform.

First, if a voter reports having a registration problem, *ceteris paribus*, they are 20 points more likely to support automatic registration and 16 points more likely to support Election Day registration. Those are substantial effects and it shows how having a problem in the polling place can strongly be associated with opinions about election reforms that might resolve the problems experienced by that voter. Second, a voter who said they had an equipment problem was 20 points more likely to support automatic registration, 12 points more likely to support election day registration, and 13 points more likely to support making Election Day a holiday. Again, having a problem voting seems to be strongly associated with election reforms that might mitigate the problem the voter experienced.

Conclusions

Our analysis of the American voting public's support for the many potential election reforms provides a variety of important insights into the potential direction of innovations in the electoral process in the near future. First, we found that some other reforms have mixed support. These include attitudes toward automatic voter registration, Election Day voter registration, and moving Election Day to a weekend. These reforms do not have majority support among all voters in the United States but there are some states where these reforms do have majority support and could be implemented. Second, we found that Internet voting and voting-by-mail did not receive a great deal of support from American voters. There was no state where Internet voting was supported by a majority of voters and there were no states that do not already have expanded vote by mail (Washington and Oregon) where expanded vote by mail had majority support. Finally, we found that a majority of Americans support two reforms — requiring showing photo identification (overwhelming support) and making Election Day a holiday (bare majority support). These two reforms have strong support nationally and a

majority of support in most of the states. Americans, in general, are more interested in the one reform that would promote security, requiring photo identification, than any of the convenience voting reforms that would improve the accessibility to the voting process.

Our findings are indicative of where the public stands today, with what they know about these election reforms today. These results do not mean that election reforms with substantial support from voters are inevitable, that reforms without substantial support will never be enacted, or that or that voters actually have strong or well-formed opinions about the potential ramifications of reform. Still, the patterns we discover here have implications for current politics and for the likelihood of election reform in future years.

Partisanship, for instance, is strongly associated with support for and opposition to virtually every reform proposal. To a large degree, these popular reform attitudes tend to map onto the attitudes of legislators, both at the national and state levels, and as with most attitudes in legislatures these days, the partisan divisions are likely stronger among legislators than among their electoral supporters. Although there are exceptions, Democratic lawmakers tend to be the advocates of most of the reforms we explore in this paper, and that support tends to be mirrored, in a muted fashion, among the electorate. (The exceptions are requiring photo identification and Internet voting.)

Younger voters tend to support the reforms studied here, except all-mail voting and moving Election Day to a weekend. What we cannot judge is whether this is a cross-sectional or a cohort effect. That is, we cannot tell whether younger voters are more likely to support reforms because young people are inherently prone to support making it easier to vote, or because they have lived more of their lives surrounded by easy conveniences and electronic appliances. If the latter, and if reforms tend to be more likely when voters support them, then it

may be a matter of time before support for some of these reforms, such as voter identification and making Election Day a holiday, become irresistible. If the former, then there are no obvious future trends favoring or opposing reform.

Finally, the findings here provide an interesting insight into how the adoption of weakly supported (or even strongly opposed) reforms may eventually win over voters. Note that respondents were overwhelmingly opposed to vote-by-mail, except in Oregon and Washington — one state that has long had the practice, and the other which has recently transitioned to it. Unfortunately, we do not have evidence of attitudes toward vote-by-mail in these two states prior to its adoption, but it is hard to believe that residents in Oregon and Washington were wildly out of step with voters in other states, even though they may have supported it more than average. For all Oregon and most Washington voters, voting by mail is "the way it's done," and voters there by-and-large support it like voters in no other state.

And in general, now that we have benchmarked all states according to their voters' attitudes toward electoral reform, it will be possible in the future to answer causal questions concerning public attitudes toward electoral practices. Are states whose citizens most support particular electoral reforms more likely to enact them? Do voters in states that adopt reform become more accepting of those reforms after they have been adopted and put into place?

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Table 1: Overall Support for Election Reform

	Pct. supporting	N
Require ID	75.6	9,869
Make Election Day a holiday	57.5	9,861
Auto-register all citizens to vote	48.3	9,850
Election Day Registration	43.7	9,950
Election Day to Weekend	41.8	9,800
Absentee voting over Internet	30.1	9,834
Vote by Mail	14.7	9,778

Table 2: Support for Election Reform by State

	Internet Voting	Vote by Mail	Automatic Registration	EDR	Require ID	ED Weekend	ED Holiday		Internet Voting	Vote by Mail	Automatic Registration	EDR	Require ID	ED Weekend	ED Holiday
Alabama	28	6	48	28	80	43	51	Nebraska	24	14	36	37	79	38	50
Alaska	24	12	42	32	79	45	49	Nevada	27	11	37	33	83	51	63
Arizona	39	32	43	40	83	47	54	New Hampshire	20	7	39	75	75	37	56
Arkansas	31	10	46	35	81	41	59	New Jersey	32	15	53	43	74	42	67
California	40	22	50	44	75	48	57	New Mexico	33	13	52	41	71	53	68
Colorado	28	24	51	37	76	47	61	New York	33	15	60	47	73	43	61
Connecticut	31	12	48	43	72	44	57	North Carolina	32	9	54	47	76	41	73
Delaware	28	11	57	36	74	41	76	North Dakota	29	17	56	68	77	31	45
Florida	30	17	50	34	84	48	57	Ohio	28	15	51	30	81	42	60
Georgia	31	11	50	41	83	42	60	Oklahoma	33	10	38	28	72	37	54
Hawaii	39	25	54	45	88	52	60	Oregon	26	66	42	39	66	38	51
Idaho	24	14	44	76	77	35	53	Pennsylvania	35	14	54	40	74	44	62
Illinois	30	10	53	38	78	39	60	Rhode Island	30	7	50	46	77	38	63
Indiana	32	12	49	36	85	41	56	South Carolina	41	12	54	37	78	45	63
Iowa	27	14	48	61	73	38	53	South Dakota	22	6	38	31	78	33	42
Kansas	24	7	35	37	76	35	53	Tennessee	38	13	47	34	80	47	58
Kentucky	27	7	45	34	79	32	60	Texas	35	10	50	44	75	38	48
Louisiana	31	11	43	35	82	55	64	Utah	33	12	42	41	78	30	57
Maine	24	14	52	68	66	38	57	Vermont	33	14	58	54	62	48	58
Maryland	33	9	52	40	73	38	69	Virginia	29	12	46	32	77	47	66
Massachusetts	26	8	54	46	61	44	55	Washington	29	53	55	42	69	48	55
Michigan	38	15	58	38	81	51	56	West Virginia	34	11	46	35	65	42	58
Minnesota	25	10	52	77	69	34	45	Wisconsin	27	13	50	75	75	42	51
Mississippi	29	11	53	31	75	36	58	Wyoming	23	10	37	70	79	31	47
Missouri	29	13	49	27	69	49	58								
Montana	31	23	43	54	69	36	55	**National**	30	15	48	44	75	42	57

Table 3: Support for Election Reform by Demographic Categories

		Pct. Obs.	Internet Voting	Vote by Mail	Automatic Registration	EDR	Require ID	ED Weekend	ED Holiday	Statistical test performed
Age	18 To 34 Years Old	24	**38**	16	**63**	**62**	**81**	43	**71**	Probit
	35 To 54 Years Old	39	**31**	14	**48**	**43**	**76**	40	**57**	
	Older Than 55	37	**24**	15	**39**	**32**	**72**	43	**49**	
Sex	Male	47	**27**	14	**42**	**37**	75	**45**	**56**	Probit
	Female	53	**33**	16	**53**	**50**	76	**39**	**59**	
Race	White	85	**28**	**14**	**45**	**41**	75	**41**	**55**	ANOVA
	Black	9	**42**	**16**	**74**	**62**	74	**44**	**78**	
	Hispanic	4	**43**	**16**	**61**	**60**	79	**43**	**65**	
	Asian	1	**42**	**24**	**60**	**51**	85	**61**	**69**	
Income	Less Than $10,000	4	**42**	**26**	65	66	77	**42**	58	Probit
	$10,000-14,999	4	**36**	**16**	64	60	71	**44**	58	
	$15,000-19,999	4	**32**	**19**	59	53	78	**40**	59	
	$20,000-24,999	5	**34**	**15**	54	53	77	**44**	58	
	$25,000-29,999	6	**32**	**15**	52	52	73	**37**	61	
	$30,000-39,999	11	**31**	**12**	53	47	76	**38**	60	
	$40,000-49,999	11	**30**	**13**	47	45	75	**41**	58	
	$50,000-59,999	11	**28**	**13**	49	41	78	**40**	56	
	$60,000-69,999	8	**30**	**13**	45	40	75	**42**	59	
	$70,000-79,999	9	**29**	**17**	46	41	74	**43**	59	
	$80,000-99,999	9	**29**	**13**	42	40	76	**42**	58	
	$100,000-119,999	7	**30**	**15**	43	36	78	**46**	58	
	$120,000-149,999	5	**28**	**14**	44	36	73	**47**	55	
	$150,000 Or More	5	**27**	**15**	42	35	74	**47**	55	
Education	No High School	4	34	18	**56**	49	**79**	44	53	Probit
	High School	36	30	15	**50**	46	**78**	38	53	
	Some College	24	30	14	**48**	42	**76**	41	60	
	2-Year	7	29	11	**44**	39	**78**	40	55	
	4-Year	19	29	15	**44**	41	**74**	46	61	
	Post-Grad	10	29	18	**49**	44	**65**	50	64	
Home owner	No	32	**37**	**16**	**58**	**55**	77	43	**65**	Probit
	Yes	68	**27**	**14**	**44**	**38**	75	41	**54**	
Disability	No	84	30	**14**	**48**	**43**	76	41	58	Probit
	Yes	16	33	**18**	**51**	**46**	75	44	56	

Table 4: Support for Election Reform by Political Categories

		Pct.Obs.	Internet Voting	Vote by Mail	Automatic Registration	EDR	Require ID	ED Weekend	ED Holiday	Statistical test performed
Presidential vote	McCain	51	**18**	**7**	**26**	**22**	**88**	**32**	**40**	Probit
	Obama	49	**39**	**21**	**67**	**62**	**63**	**50**	**74**	
Ideology	Very Liberal	8	**44**	**28**	**75**	**74**	**52**	**57**	**81**	Probit
	Liberal	18	**40**	**19**	**67**	**63**	**61**	**51**	**76**	
	Moderate	33	**32**	**16**	**55**	**47**	**74**	**43**	**63**	
	Conservative	26	**19**	**9**	**30**	**24**	**87**	**35**	**42**	
	Very Conservative	15	**16**	**7**	**21**	**20**	**90**	**30**	**37**	
3-point party ID	Democrat	39	**38**	**20**	**68**	**62**	**64**	**48**	**73**	Probit
	Independent	28	**31**	**16**	**46**	**42**	**77**	**47**	**57**	
	Republican	34	**19**	**8**	**27**	**23**	**88**	**31**	**40**	

Table 5: Support for Election Reform by Voting Experience

|		Pct.Obs.	Internet Voting	Vote by Mail	Automatic Registration	EDR	Require ID	ED Weekend	ED Holiday	Statistical test performed
Voter confidence	Not At All	2	21	9	43	**36**	**79**	39	55	Probit
	Not Too	3	24	15	43	**34**	**79**	35	53	
	Somewhat	23	27	15	47	**42**	**75**	43	58	
	Very	72	29	14	47	**42**	**75**	41	58	
Mode of voting	Election Day	65	**27**	**9**	47	42	**76**	**38**	**56**	ANOVA
	Early Voter	18	**30**	**13**	49	44	**73**	**50**	**63**	
	Mail Voter	17	**33**	**34**	46	42	**73**	**45**	**57**	
Line length (min)	Not At All	42	**26**	**9**	**45**	44	76	**38**	**55**	Probit
	Less Than 10	28	**26**	**9**	**48**	40	75	**38**	**55**	
	11-30 min	17	**30**	**12**	**46**	41	76	**43**	**59**	
	31-60 min	9	**30**	**12**	**49**	41	75	**49**	**66**	
	More Than 60	5	**38**	**13**	**59**	44	74	**52**	**73**	
Registration problems	No	98	**27**	10	**47**	**42**	76	40	**58**	Probit
	Yes	2	**39**	11	**62**	**60**	80	43	**65**	
Was asked for ID	No	47	**25**	**9**	**44**	**44**	70	**39**	56	Probit
	Yes	53	**29**	**11**	**49**	**41**	80	**42**	59	
Precinct well run	Very Well	0	**46**	**15**	**54**	**52**	65	**45**	68	Probit
	Okay	1	**28**	**14**	**49**	**45**	74	**48**	64	
	Not Well	15	**33**	**13**	**50**	**46**	74	**45**	65	
	Terrible	83	**26**	**9**	**46**	**41**	76	**40**	56	
Type of in-precinct voting technology	OpScan	56	**30**	**17**	48	**45**	**76**	41	55	ANOVA
	DRE	32	**32**	**12**	49	**37**	**77**	42	**62**	
	Mixed	9	**26**	**11**	51	**60**	**68**	43	**58**	
	Other	3	**29**	**12**	53	**52**	**72**	41	**56**	
Absentee laws	No-Excuse	54	16	16	47	46	76	41	56	
	Excuse Required	44	14	11	50	41	75	42	59	
	VBM state	2	1	66	42	39	66	38	51	
Voter registration laws	EDR State	22	6	13	47	65	73	37	54	
	Non-EDR State	78	24	15	49	38	76	43	58	

Table 6: First Differences (90% Posterior Intervals, All Voters)

Variable		Internet Voting			Vote By Mail			Automatic Registration			Election Day Registration			Require ID			Election Day to Weekend			Make Election Day a Holiday		
		5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%
Probability of support		25	**33**	41	6	**8**	12	53	**62**	70	45	**56**	66	63	**71**	78	30	**38**	47	61	**69**	76
Age	44-53 to 54-62	-5	**-2**	1	-1	**0**	2	-8	**-5**	-1	-10	**-6**	-3	-8	**-5**	-1	-3	**0**	4	-9	**-5**	-2
Gender	Female To Male	-4	**1**	5	-1	**1**	3	-7	**-2**	3	-9	**-4**	1	-6	**-2**	3	3	**7**	12	-1	**3**	8
Race	White To Non-White	-5	**1**	8	-6	**-3**	-1	0	**6**	13	2	**9**	16	0	**6**	12	-9	**-2**	5	-2	**4**	10
Income	$60,000 - $69,999 To $70,000 - $79,999	-3	**0**	3	-1	**0**	1	-3	**0**	3	-4	**-1**	2	-3	**0**	3	-2	**1**	4	-3	**0**	3
Home owner	Yes To No	-4	**1**	6	-3	**-1**	1	-6	**-1**	4	-6	**0**	5	-2	**3**	8	-6	**-1**	4	-3	**2**	7
Disability	No To Yes	-4	**1**	7	-2	**0**	3	-2	**3**	9	-6	**0**	6	-3	**2**	7	-4	**2**	7	-3	**2**	7
Education	Some College To 2-Years Of College	-3	**0**	3	-1	**0**	1	-5	**-2**	2	-3	**0**	4	-5	**-2**	1	-2	**2**	5	-1	**2**	5
Presidential vote	Obama To Mccain	-23	**-17**	-12	-9	**-5**	-3	-37	**-31**	-25	-40	**-33**	-26	13	**18**	25	-18	**-12**	-7	-33	**-27**	-22
Ideology	Moderate To Conservative	-9	**-5**	-2	-3	**-2**	-1	-13	**-9**	-5	-13	**-9**	-5	5	**8**	11	-8	**-4**	0	-10	**-6**	-2
Partisanship	Indep To Rep	-2	**3**	7	-2	**-1**	1	-6	**-2**	2	-8	**-3**	2	-1	**3**	7	-5	**-1**	3	-6	**-2**	2
	Indep To Dem	-7	**-3**	2	-1	**1**	3	-2	**2**	6	-2	**3**	7	-8	**-4**	1	-3	**1**	6	-2	**2**	6
Voter confidence	"Very Confident" To "Somewhat Confident"	-7	**-3**	1	-1	**0**	2	-2	**2**	6	-3	**2**	6	-7	**-2**	2	-3	**2**	6	-2	**2**	6
Mode of voting	In Person E.D. To Early	-4	**2**	9	2	**5**	9	-5	**1**	8	-3	**4**	10	-7	**-1**	5	7	**13**	19	-3	**3**	8
	In Person To By Mail	6	**13**	20	8	**14**	22	-7	**0**	6	-10	**-3**	5	-3	**4**	9	0	**6**	13	-3	**2**	8

Table 7: First Differences (90% Posterior Intervals, Precinct Voters)

Variable		Internet Voting			Vote By Mail			Automatic Registration			Election Day Registration			Require ID			Election Day to Weekend			Make Election Day a Holiday		
		5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%	5%	50%	95%
Probability of support		23	**34**	46	3	**6**	10	43	**55**	67	40	**55**	69	50	**62**	74	28	**38**	51	62	**73**	82
Age	44-53 To 54-62	-6	**-2**	2	-1	**0**	2	-10	**-6**	-1	-11	**-6**	-2	-11	**-6**	-2	-3	**1**	5	-9	**-5**	-2
Gender	Female To Male	-7	**-1**	4	-1	**1**	3	-8	**-2**	4	-11	**-5**	1	-9	**-3**	4	3	**8**	14	-1	**3**	8
Race	White To Non-White	-9	**-2**	6	-5	**-3**	-1	1	**9**	17	-3	**5**	13	-1	**7**	14	-10	**-3**	6	-3	**4**	10
Income	$60,000 - $69,999 To $70,000 - $79,999	-3	**0**	4	-1	**0**	1	-4	**0**	4	-5	**-1**	3	-4	**0**	4	-3	**0**	4	-3	**0**	3
Home owner	Yes To No	-4	**2**	8	-3	**-1**	1	-10	**-3**	3	-7	**-1**	6	-3	**3**	11	-7	**-1**	5	-4	**1**	7
Disability	No To Yes	-7	**0**	7	-3	**-1**	1	-3	**5**	12	-7	**1**	8	-2	**5**	12	-4	**2**	9	-3	**3**	8
Education	Some College To 2-Years Of College	-4	**0**	4	-1	**0**	1	-7	**-2**	2	-4	**0**	5	-6	**-2**	3	-2	**2**	6	-2	**1**	5
Presidential vote	Obama To Mccain	-27	**-19**	-12	-8	**-5**	-2	-37	**-30**	-22	-40	**-33**	-24	15	**23**	32	-20	**-13**	-6	-34	**-27**	-21
Ideology	Moderate To Conservative	-10	**-6**	-2	-3	**-1**	0	-15	**-11**	-6	-14	**-9**	-4	7	**11**	16	-7	**-3**	2	-10	**-6**	-2
Partisanship	Indep To Rep	-2	**4**	10	-2	**0**	2	-8	**-3**	3	-11	**-5**	1	-3	**3**	8	-7	**-2**	3	-8	**-3**	2
	Indep To Dem	-9	**-3**	2	-1	**0**	2	-3	**3**	8	-1	**5**	10	-9	**-3**	2	-3	**2**	7	-2	**3**	7
Voter confidence	"Very Confident" To "Somewhat Confident"	-10	**-5**	0	-2	**0**	2	-3	**2**	8	-4	**1**	7	-7	**-1**	5	-5	**1**	6	-2	**2**	7
Early voting	No To Yes	-4	**3**	11	1	**4**	9	-7	**1**	9	-5	**4**	12	-14	**-5**	2	6	**13**	20	-4	**2**	8
Registration problem	No To Yes	-11	**1**	17	-6	**-2**	3	9	**20**	31	3	**16**	28	-7	**8**	22	-19	**-7**	7	-7	**5**	14
Difficulty finding polling place	"Very Easy" To "Fairly Easy" Or Less	2	**9**	17	0	**2**	7	-2	**7**	15	-7	**2**	10	-1	**7**	15	0	**8**	16	-9	**-2**	5
Line length	"Less Than 10 Min" To "10-30 Min"	-3	**1**	5	-1	**0**	1	-6	**-1**	4	-5	**-1**	4	-4	**0**	5	-4	**0**	4	-4	**0**	4
Equipment problem	No To Yes	-15	**-5**	7	-2	**2**	10	10	**20**	31	-3	**12**	24	-22	**-8**	7	-1	**13**	26	0	**9**	18
Know poll worker	No To Yes	-7	**-1**	6	-4	**-1**	1	-2	**5**	11	-8	**0**	8	-11	**-4**	4	-15	**-9**	-3	-7	**-1**	4
Asked for ID	No To Yes	-4	**2**	9	-1	**1**	4	-2	**5**	12	-1	**7**	14	7	**14**	21	-7	**-1**	6	-4	**1**	7
Precinct well run	"Okay" To "Very Well"	-9	**-2**	4	-2	**0**	2	-4	**3**	9	-11	**-5**	2	-1	**5**	11	-8	**-1**	5	-10	**-5**	1

Figure 1: Hierarchical Binary Logit Coefficients (All Voters)
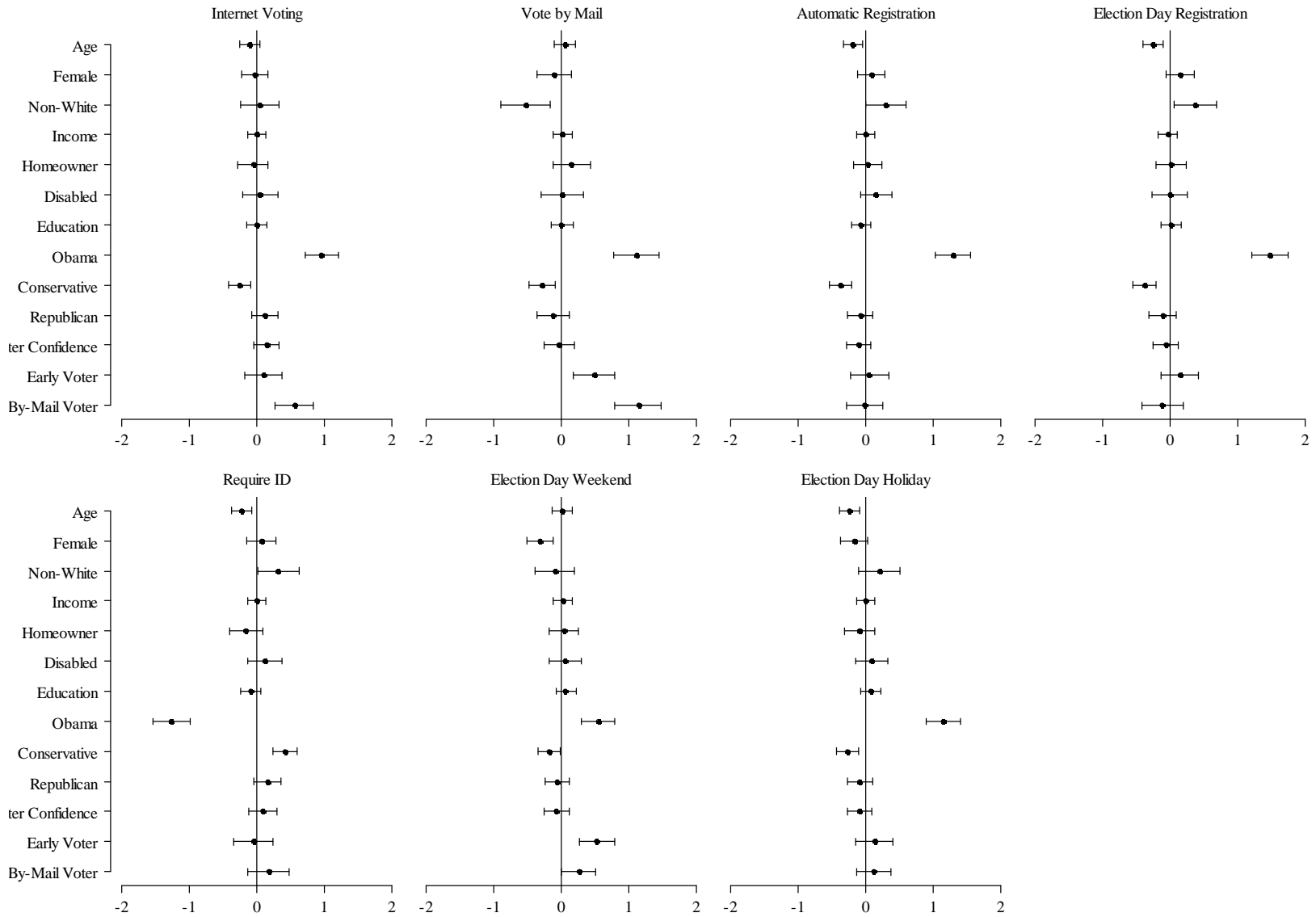
Note: Points indicate average coefficients and horizontal lines indicate 90% posterior intervals.

Figure 2: Hierarchical Binary Logit Coefficients (Precinct Voters)

Note: Points indicate average coefficients and horizontal lines indicate 90% posterior intervals.