How Postregistration Laws Affect the Turnout of Registrants

Raymond E. Wolfinger*, Benjamin Highton, Megan Mullin
University of California, Berkeley
* vturnout@socrates.berkeley.edu

CIRCLE WORKING PAPER 15

JUNE 2004

CIRCLE
The Center for Information & Research
on Civic Learning & Engagement

Some American states try to make it easy for their registered citizens to go to the polls on Election Day. They mail a sample ballot to each registrant as well, perhaps, as information about the location of his or her polling place. Polls may be open from dawn until 9 p.m. Firms may be required to give employees time off to vote. In this paper we examine the effects that each of these postregistration provisions have on the turnout of people who are already registered to vote. We are particularly interested in three related questions: What are the effects of each postregistration provision on turnout? What types of people are more and less affected by postregistration laws? What are the combined effects of these "best practices" on overall turnout rates?

EXPLAINING TURNOUT

The conventional approach to explaining turnout has been description and analysis of variations in the voting rates of different sorts of Americans, most often in demographic terms. Scholars in this genre have concluded that, controlling for all 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 variables account for most other group differences in electoral participation, including the lower aggregate turnout of blacks and Latinos (see, for example, Wolfinger and Rosenstone 1980, 90-93).

A subcategory of these studies has reached consensus on the effect of state laws prescribing how, when, and where citizens can become eligible to vote (in addition to the citations above, see Highton 1997). By far the most consequential legal provision is the closing date or registration deadline; allowing citizens to register at the polls on Election Day is even more effective. North Dakota, where voter registration was abolished in 1951, provides the most permissive voting environment.[1]

[1] Turnout in none of these permissive states comes close to matching that in any other democracy except Switzerland. In other words, American registration requirements, while an important explanation of individual and interstate differences, are not responsible for most of the international participation gap.

More demanding registration laws are impediments that many people can readily overcome, hence election-day registration at the polls or, in the case of North Dakota, no registration requirement at all, is not equally advantageous for everyone:

> Thus the greatest aggregate effects of more difficult registration laws are on those with the least amount of formal education. Where registration requirements are minimal or nonexistent, the effect of education is reduced because less educated citizens vote at higher rates while the turnout of the better educated is nearly unchanged (Highton 1997, 570).

Moreover, permissive registration arrangements are especially beneficial also to younger citizens (Teixeira 1992, 119; Highton and Wolfinger 1998, 84-89).

EXPLAINING THE TURNOUT OF THE REGISTERED

The dependent variable in this genre—the behavior to be explained—has been the percentage of citizens who voted. With the exception of North Dakota and the six election-day states, where registration and voting can be one essentially continuous act, participation in an American election comprises two transactions that usually are separate in time and space. Compared to voting, registration arguably is more demanding: "Citizens must first perform a separate task that lacks the immediate gratification characterizing other forms of political expression (such as voting). Registration is usually more difficult than voting, often involving more obscure information and a longer journey at a less convenient time, to complete a more complicated procedure" (Wolfinger and Rosenstone 1980, 61).

Once registered, Americans are very likely to vote (Erikson 1981; Glass, Squire, and Wolfinger 1983). Registrants' 86-percent turnout in 2000 is near the mean for the past two decades.[2] In

[2] The high point was 91 percent in 1992; the low was 83 percent four years later. 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 in the days when the NES verified respondents' reports by inspecting official election records (Squire, Wolfinger, and Glass 1987). Calculating the turnout of the registered 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 "deadwood," the names of people who have died or, more likely, moved (Squire et al. 1987, 46-47).

the 1980s this finding led legislators and groups interested in higher turnout to concentrate on making registration easier rather than on measures that could affect only people who were already registered, e.g., holding elections on Sunday. The principal author of the National Voter Registration Act of 1993 (the "Motor Voter" law) had come around to 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 so high a proportion of registrants actually voted, one research team said 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 be eligible to vote nevertheless failed to do so. This was evident in the gap between the actual turnout of the registered, no matter how high, and 100 percent. These researchers did not pay much attention to 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 the registered (Squire et al. 1987, 48).

Almost a decade passed before research was published that used turnout of the registered as the dependent variable of interest. Jackson (1996) found that the relationship of individual characteristics, especially education, income, and residential mobility, to turnout of the registered was much weaker than their effects on registration. Jackson used one state-level legal variable, the closing date, when analyzing registration and turnout among his entire sample. The other published study separately modeling registration and registrants' turnout (Timpone 1998, 155) included two "Administrative Barriers": closing date and years before purging.

Neither article included state-level postregistration procedures when explaining the turnout of the registered. To the best of our

knowledge, the length of the voting day is the only postregistration factor whose effect has been studied empirically. Extended polling hours had a modest favorable effect on 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, 71-72).[4] Hence we believe that our research is the first examination of the effect of postregistration laws on the turnout of the registered.

DATA SOURCES AND MODEL

Our individual-level data are from the 2000 Voter Supplement of the Current Population Survey (CPS) (U.S. Department of Commerce 2001). The Census Bureau conducts the CPS each month primarily to provide raw data on unemployment. The basic questionnaire provides very detailed demographic data; monthly supplements solicit information on an additional topic, e.g., Internet use, smoking, child care. In November of even-numbered years the Voter Supplement asks about citizenship status, registration, and voting. The most obvious feature of the Voter Supplement is the immense sample, which provides data on voting in 2000 for 74,174 citizens.[5] This is particularly useful for studies that require state-level data; the smallest state sample in our analysis has 733 cases. The huge sample also is essential for analyzing sub-groups, e.g., elderly Latino citizens in states with permissive postregistration laws, young adults living with their parents, who are sparse in conventional surveys.

Sample size is not the only CPS advantage. The completion rate for the 2000 Voter Supplement was 87 percent.[6] This compares to an aggregate

---

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

4 As Jackson (1996) demonstrated, studies of "mobilization activities" would have produced more robust findings with a better dependent variable: rather than turnout of the eligible population, turnout of the registered, the only people who could respond to campaign appeals.

5 The choice of words in this sentence illustrates two data management decisions that differ from those made by the Census Bureau in its biennial reports on registration and voting: 1) We deleted cases where information on registration and voting was not obtained, while the Census Bureau codes them as nonvoters. 2) Our analysis is confined to citizens. Among other advantages, this precludes substantially underestimating the electoral participation of Latinos and Asian-Americans, not to mention turnout in states such as California, where these groups are a significant part of the voting-age population but a much smaller fraction of adult citizens (Citrin and Highton 2002).

6 The "non-response rate" for the basic November 2000 CPS was 7.5 percent; an additional 5.8 percent failed to respond to the Voter Supplement (U.S. Department of Commerce 2001, 17-2).

response rate of just 52 percent for the 2000 National Election Study (NES) (Burns et al. 2002), the other common source for analyses of turnout.[7] Voter Supplement interviewing is finished by the third week in November, while NES field work drags on well into December.

Seeking to explore how postregistration laws might explain variations in the turnout of the registered, 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. We also deleted Oregon, where everyone voted by mail in 2000. Mail voting allows registrants to vote in their own time, at home, with the ballot in front of them, thus eliminating the relevance of our procedural variables. The same logic led us to delete 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 to analyze, including 4,810 blacks, 2,462 Latinos, 4,878 citizens without a high school diploma, and 12,685 college graduates. Using CPS data, a simple state-by-state analysis of the turnout of the registered revealed considerable interstate variation; in 2000, from 79 to 92 percent.

Data on postregistration variables came from several sources. We began by consulting the Federal Election Commission (FEC) Web site for information on polling hours. Then we searched the Web sites of 42 secretaries of state to confirm the FEC data and learn about mailing sample ballots and polling place information. No Web site had all the necessary data, hence we contacted all secretaries of state, first by email and then by follow-up phone calls. In cases where state sources differed from the FEC, we called to confirm the state's information and then used the state version.

We also examined legal codes in ten states to see whether what we had learned was consistent with statutory requirements. In eight cases the

laws matched previous responses, with apparent discrepancies satisfactorily explained. In the two remaining cases we double-checked with state sources to ascertain that, although not required by law, information had been sent to registrants in 2000.[9]

The principal challenge was intrastate variation, reflecting either county autonomy or different polling hours. In three states elections are conducted by county officials and the state does 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 in order to identify the legal provisions affecting the greater proportion of state residents. This strategy, which inescapably incorporated some coding error, was our best option for coping with messy reality. Our final coding decisions for each of the states in our analysis are provided in Table A1.

Presidential campaigns of course 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. The remainder were "the battleground states, where both campaign organizations would concentrate the lion's share of their time, money, and effort. . . . many of the remaining states . . . would see little evidence that a presidential campaign was in progress" (Abramson, Aldrich, and Rohde 2002, 32-3). The "battleground state" phenomenon and Jackson's (1996) findings led us to include in our multivariate model measures of state level campaign intensity. We found that campaign intensity could be adequately represented by two measures: CNN designation as a battleground state and the presence of a concurrent senatorial or gubernatorial contest. Explanatory power was not enhanced by including vote margins, the number of electoral votes, or the extent of each party's campaign effort.

---

7 Of the 2,982 people selected in 2000, the NES completed pre- and post-election interviews with 1,555. Completion rates in 2000 for both surveys were lower than in the last decades of the 20th century: 95 percent for the CPS and 70 percent for the National Election Studies (Brehm 1993, 16), the source used by Jackson (1996) and Timpone (1998).
8 This deletion was inconsequential; results were the same with absentee voters included.

9 Because we are interested in the individual-level effect of receiving more time or information to vote, we code the key independent variables as whether or not a state carried out the postregistration procedure in 2000, regardless of the state's typical practices.

In order to determine the effects of postregistration provisions on whether registrants voted, we estimated a multivariate logit model of turnout of the registered. The independent variables were: (1) legal provisions about time: polls open before 7 a.m.; polls close after 7 p.m.; time off for state employees; time off for private workers; (2) two provisions furnishing information: mailed sample ballots and mailed information about individuals' polling places. State-level control variables were region (South/nonsouth), CNN identification as a battleground state in the 2000 presidential contest, and a concurrent gubernatorial or senatorial election. Individual-level control variables included age, education, race, family income, employment status, and residential stability. The logit parameter estimates are provided in Table A2.

To interpret the 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 of voting for every registrant in our sample with the values of the other variables kept at their actual levels. By computing the mean predicted probabilities, multiplied by 100, we arrived at an estimate of each variable, expressed in percentage points. For example, to calculate the effect of longer morning polling hours, we calculated two probabilities for each registrant in our sample. The first one is based on setting the value of morning polling hours to zero (polls are not open before 7 a.m.) and keeping the values of all other variables to their actual ones. The second probability is calculated by keeping the values of all the other variables at their true values and changing the value of morning polling hours to one (polls are open before 7:00 a.m.). For our sample of registrants the two mean predicted turnout percentages were 83.63 and 85.30, respectively. The difference, rounded to the nearest tenth, represents our estimate in percentage points of the effect of opening the polls before 7:00 a.m. Longer morning polling hours increased turnout of the registered 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 a.m.; Late voting—defined as whether polls were open after 7 p.m.; and Total voting hours. Twelve of our 42 states provided early voting, which might be considered time available before going to work. A simple bivariate analysis indicates that the turnout of registrants with more time to vote early in the morning is about two percentage points higher than in the other 30 states in our sample. By the same token, more time to vote after work also seems to increase turnout. In the 19 states where the polls were open after 7 p.m., the turnout of the registered is about three points greater than elsewhere. These results are displayed in Table 1, which also depicts bivariate differences between states classified by the total number of hours the polls are open. There is a difference of nearly five percentage points between states with polls open eleven or twelve hours a day and those allowing more time to vote.[10] In short, whether defined by more time in the morning, more in the evening, or just the total number of hours the polls are open, bivariate relationships with turnout are consistent with the proposition that longer polling hours facilitate voting.

TABLE 1. TIME AND TURNOUT OF THE REGISTERED IN 2000.

	Turnout of the Registered (%)	
Variable	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	81.0	81.7
13, 14, or 15	85.9	86.6
difference	+4.9	+4.9
	Overall	State Employees
Time off for state employees		
No	84.1	89.1
Yes	84.2	89.3
difference	+0.1	+0.2
	Overall	Private Employees
Time off for private employees		
No	85.1	84.1
Yes	83.5	82.1
difference	-1.6	-2.0

Notes: Cell entries report the turnout of the registered.

Source: 2000 Current Population Survey Voter Supplement.

Expectations that higher turnout would result from longer polling hours assume that many registrants who would like to vote are frustrated by stronger claims on their time. The most formidable competing claim is work, hence it would seem to follow that a longer voting day would be of greatest benefit to people with a job. As the second column in Table 1 shows, the data do not support this hypothesis. Registrants in the labor force are faintly advantaged (half a percentage point) by more time to vote in the morning and even more slightly helped by more time after work. But more total hours to vote seem to provide no greater advantage to the working population than to their fellow citizens, most of whom presumably have more time available to vote.

A longer voting day is one way to expand opportunities for potential voters. Another approach is providing time off during the work day. Thirty-one states permit state employees to leave their posts in order to get to the polls (Time off for state employees). As Table 1 shows, state government workers are inclined to vote irrespective of this inducement. Their turnout was minimally (0.2 percentage points) higher than that of their counterparts in the other eleven states. 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 for private employees). The turnout of registered private employees in these states is 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 the bivariate results. We confirmed that the effect of the length of time available to vote did not depend on whether a person had a job.[11] In a preliminary model we estimated the effects of the two polling-hour variables—polls open before 7 a.m. and polls open after 7 p.m.—and the interaction between each of these variables and being employed. Both interactions were tiny

and difficult to distinguish from zero.[12] Therefore we excluded the interactions in the final model reported in the appendix (Table A2). Overall, longer polling hours do appear to facilitate voting. But in contrast to the bivariate indication that longer evening polling time is more consequential, 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 seven in the evening.

The logit results also reveal virtually no relationship between mandating time off from work and registrants' turnout. The coefficient indicating whether turnout of state employees entitled to time off is higher than that of state workers without this benefit (Time off for state employees * state employee) suggests no positive effect on turnout. Similarly, turnout of private employees with mandatory time off appears undistinguishable from that of private employees in states without this guarantee.[13] Thus the effect of postregistration measures related to time is observed only in higher overall turnout of the registered in states with longer voting days.

INFORMATION ABOUT VOTING

Other postregistration factors—Mailed sample ballots and Mailed polling place information—provide not time but information. The left-hand columns in Table 2 show bivariate relationships for these two measures. In nine states all registrants are sent a mailing informing them of the location of their polling place. Turnout of the registered in these states is 2.5 percentage points higher than in the remaining 33 states. Sample ballots in the mail also provide potentially useful information. Seven states send registrants sample ballots. Their turnout is two points higher than in the other 35 states.[14]

---

11 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.

12 Moreover, we could find no demographic category, e.g., employees working more than 40 hours a week, farmers, that benefited disproportionately from more time to vote. By the same token, the effect was not weaker for retirees or the unemployed.

13 Although we are primarily interested in the interaction (Time off for private employees * private employee), it should be noted that we are at a loss to explain the negative coefficient for "time off for private employees." In combination with the insignificant value of the interaction, this indicates that turnout of all registrants in states that require private employers to provide time off is generally somewhat lower (see Table 1), which suggests an unmeasured variable influencing turnout of the registered that our model does not explain.

14 On the other hand, provisions for printing sample ballots in newspapers, a practice in fourteen states, has no discernible effect on the turnout of the registered.

TABLE 2. INFORMATION AND TURNOUT OF THE REGISTERED IN 2000.

| | Turnout of the Registered (%) | | | | |
Variable	Overall	Less than High School	High School Degree	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

Notes: Cell entries report the turnout of the registered.

Source: 2000 Current Population Survey Voter Supplement.

The impact of an increment of information in general—and of such specific and practical information in particular—depends on the likelihood that one would have acquired it already. People already in possession of such information from another source, or with more capacity or inclination to seek it, will be less affected by either of these mailings. This generalization leads to two specific propositions: the benefits of receiving polling place information or a sample ballot will be in inverse relation to registrants' education and age. Data analysis for these two propositions is more easily described separately.

EDUCATION. Our first exploration of registrants' education and informational postregistration laws is displayed in the remaining columns of Table 2, which show trivariate relationships between these informational postregistration measures and turnout by registrants with varying levels of education. The results are consistent with our hypothesis. Greater differences are evident among people who have not attended college and most pronounced for high school dropouts. Among the least educated, turnout is 7.4 percentage points higher for residents of states that send polling place information. The advantage is nearly as great—6.2 points—for the least educated registrants in states that mail out sample ballots. On the other

hand, differences are virtually nonexistent among registrants with at least some exposure to college.

These relationships remain when we introduce control variables in the multivariate analysis. As shown in Table 3, both election procedures that provide information have an effect on turnout that is negatively related to education. Receiving information about where to vote enhances the turnout of registrants lacking a high school diploma by an estimated 2.9 percentage points.   Mailed sample ballots boost their turnout by 3.9 points. The estimated effects for high school graduates without any exposure to college are 1.2 and 2.0 points, respectively. Registrants who have attended college seem almost unaffected by either informational postregistration measure; the estimated effects are small and cannot confidently be distinguished from zero.[15] These findings support our hypothesis on the conditional effects of information: providing information matters more for people who are less likely to acquire it elsewhere.

---

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

TABLE 3. ESTIMATED EFFECTS OF POSTREGISTRATION INFORMATION ON TURNOUT OF THE REGISTERED IN 2000.

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

Source: Logit estimates in Table A2.

YOUTH. This generalization also fits young people, whose opportunities to acquire practical political information are limited and whose disinclination to vote is notorious. In 2000 just 42 percent of everyone between the ages of 18 and 24 cast a ballot, compared to 70 percent of their older fellow citizens. Some of this disparity reflects their low registration, 59 percent compared to 81 percent for everyone else. But even among those who do manage to register, turnout is still lower among the young. Just 73 percent of young registrants voted, compared to 88 percent of older registrants.

A great many young people, and virtually no older citizens, are in interpersonal environments that might reduce the value of informational postregistration provisions. Forty-seven percent of them are still in school; 37 percent are full-time college students. With other demographic variables controlled, students are more likely to vote (Wolfinger and Rosenstone 1980, 56-57; Highton and Wolfinger 2001, 206-7). Their turnout has been ascribed to the amount and intensity of political rhetoric on campus as well as wider and easier access to information about electoral mechanics, a consideration that could 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 experience is associated with moderately lower overall turnout (Highton and Wolfinger 2001, 207). To the extent that a multi-generational home, like a college campus, provides a richer information environment, postregistration mailings might have less impact.[16]

In the nine states where everyone on the registration list is mailed information about where to vote, 72 percent of young registrants voted, compared to 67.6 percent in the remaining 33 states. Sample ballots also provide potentially useful information that is likely to be especially informative—if not reassuring—to those facing their first visit to a precinct polling place. Seeing a complete list of candidate races and ballot questions in the format that will appear "behind the curtain" might reduce the uncertainty associated with voting for the first time. Over 73 percent of youthful registrants voted in the seven states that mailed sample ballots; just 67.3 percent did so in the other 35 states.

Multivariate analysis of the effect of the two informational postregistration measures on all registrants, irrespective of age, disclosed a

---

16 Just 16 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, 431-32; Highton and Wolfinger 2001, 206). We anticipate our data analysis by reporting here that marriage is unrelated to any effect of postregistration variables.

0.6 percentage point aggregate effect of polling place information and a 1.2 point effect for sample ballots. The effect was inversely related to education for both election procedures. To investigate the possibility that mailings have more sizable effects on young registrants, we included interactions between youth (distinguishing students from nonstudents and those who live with their parents from those who do not) and mailing polling place information and sample ballots. In only one instance did we find a substantial interaction: the effect of mailing sample ballots was greater among young people who had left home (7.1 points). Among young people still living with their parents, the turnout effects of mailing sample ballots were indistinguishable from the effects of mailed sample ballots to older registrants. Moreover, no meaningful interactions between being a student and either of the informational measures were evident.

MINORITY REGISTRANTS

African-Americans and Latinos are not only demographic categories but 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 and elite politics, relying more than most groups on their voting capacity. Ballot access has always been a paramount consideration, as it would be for any interest whose influence derived more from numbers than money, expert knowledge, or any 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.[17] A generation later, "The 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).[18] Latinos also have pursued an electoral strategy through organizations like the

Southwest Voter Registration Education Project. For all of these reasons, we also examined the effect of postregistration "best practices" on African-Americans and Latinos.

At present, black mobilization surpasses that of Latinos. Sixty-six percent of blacks voted in the last presidential election, just three percentage points less than whites (U.S. Department of Commerce 2001). The same cannot be said of Latinos; just 50 percent of whom voted in 2000. Some of this disparity reflects their lower registration rate: 65 percent, compared to 80 percent for whites and 78 percent for blacks. But turnout also lags among Latinos who do register (de la Garza 2001). Seventy-nine percent of Latino registrants voted in 2000, compared to 85 percent of black and 87 percent of white registrants. How postregistration provisions influence turnout of these groups is the question that interests us.

Our first step was to reestimate the turnout model (Table A2), adding interactions between each provision and each group. To minimize multicollinearity we estimated interactions between one group and the postregistration laws at a time. The results strongly suggest that there were no direct effects of postregistration laws on either blacks or Latinos. Virtually all of the interactions were small in magnitude with large standard errors. And when we compared the fit of the models with the interactions to the fit of the models without them, no significant improvement in fit was evident.

Although there appear to be no direct effects of postregistration laws on minorities, disparate effects are still likely. Permissive postregistration laws are particularly helpful to younger and less educated registrants, and Latinos and blacks are younger and less educated than whites. These differences are more pronounced in the entire population, but far from trivial among registrants. Nine percent of white registrants are under 25 years of age, compared to 12 percent of black registrants and 13 percent of Latino registrants. Educational disparities are greater: just nine percent of white registrants failed to graduate from high school, compared to 18 percent of blacks and 25 percent of Latinos. Thirty-one

17 "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).
18 In 2001 the senior black member of the 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.

percent of white registrants are college graduates, as against 18 percent of blacks and 16 percent of Latinos.

These different demographic profiles suggest that postregistration laws could have disparate impact on minority registrants. We report evidence for this proposition along with other estimates of the overall turnout effects of postregistration laws next.

<u>Combined Turnout Effects</u>

Our results indicate that extended polling hours and postregistration mailings increase turnout among the registered. The bottom line in Table 4 shows that overall estimated turnout of the registered in the most favorable legal context, which we term "best practices," is 4.3 percentage points greater than in the least favorable conditions—"worst practices."[19] Consistent with our earlier findings, the combined turnout effects of "best practices" vary widely by education, age, race, and ethnicity. The first set of entries in Table 4 shows varying effects by educational attainment; the widest gap, 10.7 percentage points, dwindles to less than one point for college graduates. The estimated effect for young people is just a bit smaller (9.7 points). Due to their demographic differences there are also racial differences; a larger impact is observed for Latinos (6.8 points) compared to blacks (4.8) or whites (4.0).

The first three columns of Table 4 report the hypothetical effects of postregistration laws on turnout, comparing predicted turnout probabilities for people in two protoypical states, one with "worst practices" and the other with "best practices." To estimate how actual turnout might change if every state adopted "best practices," it is necessary to take into account the fact that some people already live in states that have adopted various components of "best practices." As a result projected turnout increases under universal

adoption of "best practices" will be smaller than the differences between "best" and "worst" states, reported in the third column of Table 4. Moreover, there are some differences across groups in terms of the kinds of states they live in. For example, about 50 percent of Latinos live in states that mail sample ballots and polling place information to registrants whereas the corresponding figures for

whites and blacks are closer to 25 percent.[20]

---

19 To calculate these estimates, we used the logit coefficients in Table A2 to generate two predicted probabilities of voting for every registrant in the sample. The first is calculated after setting the value of all the postregistration variables to their lowest values, which correspond to a hypothetical state a) without extended polling hours in the morning or evening, and b) that mails neither sample ballots nor polling place information to its registrants ("worst practices"). The second turnout probability is calculated after setting the value of the postregistration variables to their highest, or "best practices" values, corresponding to a state with a) extended morning and evening polling place hours, and b) that also mails sample ballots and polling place information to registrants. For each individual in the sample, the difference in the two probabilities represents the estimated combined effect of all the postregistration laws. Aggregating individuals into various groups and taking the mean difference provides an estimate of the combined effect of the laws on different groups.

20 This is largely due to the fact that California a) is home to a disproportionate percentage of Latinos, and b) mails sample ballots and polling place information to registrants.

TABLE 4. ESTIMATED EFFECTS OF POSTREGISTRATION PROCEDURES ON TURNOUT OF THE REGISTERED IN 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 degree	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

Notes: "Worst practices" is defined as having no extended polling place hours and mailing neither sample ballots nor polling place information to registrants. "Best practices" is defined as having extended polling place hours and mailing sample ballots and polling place information to registrants. See text for additional details.

Overall, we project that turnout of the registered would increase by 2.8 percentage points if all states adopted "best practices" postregistration procedures. As predicted, the magnitude of the increase is inversely related to educational attainment and age. With nationwide "best practices," the turnout of registrants without a high school diploma would rise 7.5 percentage points, high school graduates would experience a 4.1 point increase, and the effect would be modest to negligible for the college educated. By the same token, the benefit for young registrants would be almost three times as great as for everyone over the age of 24. Latino turnout would increase 4.3 percentage points compared to 3.3 and 2.6 points for blacks and whites, respectively.

POLITICAL CONSIDERATIONS

Advocates of legal change to expand access to the ballot contend with people who argue that easier access may provide more opportunities for vote fraud. Postregistration laws do not have this disadvantage. Neither a rich imagination nor scrutiny of discussions of election reform has turned up claims that more information or more time to vote threatens the sanctity of the electoral process.[21] Lacking natural enemies, one would think that postregistration best practices would have been a salient topic on Capitol Hill and in media coverage of attempts to repair the widespread shortcomings revealed by the 2000 Florida debacle. This was not the case. One of the numerous study groups that sprung up, The Constitution Project's Election Reform Initiative, recommended both informational best practices (Ornstein 2001), which were also advocated in a Brookings Institution Policy Brief (Mann 2001). The widely-publicized "Carter-Ford Commission" was more circumspect. Six of its nineteen members recommended that sample ballots be mailed to all registrants (National Commission on Federal

---

21 Many election administrators are concerned about recruiting people to work in polling places, a problem that would be exacerbated by a longer voting day. Finding more election day workers and places to vote was the basis of the "Carter-Ford Commission's" recommendation that elections be held on a holiday (National Commission on Federal Election Reform 2001).

Election Reform 2001, 78-9), a proposal that seems to have escaped press attention.

By the same token, the mandate for universal sample ballots in the Dodd-Conyers bill (S 565 and HR 1170)--admittedly not the most politically interesting aspect of these far from nonpartisan measures--was missing from the many stories about these eventually unsuccessful bills in the New York Times and CQ Weekly. The winning legislative alternative, the bipartisan HR 3295, became the Help America Vote Act (HAVA) of 2002. This measure, weak on mandates, authorized 3.9 billion dollars in grants to states to improve their electoral practices. As the new law's fine print makes clear, mailing sample ballots and polling place location information would be appropriate areas for 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 vague about the educational content to be funded or emphasized training on new voting machines. Not one specifically proposed any postregistration "best practice."

CONCLUSION

As explanations of turnout appropriately begin to account for the distinction between registration and voting, scholarly and political attention shifts to include legal factors that explain varying levels of participation among those who have already registered. We have identified three election procedures that have a favorable effect on turnout of the registered: mailing sample ballots and polling place location information to all registrants and offering extended polling hours on Election Day.

We could not identify any demographic groups that were distinctively advantaged by having more time to vote. We conclude that the specific turnout relevance of "time as a resource" remains undiscovered. On the other hand, postregistration best practices that provide information seem to be more important for young adults as well as less educated people of any

age. The pattern of these relationships is easier to understand. Receiving sample ballots in the mail is most consequential for people with less access to information, the least educated young registrants, and shrinks to insignificance for college graduates. In addition, these best practices are less valuable to young adults still living with their parents. These findings support our hypothesis on the conditional effects of information: providing information matters more for people who are less likely to acquire it elsewhere.

Postregistration laws do not directly affect the turnout of black and Latino registrants, holding other demographic variables constant. However, because in the aggregate these minorities are younger and less educated than whites, they are more likely to benefit from information about voting practices. Therefore wider use of postregistration "best practices" would have a beneficial disparate impact on blacks and Latinos. 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 the registered would increase by 2.8 percentage points if all states adopted "best practices" postregistration procedures. These are substantial gains from adoption of procedures that are neither risky nor expensive and therefore should attract little overt

opposition.

APPENDIX

Table A1 reports our coding of state postregistration provisions. Six states (ID, ME, MN, NH, WI, WY) are excluded because they had election day registration in 2000. Also excluded are North Dakota (voters are not required to register), Oregon (elections are carried out by mail), and the District of Columbia. See text for detailed description of data sources and how we dealt with intrastate variation in postregistration provisions.

Table A2 reports the logit parameter estimates of turnout. The eight states listed above and the District of Columbia are excluded from the analysis. Respondents who report voting by absentee ballot also are excluded. Combined, the exclusions leave 44,859 registered respondents for analysis. 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 degree, (3) some college, (4) college graduate.

TABLE A1. STATE POSTREGISTRATION PROCEDURES.

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

TABLE A2. LOGIT PARAMETER ESTIMATES OF TURNOUT OF THE REGISTERED IN 2000.

Variable	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 for state employees	.06	.05
Time off for state employees * state employee	-.03	.19
Time off for private employees	-.19	.05**
Time off 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	

Notes: * p<.10; ** p<.05. See text for explanation of excluded cases.

Source: 2000 Current Population Survey Voter Supplement

REFERENCES

Abramson, Paul R., John H. Aldrich, and David W. Rohde. 2002. Change and Continuity in the 2000 Elections. Washington: CQ Press.

Brehm, John. 1993. The Phantom Respondents. Ann Arbor: University of Michigan Press.

Burns, Nancy, Donald R. Kinder, Steven J. Rosenstone, Virginia Sapiro, and the National Election Studies. 2002. American National Election Study, 2000: Pre- and Post-Election Survey [computer file]. 2nd ICPSR version. Ann Arbor, MI: University of Michigan, Center for Political Studies [producer], 2001. Ann Arbor, MI: Inter-University Consortium for Political and Social Research [distributor].

Citrin, Jack, and Benjamin Highton. 2002. How Race, Ethnicity, and Immigration Shape the California Electorate. San Francisco, CA: Public Policy Institute of California.

Cochran, John. 2001. "Election Overhaul Regains Spotlight with Introduction of Competing Bills to Assist States and Set Standards." CQ Weekly (May 19).

de la Garza, Rodolfo. 2001. "Promoting Equal Access to the Electoral System." The Mechanics of Election Reform: From Registration to Results. Washington: Consortium of Social Science Associations.

Erickson, Robert S. 1981. "Why Do People Vote? Because They Are Registered." American Politics Quarterly 9 (July): 259-76.

Glass, David P., Peverill Squire, and Raymond E. Wolfinger. 1983. "Voter Turnout: An International Comparison." Public Opinion (December/January).

Highton, Benjamin. 1997. "Easy Registration and Voter Turnout." Journal of Politics 59 (May): 565-75.

Highton, Benjamin, and Raymond E. Wolfinger. 1998. "Estimating the Effects of the National Voter Registration Act of 1993." Political Behavior 20 (June): 79-103.

Highton, Benjamin, and Raymond E. Wolfinger. 2001. "The First Seven Years of the Political Life Cycle." American Journal of Political Science 45 (January): 202-209.

Jackson, Robert A. 1996. "A Reassessment of Voter Mobilization." Political Research Quarterly 49 (June): 331-49.

Leighley, Jan E., and Jonathan Nagler. 1992. "Individual and Systemic Influences on Turnout: Who Votes? 1984." Journal of Politics 54 (August): 718-40.

Mann, Thomas E. 2001. "An Agenda for Election Reform." Brookings Policy Brief. Washington: Brookings Institution.

Nagler, Jonathan. 1991. "The Effect of Registration Laws and Education on U.S. Voter Turnout." American Political Science Review 85 (December): 1394-1405.

Nagler, Jonathan. 1994. "Scobit: An Alternative Estimator to Logit and Probit." American Journal of Political Science 38 (February): 230-55.

National Commission on Federal Election Reform. 2001. To Assure Pride and Confidence in the Electoral Process. Charlottesville, VA: Miller Center of Public Affairs, University of Virginia.

Ornstein, Norman. 2001. "Recommendations for Congressional Actions." The Constitution Project Election Initiative. Washington, DC: Georgetown University.

Piven, Frances Fox, and Richard A. Cloward. 1988. Why Americans Don't Vote. New York: Pantheon Books.

Rosenstone, Steven J., and John Mark Hansen. 1993. Mobilization, Participation, and Democracy in America. New York: Macmillan Publishing Company.

Squire, Peverill, Raymond E. Wolfinger, and David P. Glass. 1987. "Residential Mobility and Voter Turnout." American Political Science Review 81 (March): 45-65.

Stoker, Laura, and M. Kent Jennings. 1995. "Life Cycle Transitions and Political Participation: The Case of Marriage." American Political Science Review 89 (June): 431-33.

Swift, Al. 1984. Task Force on Elections, Committee on House Administration. U.S. House of Representatives, 98th Cong., 2nd sess., March 21.

Tate, Katherine. 1993. From Protest to Politics. New York & Cambridge, MA: Russell Sage Foundation & Harvard University Press.

Teixeira, Ruy A. 1992. The Disappearing American Voter. Washington: Brookings Institution.

Timpone, Richard J. 1998. "Structure, Behavior, and Voter Turnout in the United States." American Political Science Review 92 (March): 145-58.

U.S. Department of Commerce, Bureau of the Census. 2001. Current Population Survey: Voter Supplement File, November 2000 [Computer File]. Washington, DC: U.S. Department of Commerce, Bureau of the Census [producer], 2001. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2001.

Vedlitz, Arnold. 1985. "Voter Registration Drives and Black Voting in the South." Journal of Politics 47 (May): 643-51.

Wolfinger, Raymond E., and Steven J. Rosenstone. 1980. Who Votes? New Haven, CT: Yale University Press.

Forthcoming in *State Politics and Policy Quarterly*

CIRCLE (The Center for Information and Research on Civic Learning and Engagement) promotes research on the civic and political engagement of Americans between the ages of 15 and 25. Although CIRCLE conducts and funds research, not practice, the projects that we support have practical implications for those who work to increase young people's engagement in politics and civic life. CIRCLE is also a clearinghouse for relevant information and scholarship. CIRCLE was founded in 2001 with a generous grant from The Pew Charitable Trusts and is now also funded by Carnegie Corporation of New York. It is based in the University of Maryland's School of Public Policy.

CIRCLE
The Center for Information & Research
on Civic Learning & Engagement