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How Postregistration Laws Affect the Turnout of Citizens Registered to Vote

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ABSTRACT

A well-established scholarly tradition links lower voting costs with higher turnout. Whereas previous research emphasized the costs imposed by requiring voter registration, our research assesses postregistration costs and state policies that can make it easier for registered citizens to vote. These policies include mailing each registrant a sample ballot and information about the location of his or her polling place, providing a longer voting day, and requiring firms to give their employees time off to vote. Using the 2000 Voter Supplement to the Current Population Survey, we find that all but the last of these provisions enhance turnout, especially by the young and the less educated. Compared to a state that does none of these things, the estimated turnout of high school dropouts is nearly 11 percentage points higher in a state with these "best practices"; their effect on young registrants is nearly 10 points. Because African American and Latino registrants are disproportionately younger and less educated, they would benefit disproportionately from universal adoption of such postregistration laws. We estimate that if every state adopted these best practices, overall turnout of those registered would increase approximately three percentage points.

The American political system has long been known for moderate levels of electoral participation (Mackie and Rose 1991). State-level procedures for citizens to establish and maintain their eligibility to vote contribute to our low ranking in international comparisons; when states make registration easier, turnout is higher (Highton 2004). States also sometimes enact policies aimed at making it easier for their registered citizens to get to the polls and vote on election day. They may mail a sample ballot to registrants, perhaps along with information about the location of their polling place.

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Polls may be open from dawn until 9:00 p.m., and firms may be required to give employees time off to vote. Do these efforts increase turnout? To answer this question, we examine the effects that these postregistration provisions have on the turnout of people who are registered to vote. We focus on three questions: What are the effects of each postregistration provision on voter turnout? What types of people are more affected by postregistration laws? What are the combined effects of these postregistration "best practices" on overall turnout rates?

EXPLAINING VOTER TURNOUT

The conventional approach to explaining voter turnout has been to analyze variations in the voting rates of different types of Americans, most often defined in demographic terms. Scholars have concluded that, controlling for other characteristics, who votes can be explained largely by education, age, and residential stability (Wolfinger and Rosenstone 1980; Leighley and Nagler 1992; Teixeira 1992; Rosenstone and Hansen 1993). These three factors account for most other group differences in electoral participation, including the lower turnout of blacks and Latinos (Wolfinger and Rosenstone 1980, 90–3; Highton and Burris 2002).

Scholars have also reached consensus on the effect on turnout of state laws prescribing how, when, and where citizens can register to vote (Highton 2004). The most consequential legal provision is the registration deadline. Allowing citizens to register at the polls on election day, as six states do, is more effective in encouraging voting. North Dakota, where voter registration was abolished in 1951, provides the most permissive voting environment.[1]

Because restrictive registration laws are impediments to voting that many people can overcome, permissive registration procedures are not equally advantageous for everyone. For example, Highton (1997) found that less-educated people particularly benefit from election-day registration, presumably because they are less likely to anticipate the need to register in advance. Permissive registration arrangements are also especially beneficial to younger citizens (Teixeira 1992, 119; Highton and Wolfinger 1998, 84–9), who have been eligible to vote in fewer elections.

EXPLAINING THE TURNOUT OF REGISTRANTS

In most studies of voter turnout, the dependent variable has been the percentage of citizens who vote (see, e.g., Wolfinger and Rosenstone 1980; Rosenstone and Hansen 1993). With the exception of North Dakota and the six

election-day registration states wherein registration and voting can be one essentially continuous act, participation in an American election requires two actions that are separate in time and space: registration and voting. Arguably, registration is the more daunting task, since it lacks the immediate gratification of voting and can be more difficult, "often involving more obscure information and a longer journey at a less convenient time [and] a more complicated procedure" (Wolfinger and Rosenstone 1980, 61).

Once registered, Americans are very likely to vote (Erikson 1981; Glass, Squire, and Wolfinger 1983). The 86 percent turnout rate of registrants in 2000 is near the mean for the past two decades.[2] In the 1980s, this finding led legislators and groups interested in increasing voter turnout to concentrate on making registration easier, rather than on measures that could affect only people who were already registered, such as holding elections on Sunday. The principal author of the National Voter Registration Act of 1993 (nicknamed the Motor Voter law) became supportive of this approach after learning "that while U.S. voter turnout is far behind European countries, the percentage of registered voters in this country who vote compares favorably to other Western democracies" (Swift 1984, 13).[3]

Finding that such a high proportion of registrants actually voted, one research team concluded that "registration is virtually equivalent to voting" (Squire, Wolfinger, and Glass 1987, 47). This assertion exemplified academic irrational exuberance; clearly, millions who had taken the trouble to register nevertheless failed to vote. The turnout of those registered to vote, while high, is not 100 percent. These researchers did not assess which registrants were more likely to vote, other than noting that the demographic variables that best predicted turnout were only modestly related to the turnout of registrants (Squire, Wolfinger, and Glass 1987, 48).

Almost a decade passed before research was published that tried to explain the turnout of registrants. Jackson (1996) found that the effects of individual characteristics, especially education, income, and residential mobility, on the turnout of registrants were much weaker than their effects on registration. Jackson used one state-level policy variable, the registration closing date, when analyzing registration and turnout among his entire sample. The other published study to model registration and registrants' turnout separately included two policy variables: the closing date and the number of years before a name was purged from registration lists (Timpone 1998, 155). Neither Jackson nor Timpone included state-level postregistration procedures in their models of the turnout of registrants. To the best of our knowledge, the length of the voting day is the only postregistration variable whose effect has been studied empirically. Extended polling hours had a

modest positive effect on overall voter turnout in 1972, measured as a proportion of the entire population, registered and unregistered alike: "keeping the polls open for fourteen hours instead of twelve hours increases from 1 percent to 3 percent the probability that an individual will vote" (Wolfinger and Rosenstone 1980, 71–2).[4] Accordingly, we believe that ours is the first examination of the effect of postregistration laws on the turnout of those registered to vote.

Our study expands the familiar costs/benefits turnout model. While registration may be the more demanding task, voting is not wholly or universally costless. Our assessment provides evidence to help state policymakers craft statutes that will facilitate voting by those citizens who have already surmounted the registration barrier.

DATA SOURCES AND MODEL

Our individual-level data are from the 2000 Voter Supplement of the Current Population Survey (CPS) (United States Department of Commerce 2001). The United States Census Bureau conducts the CPS each month primarily to gather data on unemployment. The basic questionnaire asks for detailed demographic data, and monthly supplements solicit information on an additional topic, such as Internet use, smoking, or child care. In November of even-numbered years, the Voter Supplement asks about citizenship status, voter registration, and voting. An important feature of the Voter Supplement is its immense sample, which provided data on voting for 74,174 citizens in 2000.[5] This is particularly useful for studies that require state-level data, as the smallest state sample in our analysis has 733 cases. The huge sample also is essential for analyzing subgroups that are sparsely represented in conventional surveys, such as elderly Latino citizens in states with permissive postregistration laws or young adults living with their parents.

Sample size is not the only CPS advantage. The completion rate for the 2000 Voter Supplement was 87 percent.[6] This compares very favorably to the aggregate response rate of just 52 percent for the 2000 National Election Study (NES) (Burns et al. 2002), the other common source of data for analyses of voter turnout.[7] Furthermore, Voter Supplement interviewing is finished by the third week in November, while NES field work drags on well into December, increasing the chances of response error.

Because we are seeking to analyze how postregistration laws affect the turnout of those registered to vote, we excluded from our analysis the six states that permitted election-day registration in 2000: Idaho, Maine, Minnesota, New Hampshire, Wisconsin, and Wyoming, as well as North Dakota,

whose voters do not register at all. We also excluded Oregon, where everyone voted by mail in 2000. Mail voting allows registrants to vote at their convenience, at home, with the ballot in front of them, thus eliminating the relevance of our postregistration policy variables. The same logic led us to delete from our sample all absentee voters in the remaining 42 states; 10 percent of registrants used absentee ballots in 2000.[8] These exclusions left us with 44,859 cases in our dataset, including 4,810 African Americans, 2,462 Latinos, 4,878 citizens without a high school diploma, and 12,685 college graduates. Using these CPS data, a state-by-state analysis of turnout in 2000 of those registered to vote revealed variation from 79 to 92 percent among the states.

The four postregistration provisions we analyze are polling hours, time off work to vote, mailing sample ballots to registrants, and mailing polling place information to registrants. Our data on these policies came from several sources. We began by consulting the Federal Election Commission (FEC) Web site for information on polling hours. We searched the Web sites of the 42 secretaries of state to confirm these FEC data and to learn about mailing sample ballots and polling place information. No Web site had all the necessary data, so we contacted all secretaries of state directly, first by email and then by telephone. Where state sources differed from the FEC, we called to confirm the information given by the state source and then used it in our analysis. We also examined legal codes in 10 states to verify the information we gathered through this procedure. In eight cases, the laws matched previous responses with apparent discrepancies satisfactorily explained. In the two remaining cases, we double-checked with state sources and found that, although not required by law, information had been sent to registrants in 2000.[9]

An important challenge was how to deal with intrastate variation in our coding scheme. In three states, elections were conducted by county officials, and the state did not collect information about pre-election mailings. In five states, polling hours varied across localities. In all such cases, we used local government Web sites and surveyed each state's most populous counties to identify the legal provisions affecting the greatest proportion of the state's residents. This strategy, which inescapably incorporated some measurement error, was our best option for coping with messy reality. Our final coding decisions for each state in our analysis are provided in Table A1.

To assess the effects of postregistration policies, we estimated a multivariate logit model of whether a registrant voted. The independent variables to test our hypotheses were: 1) legal provisions concerning time: polls open before 7:00 a.m., polls open after 7:00 p.m., time off work for state employ-

ees, and time off work for private workers; and 2) provisions concerning the state furnishing voting information: mailed sample ballots and mailed information regarding polling places. State-level control variables were region (South/non-South), CNN identification as a battleground state in the 2000 presidential contest, and a concurrent gubernatorial or senatorial election.[10] Following Jackson (1996) and Timpone (1998), individual-level control variables in the model were employment status, education, age, family income, race, and residential stability.

Table 1 displays the logit parameter estimates of impacts on registrants' turnout in 2000. To interpret the estimated effects of postregistration laws, we computed turnout probabilities based on the logit estimates. For each value of every variable of interest, we calculated the predicted probability that a registrant in our sample would vote with the values of the other variables kept at their actual levels. The mean of these probabilities gives a predicted overall turnout level for each value of a variable. The difference between the figures is our estimate of the effect of a particular variable. For example, to calculate the effect of longer morning polling hours, we calculated two probabilities for each registrant in our sample. The first probability was based on setting the value of morning polling hours to zero (polls not open before 7:00 a.m.) and keeping the values of all other variables at their actual levels. The second probability was calculated by setting the value of morning polling hours to one (polls open before 7:00 a.m.) and keeping the values of all the other variables at their actual levels. These calculated probabilities were then averaged across all respondents for each value of each postregistration policy variable. In our sample, the mean predicted turnout percentages for the morning hours variable were 83.6 and 85.3, respectively. The difference between these values is our estimate of the effect of opening the polls before 7:00 a.m. on the turnout of registrants. Thus, we estimate that early morning polling hours increased this turnout by 1.7 percentage points.

RESULTS

Time to Vote

We used three measures of voting hours: *early voting,* defined as whether polls were open before 7:00 a.m.; *late voting,* defined as whether polls were open after 7:00 p.m.; and *total voting hours.* Twelve of our 42 states offered early voting. A bivariate analysis indicates that the turnout of registrants with more time to vote early in the morning was about two percentage points higher than in the other 30 states in our sample (Table 2). By the same token, more time to vote in the evening also appeared to increase turnout in our sample.

In the 19 states where the polls were open after 7:00 p.m., the turnout of registrants was about three points greater than elsewhere. Table 2 also shows the bivariate differences between states classified by the total number of hours their polls were open. There was a difference of nearly five percentage points between states with polls open 11 or 12 hours a day and those open longer.[11] In short, whether measured as more time in the morning, more time in the evening, or just the total number of hours the polls are open, these bivariate

Table 1. Logit Estimates of Influences on Turnout of Registrants, 2000

	Parameter Estimate	Standard Error
Early voting	.14	.03**
Late voting	.08	.04**
Mailed polling place information	.24	.12**
Mailed polling place information × Education	–.08	.04**
Mailed sample ballots	.29	.12**
Mailed sample ballots × Education	–.09	.04**
Mailed sample ballots × Age 18–24 (live with parents)	.01	.12
Mailed sample ballots × Age 18–24 (live without parents)	.33	.13**
Time off work for state employees	.06	.05
Time off work for state employees × State employee	–.03	.19
Time off work for private employees	–.19	.05**
Time off work for private employees × Private employee	.03	.06
State employee	.02	.16
Private employee	–.28	.06**
Employed	.28	.05**
Education	.52	.02**
Age	.11	.01**
Age squared/100	–.08	.01**
Age 18–24 (live with parents)	.42	.08**
Age 18–24 (live without parents)	.14	.07**
Family income	.16	.01**
Black	.41	.04**
Latino	–.10	.05*
Asian	–.43	.10**
Residential stability	.29	.02**
South	–.19	.04**
Battleground state	.08	.03**
Concurrent senatorial/gubernatorial election	–.09	.04**
Constant	–3.82	.16**
Number of observations	44,859	
–2 * log likelihood (initial)	39,196	
–2 * log likelihood (final)	35,473	
Percent correctly predicted	84	
Pseudo-R^2	.095	

* p<.10; ** p<.05

Source: 2000 Current Population Survey Voter Supplement (United States Department of Commerce 2001)

Table 2. Polling Hours and the Turnout of Registrants, 2000

	Turnout of Registrants (%)	
	Overall	Employed
Early voting		
Polls open at 7:00 a.m. or later	83.4	83.9
Polls open before 7:00 a.m.	85.6	86.6
difference	+2.2	+2.7
Late voting		
Polls close at 7:00 p.m. or before	82.5	83.1
Polls close after 7:00 p.m.	85.7	86.5
difference	+3.2	+3.4
Total voting hours		
11 or 12 hours	81.0	81.7
13, 14, or 15 hours	85.9	86.6
difference	+4.9	+4.9
n	44,859	30,369
	Overall	State Employees
Time off work for state employees		
No	84.1	89.1
Yes	84.2	89.3
difference	+0.1	+0.2
n	44,859	1,508
	Overall	Private Employees
Time off work for private employees		
No	85.1	84.1
Yes	83.5	82.1
difference	−1.6	−2.0
n	44,859	21,578

Source: 2000 Current Population Survey Voter Supplement (United States Department of Commerce 2001)

relationships are consistent with the proposition that longer polling hours facilitate increased voting of registrants.

The hypothesis that longer polling hours lead to higher turnout is based on the assumption that many registrants would like to vote but decide not to do so because of stronger demands on their time. If the most formidable competing demand is work, it follows that a longer voting day would be of greatest benefit to people who are employed. But, as the second column in Table 2 shows, the data do not support this hypothesis. Employed registrants were only slightly advantaged (half a percentage point) by more time to vote in the morning and helped even less by more time after work. But more total hours to vote seems to have provided no greater advantage to the working population than to their fellow citizens, most of whom presumably had more free time to vote.

One way to expand opportunities for potential voters is to provide time off for them to vote during the work day. Thirty-one states permit state government employees to leave their posts to vote (*time off work for state employees*). But, as Table 2 shows, registered state government workers are inclined to vote irrespective of this inducement. When given time off to vote, their turnout was minimally (0.2 percentage points) higher than that of their counterparts in the other 11 states in our sample, which do not offer this benefit. The results were much the same for private sector employees. Two dozen states require private firms to give their workers time off to vote (*time off work for private employees*). The turnout of registered private employees in these states is actually two percentage points lower than in states that do not provide such an impetus to civic duty, an anomalous result that we explore further below.

Multivariate estimates of the effects of having more time to vote are generally consistent with these bivariate results (Table 1). The effect of the length of time available to vote did not depend on whether a person had a job.[12] In a preliminary model, we estimated the effects of the two polling-hour variables—early voting and late voting—and the interaction between each of these variables and being employed. The estimated effects of both interactions were tiny and statistically indistinguishable from zero.[13] Therefore, we excluded these interaction terms from the final model reported in Table 1. Overall, longer polling hours appear to facilitate voting. But in contrast to the bivariate indication that longer evening polling time is more consequential than longer morning time, the multivariate analysis reveals the opposite; the 1.7 percentage point estimated effect of opening voting before 7:00 a.m. exceeds the estimated 1.0 point impact of keeping the polls open past 7:00 p.m.

The logit results also reveal virtually no relationship between mandating time off from work for voting and registrants' turnout. Neither the coefficient for time off for state workers nor its interaction with state workers (*time off work for state employees* × *state employee*) was statistically significant. Similarly, the turnout of registered private employees in states with mandatory time off is statistically indistinguishable from that of such employees in states without this guarantee.[14] Thus, the only effect of postregistration policy related to time for voting is that longer voting days increase the overall turnout of registrants.

INFORMATION ABOUT VOTING

Our two other postregistration policy variables—*mailed sample ballots* and *mailed polling place information*—provide registrants not time, but informa-

tion. The left-hand column in Table 3 shows the bivariate relationships for these two measures. In nine states, all registrants were mailed information about the location of their polling place. Turnout of registrants in these states was 2.5 percentage points higher than in the remaining 33 states in our sample. Receiving a sample ballot in the mail may also provide useful information to registrants, thus facilitating voting. Seven states sent registrants sample ballots in 2000, and their turnout was two points higher than that of registrants in the other 35 states.[15]

The impact of additional information in general, and of such specific and practical information in particular, depends on the likelihood that one would have acquired it already. Therefore, the probability of voting for people already possessing the information contained in the mailings, or those with more capacity or inclination to seek such information, will be less affected by them. This generalization leads to two specific propositions: the impact of receiving polling place information or a sample ballot on the probability of voting will be in inverse relation to a registrant's 1) education and 2) age. The tests of these two propositions are more easily described separately.

Education. Our first examination of the interaction effect of informational postregistration laws and registrants' education on the probability of such registrant voting is displayed in the four right-hand columns of Table 3. The results are consistent with our hypothesis. These policies have greater effects on turnout among people who had not attended college and the most pronounced effects for high school dropouts. Among the least educated, turnout was 7.4 percentage points higher for registrants in states that send

Table 3. Information about Voting and the Turnout of Registrants, 2000

	Turnout of Registrants (%)				
	Overall	Less than High School	High School Diploma	Some College	College Degree
Mailed polling place information					
No	83.5	69.2	80.5	84.9	92.0
Yes	86.0	76.6	82.8	84.8	92.4
difference	+2.5	+7.4	+2.3	–0.1	+0.4
Mailed sample ballots					
No	83.7	69.7	80.6	84.9	92.2
Yes	85.7	75.9	82.7	84.7	92.1
difference	+2.0	+6.2	+2.1	–0.2	–0.1
n	44,859	4,945	14,104	13,212	12,597

Source: 2000 Current Population Survey Voter Supplement (United States Department of Commerce 2001)

out polling place information. The impact was nearly as great (6.2 points) for the least-educated registrants in states that mail out sample ballots. On the other hand, differences in turnout were virtually nonexistent among registrants with at least some exposure to college.

We found that these relationships remained similar when we introduced control variables in the multivariate analysis (Table 1). The interaction effect of education with each information policy variable is negative and statistically significant. Receiving information about where to vote enhanced the turnout of registrants lacking a high school diploma by an estimated 2.9 percentage points; mailed sample ballots boosted their turnout by 3.9 points (Table 4). On the other hand, the estimated effects for high school graduates without any exposure to college were 1.2 and 2.0 points, respectively. Registrants who had attended college appear to have been unaffected by either informational postregistration measure, as the estimated effects are small and cannot confidently be statistically distinguished from zero.[16] These findings support our hypothesis of the conditional effect of information: providing information matters more for people who are less likely to have acquired it elsewhere.

Youth. The second hypothesis following from our generalization involves young registrants, whose opportunities to acquire practical political information are limited and whose disinclination to vote is notorious. In 2000, just 42 percent of citizens between the ages of 18 and 24 cast ballots, compared to 70 percent of those over 24. In part, this reflects a registration disparity, with 59 percent for those under 25 in our sample being registered to vote versus 81 percent of everyone else. But even among those who manage to register, turnout is still lower among the young, as only 73 percent of young registrants voted, compared to 88 percent of older registrants.

Personal circumstances are more likely to reduce the value of postregis-

Table 4. Estimated Effects of Postregistration Information on the Turnout of Registrants, 2000

	Estimated Turnout Effect (%)	
Education	Mailed Polling Place Information	Mailed Sample Ballots
Less than high school	+2.9	+3.9
High school diploma	+1.2	+2.0
Some college	+0.6	+0.6
College degree	–0.6	–0.3
Overall	+0.6	+1.2

Note: Estimated effects were calculated using the logit estimates in Table 1 by the procedure described in the text.

tration provisions for younger citizens. Forty-seven percent of young citizens are still in school and 37 percent are full-time college students. With other demographic variables controlled, students are more likely to vote than non-students (Wolfinger and Rosenstone 1980, 56–7; Highton and Wolfinger 2001, 206–7). This impact on turnout has been ascribed to the amount and intensity of political rhetoric on campuses and the wider and easier access to information about electoral mechanics found there, a situation that may reduce the added value of informational mailings. Moreover, 53 percent of young adults live with their parents, compared to just 5 percent of older citizens. This is associated with moderately lower overall turnout (Highton and Wolfinger 2001, 207). More important for our hypothesis, however, is that a multigenerational home, like a college campus, provides a richer information environment, the result being that postregistration mailings might have less impact.[17]

In the nine states where everyone on the voter registration list was mailed information about where to vote, 72 percent of registrants under 25 voted compared to 67.6 percent in the remaining 33 states in our dataset. Sample ballots also provide information that is likely to be especially informative, if not necessarily reassuring, to those facing their first visit to a polling place. Seeing the complete list of candidate races and ballot questions in the format that the voter will face in the voting booth might reduce the uncertainty associated with voting for the first time and give the novice voter more time to make his or her decision. Over 73 percent of youthful registrants voted in the seven states that mailed sample ballots, while just 67.3 percent did so in the remaining 35 states in our sample.

Multivariate analysis of the effect of the two postregistration information measures on all registrants, irrespective of age, yielded a 0.6 percentage point aggregate estimated effect for polling place information and a 1.2 point effect for sample ballots. The effect was inversely related to education for both election procedures. To test the hypothesis that information policies have a greater effect on young registrants, we included interactions between youth (distinguishing students from non-students and those who live with their parents from those who do not) and mailing polling place information and sample ballots. The only substantial interaction we found was that the impact of mailing sample ballots was greater among young people who had left home (7.1 points). Among young registrants still living with their parents, however, the turnout effects of mailing sample ballots were indistinguishable from the effects of mailing sample ballots to older registrants. Moreover, we found no meaningful interaction between being a student and either of the informational measures.

MINORITY REGISTRANTS

African Americans and Latinos have common demographic characteristics and are also self-conscious interest groups represented by active and well-funded organizations in Washington and state capitals. In either manifestation, they are major actors in both electoral politics and policymaking, relying more than most groups on their voting capacity. Ballot access has always been a paramount consideration for these groups (Vedlitz 1985), as it would be for any interest group whose influence is derived more from numbers than from money, political expertise, or some other resource. Black commitment to electoral strategies is enhanced by a century of wholesale disenfranchisement in the South that ended only with the Voting Rights Act of 1965.[18] A generation later, "[t]he overwhelming majority of Black Americans believe in voting as a means to achieve group empowerment" (Tate 1993, 75). In 2001, the Congressional Black Caucus made "overhauling elections its No. 1 priority" (Cochran 2001, 1150).[19] Latinos also have pursued an electoral strategy through organizations like the Southwest Voter Registration Education Project. For these reasons, we examined the effects of postregistration policies on African Americans and Latinos.

At present, black mobilization is greater than that of Latinos. Sixty-six percent of blacks voted in the last presidential election, which is just three percentage points less than whites (United States Department of Commerce 2001). However, only 50 percent of Latinos voted in 2000. In part, this disparity reflects their lower registration rate: 65 percent for Latinos compared to 80 percent for whites and 78 percent for blacks. But turnout also lags among registered Latinos (de la Garza 2001). Seventy-nine percent of Latino registrants voted in 2000, compared with 85 percent of black registrants and 87 percent of white registrants.

To assess the influence of race on the impact of postregistration policies, we re-estimated the logit turnout model (Table 1), adding interactions between each policy and each group. To minimize multicollinearity, we estimated interactions between postregistration policies and one racial group at a time. The results strongly suggest that there were no direct effects of postregistration policies on the turnout of either African American or Latino registrants. Virtually all of the estimated interaction effects were small in magnitude with large standard errors. There was no significant improvement in the fit of the overall model with any of these interactions added.

Although there appears to be no direct effect of postregistration policy on minority registrant turnout, disparate effects are still likely. We have shown that postregistration information policies are particularly helpful to younger

and less-educated registrants, and Latinos and blacks are younger and less educated than whites (Citron and Highton 2002). While these differences are more pronounced in the entire population, they are far from trivial among registrants. In our dataset, 9 percent of white registrants were under 25 years of age, compared to 12 percent of black registrants and 13 percent of Latino registrants. Educational disparities were greater: just 9 percent of white registrants failed to graduate from high school compared to 18 percent of black registrants and 25 percent of Latino registrants. Thirty-one percent of white registrants were college graduates, compared to 18 percent of black registrants and 16 percent of Latino registrants. These demographic profiles suggest that postregistration laws could have disparate impact on minority registrants, even if it is not directly attributable to their race.

COMBINED TURNOUT EFFECTS: ASSESSING THE IMPACT OF BEST PRACTICES

Our results indicate that extended polling hours and postregistration mailings increase turnout among those registered to vote. The first three columns of Table 5 report the combined estimated effects of postregistration laws on registrant turnout based on the model in Table 1. We compare predicted turnout probabilities for people in two hypothetical states, one with the "worst practices" and the other with the "best practices." To calculate these estimates, we used the logit coefficients in Table 1 to generate two predicted probabilities of voting for each registrant in the sample. The first was calculated after setting the value of each of the postregistration variables to its lowest value, which corresponds to a hypothetical state that 1) does not extend polling hours in the morning or evening and 2) mails neither sample ballots nor polling place information to its registrants (worst practices). The second turnout probability was calculated after setting the value of each postregistration variable to its highest value, corresponding to a state that 1) extends morning and evening polling place hours and 2) mails sample ballots and polling place information to registrants (best practices). For each registrant in the sample, the difference in the two probabilities represents the estimated combined effect of all these postregistration laws. We aggregate these individuals into various groups and take the mean difference of these estimates to yield the estimates of the combined effects of these laws on different groups, which are displayed in Table 5.

The last line in Table 5 shows that the overall estimated turnout of registrants in the most favorable legal context (best practices) is 4.3 percentage points greater than in the least favorable legal context (worst practices).

Reflecting our earlier findings in the model of registrant turnout (Table 1), the combined effect of best practices varies widely by education, age, and race. The first set of entries in Table 5 shows varying effects by educational attainment. The widest estimated gap is 10.7 percentage points for high school dropouts; this dwindles to less than one point for college graduates. The estimated effect for young adults is just a bit smaller (9.7 points) than for high school dropouts. Due to age and educational differences, there are also racial differences, with a larger effect of postregistration best practices on Latino registrants (6.8 points) than black (4.8) or white registrants (4.0).

To estimate how nationwide turnout might change if every state adopted these postregistration best practices, we must take into account the fact that some states have already adopted various components of them. As a result, projected turnout increases under universal adoption of best practices are smaller than the differences between the hypothetical best and worst practice states reported in the third column of Table 5. Moreover, there are differences in the demographic composition of states' pools of registrants that will affect the overall impact of universal best practice adoption. For example, about 50 percent of Latinos live in states that currently mail sample ballots and

Table 5. Estimated Effects of Best and Worst Practices in Postregistration Procedures on the Turnout of Registrants, 2000

	Estimated Turnout with Worst Practices (%)	Estimated Turnout with Best Practices (%)	Difference (%)	Projected Turnout Increase with Universal Adoption of Best Practices (%)
Education				
Less than high school	68.4	79.1	10.7	7.5
High school diploma	78.5	84.7	6.2	4.1
Some college	84.3	87.6	3.3	2.1
College degree	91.4	92.2	0.8	0.3
Age				
18–24	65.9	75.6	9.7	6.8
25+	84.5	88.2	3.7	2.4
Race				
White	83.5	87.5	4.0	2.6
Black	82.8	87.6	4.8	3.3
Latino	74.0	80.8	6.8	4.3
Overall	82.7	87.0	4.3	2.8

Note: Worst practices are defined as no extended polling place hours and mailing neither sample ballots nor polling place information to registrants. Best practices are defined as extended polling place hours and mailing sample ballots and polling place information to registrants. Estimated effects were calculated using the logit estimates in Table 1 by the procedure described in the text.

polling place information to registrants, whereas the corresponding figures for whites and blacks are closer to 25 percent.[20]

Overall, we project that the turnout of registrants would have increased by 2.8 percentage points in 2000 if all states had adopted postregistration best practices. The magnitude of this increase is inversely related to educational attainment and age. With nationwide use of best practices, the turnout of registrants without a high school diploma would have risen 7.5 percentage points, high school graduates would have experienced a 4.1 point increase, and the effect would have been modest to negligible for those with college education. Similarly, the benefit for young adult registrants would have been almost three times as great as for those over the age of 24. Latino turnout would have increased 4.3 percentage points, compared to 3.3 and 2.6 percentage points for blacks and whites, respectively.

POLITICAL CONSIDERATIONS

Advocates of legal change to expand access to the ballot must contend with arguments that easier access would provide more opportunities for vote fraud. The postregistration laws we analyze do not have this disadvantage. Neither a rich imagination nor scrutiny of discussions on election reform has turned up claims that more information or more time to vote would threaten the sanctity of the electoral process.[21] Without opposing arguments, one might think that postregistration best practices would have been a salient topic both on Capitol Hill and in media coverage of attempts to repair the widely publicized shortcomings in our electoral system, highlighted by the 2000 Florida election. This was not the case. One of the numerous study groups that developed after 2000, The Constitution Project's Election Reform Initiative, recommended both of our informational best practices (Ornstein 2001), and these were also advocated in a Brookings Institution Policy Brief (Mann 2001). The widely-publicized Carter-Ford Commission was more circumspect; six of its 19 members recommended that sample ballots be mailed to registrants (National Commission on Federal Election Reform 2001, 78–9), a proposal that seems to have escaped media attention.

By the same token, the mandate for universal sample ballots in the 2001 Dodd-Conyers Bill (S 565 and HR 1170)—admittedly, not the most politically interesting aspect of this far-from-nonpartisan measure—was missing from the many stories about the unsuccessful bill in the *New York Times* and *CQ Weekly.* The major federal law enacted by the 107th Congress was the bipartisan Help America Vote Act (HAVA) of 2002. This statute, while weak on mandates, authorized $3.9 billion in grants to states to improve their

electoral practices. HAVA suggested that mailing sample ballots and polling place location information would be appropriate actions of reform. By late September 2003, all 42 states in our analysis had posted draft state HAVA plans on their Web sites, each with a section dedicated to voter education activities. However, these tentative plans were typically vague about the educational content to be funded or they emphasized training on new voting machines. None of these 42 state HAVA plans specifically proposed any of the postregistration best practices we have analyzed.

CONCLUSION

As explanations of voter turnout begin to differentiate registration and voting (Jackson 1996; Timpone 1998), scholarly and political attention should expand to include policies that affect the participation of those who have registered to vote. We have identified three postregistration procedures that have a favorable effect on the turnout of registrants: mailing sample ballots to registrants, mailing polling place location information to registrants, and offering extended polling hours on election day.

While no demographic group appears to be distinctively advantaged by having more time to vote, postregistration best practices that provide information appear to be more effective in increasing the turnout of registrants who are either young adults or less educated. These findings support our hypothesis of the conditional effects of information, that providing information matters more for people who are less likely to acquire it elsewhere. Thus, receiving sample ballots in the mail is most consequential for people with less access to information, the least-educated and young registrants, while its effect shrinks to insignificance for college graduates. In addition, these best practices are less valuable to young adults still living with their parents, who can acquire this information more easily from older, more experienced people.

Postregistration policies do not directly affect the turnout of African American and Latino registrants when other demographic variables are controlled. But because, in the aggregate, these minorities are younger and less educated than whites, they are more likely to benefit from information about voting. Therefore, the wider use of postregistration best practices would have a disproportionately beneficial impact on black and Latino turnout. We estimate that universal implementation of longer polling hours and pre-election mailings would increase turnout of black registrants by 3.3 percentage points and Latino registrants by 4.3 points. Overall, we project that turnout of those registered to vote would increase by 2.8 percentage points if all states

adopted best practice postregistration procedures. These are substantial gains from adopting procedures that are neither risky nor expensive and should therefore attract little overt opposition.

APPENDIX

Table A1 reports our coding of state postregistration provisions for 2000. Six states (Idaho, Maine, Minnesota, New Hampshire, Wisconsin, and Wyoming) are excluded because they had election-day registration in 2000. We also excluded North Dakota, where voters were not required to register, and Oregon, which carried out the election by mail. See the text for a detailed description of our data sources and how we dealt with intrastate variation in postregistration provisions.

Table A1. State Postregistration Procedures, 2000

	Early Voting	Late Voting	Time Off Work (Private)	Time Off Work (State)	Poll Location Mailed	Sample Ballots Mailed
Alabama						
Alaska		√	√	√		√
Arizona	√		√	√	√	√
Arkansas		√	√	√		
California		√	√	√	√	√
Colorado			√	√	√	
Connecticut	√	√				
Delaware		√		√	√	
Florida				√		√
Georgia			√			
Hawaii			√	√	√	
Illinois	√		√	√		
Indiana	√			√		
Iowa		√	√	√		
Kansas			√	√		
Kentucky	√		√	√		
Louisiana	√	√		√		
Maryland		√	√	√	√	√
Massachusetts		√				
Michigan		√				
Mississippi						
Missouri	√		√	√		
Montana		√		√		
Nebraska			√	√		
Nevada			√	√	√	√
New Jersey		√		√	√	√
New Mexico			√	√		
New York	√	√	√	√	√	
North Carolina	√	√				

Table A1. Cont.

	Early Voting	Late Voting	Time Off Work (Private)	Time Off Work (State)	Poll Location Mailed	Sample Ballots Mailed
Ohio	√	√	√	√		
Oklahoma			√	√		
Pennsylvania		√				
Rhode Island				√		
South Carolina				√		
South Dakota			√	√		
Tennessee			√	√		
Texas			√	√		
Utah		√	√	√		
Vermont						
Virginia	√					
Washington		√				
West Virginia	√	√	√	√		

Note: See the text for a description of the procedures and sources for coding. Six states (Idaho, Maine, Minnesota, New Hampshire, Wisconsin, and Wyoming) are excluded because they had election-day registration in 2000. We also excluded North Dakota, where voters are not required to register, and Oregon, which carried out the election by mail.

Table 1 reports the logit parameter estimates of the impact on turnout in 2000 of those registered to vote. People in the eight states listed above were excluded from the analysis, as were those who voted by absentee ballot. Combined, these exclusions left 44,859 cases in our dataset. Explanations of the exclusions and coding of the contextual variables are in the text. Below are the codes we used for individual-level variables in the analysis:

Age: age in years

Family income: 1) <$20k, 2) $20–$35k, 3) $35–$50k, 4) $50–$75k, 5) $75k+

Residential stability: 1) <1 year at current address, 2) 1–2 years, 3) 3+years

Education: 1) less than high school, 2) high school diploma, 3) some college, 4) college graduate

ENDNOTES

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1. Turnout in none of these permissive states comes close to matching that in any other democracy, except Switzerland (Mackie and Rose 1991, 509). Thus, American registration requirements, while an important cause of individual and interstate differences in voting, are not responsible for most of the international turnout gap.

2. The source for this figure is the Current Population Survey Voter Supplement, which is described in detail in the next section. The high point in turnout of registrants in a presidential election was 91 percent in 1992; the low was 83 percent in 1996. Readers need not suspect that these numbers are inflated by respondents' false claims. Nearly identical estimates were produced by the National Election Studies (NES) Vote Validation Studies back when the NES verified respondents' reports by inspecting official election records (Squire, Wolfinger, and Glass 1987). Calculating the turnout of registrants from official records by dividing the number of votes cast by the number of names on registration lists produces unrealistically low estimates because the latter number is inflated by the names of people who have died or, more likely, moved (Squire, Wolfinger, and Glass 1987, 46–7).

3. For a similar observation in the activist community, see Piven and Cloward 1988 (18).

4. As Jackson (1996) demonstrated, mobilization activities are more likely to be effective when they focus on those registered to vote since they are the only people who could respond to campaign appeals.

5. The choice of words in this sentence illustrates two of our data management decisions that differ from those made by the Census Bureau in its biennial reports on registration and voting. First, we deleted cases where information on registration and voting was not obtained, while the Census Bureau codes them as nonvoters. Second, our analysis is confined to citizens. Among other advantages, this precludes substantially underestimating the electoral participation of Latinos and Asian Americans and, overall, turnout in states such as California, where these groups are a significant part of the voting-age population but constitute a much smaller fraction of adult citizens (Citrin and Highton 2002).

6. The nonresponse rate for the basic November 2000 CPS was 7.5 percent, and an additional 5.8 percent failed to respond to the Voter Supplement (United States Department of Commerce 2001, 17–22).

7. Of the 2,982 people selected for its sample in 2000, the NES completed pre- and post-election interviews with only 1,555. Completion rates in 2000 for both surveys were lower than in the last decades of the 20th century, which averaged 95 percent for the CPS and 70 percent for the NES (Brehm 1993, 16).

8. This deletion was inconsequential; our substantive conclusions were the same with absentee voters included.

9. Because we were interested in the individual-level effect of having more time or information to vote, we coded our postregistration policy variables as whether or not a state carried out the postregistration procedure in 2000, regardless of the state's typical practices.

10. Presidential campaigns are designed to win a majority in the Electoral College. In 2000, strategic calculations yielded assumptions, apparently shared by both candidates, that some states were beyond hope for one party's presidential candidate. The remainder were "the battleground states, where both campaign organizations would concentrate the lion's share of their time, money, and effort . . . [M]any of the remaining states . . . would see little evidence that a presidential campaign was in progress" (Abramson, Aldrich, and

Rohde 2002, 32–3). This campaign strategy phenomenon and Jackson's (1996) mobilization findings led us to include in our multivariate model two measures of state-level campaign intensity: CNN designation as a battleground state and the presence of a concurrent senatorial or gubernatorial contest. The explanatory power of our model was not enhanced by including other potential measures of campaign intensity, such as vote margins, the number of electoral votes, or the extent of each party's campaign effort.

11. Two states provided 11 total voting hours and 18 kept their polls open for 12 hours. Eighteen more had polls that were open for 13 hours, while the rest allowed voting for 14 or 15 hours.

12. Cognizant of the issues raised by Nagler (1991, 1994), when we investigated the possibility of interaction effects, we included interaction terms rather than relying on the nonlinear functional form of the logit curve to produce them.

13. We could find no demographic category, such as employees working more than 40 hours a week or farmers, that benefited disproportionately from more time to vote. By the same token, the effect was not weaker for retirees or the unemployed.

14. Although we are primarily interested in the interaction effect (*time off work for private employees* × *private employee*), we are at a loss to explain the negative coefficient for the main effect of "time off for private employees." In combination with the statistically insignificant value of the interaction term, this indicates that turnout of all registrants in states that require private employers to provide time off for voting is somewhat lower (Table 2). This suggests an unmeasured variable influencing the turnout of registrants, which our model does not include.

15. On the other hand, printing sample ballots in newspapers, a practice in 14 states, had no statistically discernible effect on the turnout of registrants in our sample (results not shown).

16. Restricting the sample to registrants with at least some college and re-estimating the turnout model yields p-values of .53 for the polling place information coefficient and .60 for the mailed sample ballots coefficient.

17. Sixteen percent of young adults and 66 percent of older citizens are married. Married young people are slightly less likely to vote (Stoker and Jennings 1995, 431–2; Highton and Wolfinger 2001, 206). Marriage was unrelated to any effect of postregistration variables in our dataset.

18. "There is no doubt that registration drives are an emotionally charged and even revered component of southern black politics, a component that may provide organizational strength, unity, identity, and motivation far beyond any actual increases in registrants and voters" (Vedlitz 1985, 644).

19. In 2001, the senior black member of the United States House of Representatives, John Conyers (D-MI), introduced a bill (HR 1170) whose provisions included a mandate to states to send sample ballots to all registrants.

20. This is largely due to the fact that California both is home to a disproportionate percentage of the nation's Latinos and mails sample ballots and polling place information to registrants.

21. On the other hand, many election administrators are concerned about recruiting people to work in polling places, a problem that would be exacerbated by a longer voting day. This concern led the Carter-Ford Commission to recommend that elections be held on a holiday (National Commission on Federal Election Reform 2001).

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