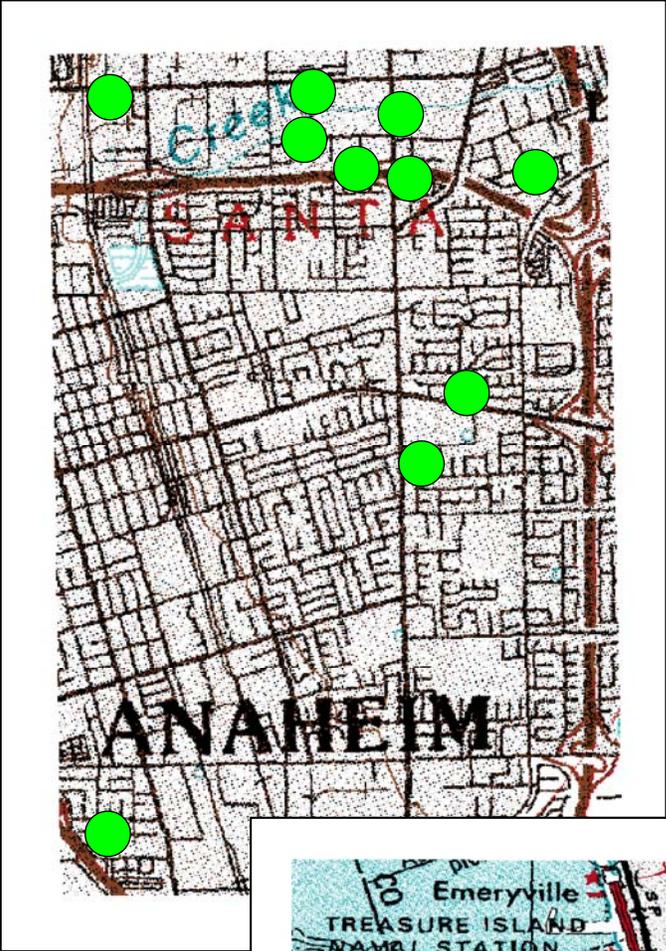


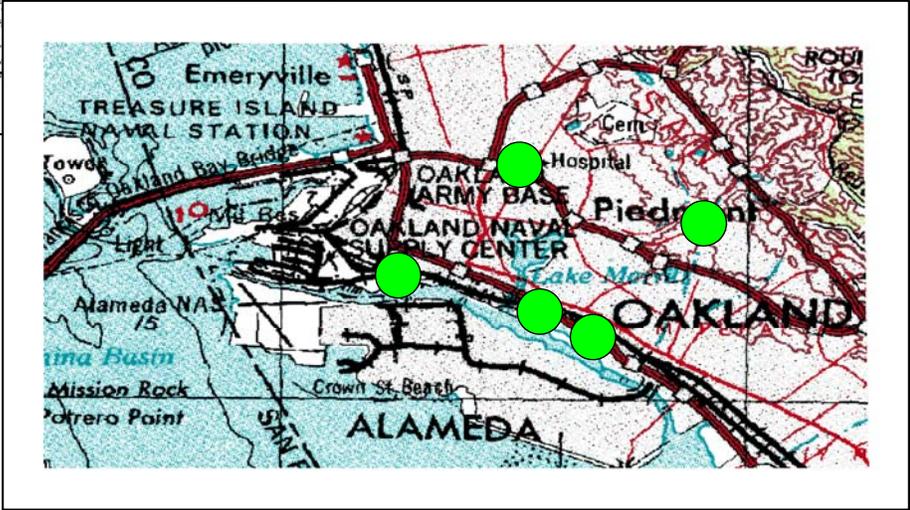
# Will Vote-by-Mail Elections Increase Participation? Evidence from California Counties



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A Project Sponsored by the  
John Randolph Haynes  
and Dora Haynes Foundation



*Voters in small precincts throughout California cast ballots exclusively by mail. The maps show mail ballot precincts from the 2002 general election in selected portions of Orange and Alameda counties.*

## *Executive Summary*

Advocates of mail ballot elections predict that voting by mail will produce higher turnout and allow voters to become more informed. Our study tests these predictions by taking advantage of a “natural experiment” in which many California voters are assigned to vote by mail because they live in less populous precincts. By matching these mail ballot precincts with traditional polling place precincts that contain voters with similar demographic characteristics, we are able to observe the effects of voting by mail on comparable groups of voters taking part in the same elections. We find that:

- Voting by mail does not increase turnout in presidential and gubernatorial general elections. In fact, turnout was 2.6 to 2.9 percentage points lower in mail ballot precincts, according to our analysis of two general elections held in representative samples of 18 and 9 counties.
- Voters who cast their ballots by mail in general elections are more likely to skip downballot races, another finding that runs counter to the expectations of vote-by-mail advocates.
- However, voting by mail appeared to bring an average 7.6 percentage point turnout increase in local special elections, which have much lower participation rates overall. This finding is based on recent elections held in three counties.
- Running elections by mail offers other potential costs and benefits apart from its effects on political participation, according to our interviews with California registrars and review of vote-by-mail elections across the country. These other impacts include potential cost savings, opportunities and barriers to fraud, and access for disabled voters.

*We would like to thank the John Randolph Haynes and Dora Haynes Foundation for supporting this project and the many county election officials who offered their observations and data. We are grateful to the Statewide Database’s Karin MacDonald for bringing mail ballot precincts to our attention and Anup Pradhan for fulfilling our data requests. Sam Deddeb, Mike Binder, Krishan Banwait, and Thurman Wise provided valuable research assistance, and Yphtach Lelkes and Josh Weikert made thoughtful comments that helped improve the report.*

## **Will Vote-by-Mail Elections Increase Participation? Evidence from California Counties**

Can holding mail ballot elections – which feature no polling places and ask everyone to vote by mail over a specified period – increase voter participation? Electoral reform advocates claim that it can (Bradbury 2005; Rosenfield 1995; Davis 2005). Residents of Oregon have voted by mail since 1995, and policymakers at all levels of government are considering proposals to introduce this fundamental shift in the way that elections are conducted. Legislation to allow vote-by-mail elections has been introduced in Congress (HR 1835) and in California (AB 867 and AB 1309), and voters in Arizona recently rejected a ballot proposition that would have instituted voting by mail. Proposals for local implementation have appeared before the governing bodies of San Diego, California (Elections Task Force 2006) and King County, Washington (Roberts 2006). A key rationale behind these policy efforts is the conventional wisdom that vote-by-mail elections will significantly boost turnout.<sup>1</sup> This conventional wisdom draws from political science research on absentee voters and the experiences of Oregon, yet there are important reasons to doubt whether findings from this research will extend to more general applications of voting by mail.

Studies of people who have chosen to vote absentee (Patterson and Caldeira 1985; Oliver 1996; Dubin and Kalsow 1996a, 1996b; Karp and Banducci 2001) cannot be used to predict the impact of a shift to mail ballot elections because they examine a sub-group of registered voters who are especially likely to turn out. Voluntary absentee voters tend to be older and better educated than other registrants (Barreto et al. 2006) and more politically active (Oliver 1996; Karp and Banducci 2001). Simply comparing their behavior to that of polling place voters may be misleading, because

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<sup>1</sup> This conventional wisdom is exemplified in the goals laid out on the website of the Oregon Secretary of State: “The major reasons to conduct an election by mail include: Increases voter participation; Removes barriers that can keep people from getting to the polls; Allows more time for people to study issues and candidates before marking the ballot; Has built-in safeguards that increase the integrity of the elections process; Saves taxpayer dollars ” (accessed at <http://www.sos.state.or.us/elections/vbm/faq.html> in August 2006).

the characteristics that lead them to vote by mail also make it more likely that they will turn out to vote, regardless of the voting process. A second stream of scholarship contrasts traditional elections with contests recently held in Oregon that require all voters to vote by mail (Southwell and Burchett 1997, 2000; Karp and Banducci 2000; Berinsky, Burns, and Traugott 2001; Southwell 2003; Hanmer and Traugott 2004). In these studies, those who vote by mail are similar to the comparison group that casts ballots in a polling place. Yet we cannot use these studies to draw general policy lessons, because they do not hold electoral conditions constant. It is difficult to determine whether observed increases in turnout should be attributed to the shift to mail ballot elections or to the changes in political context and other aspects of election administration that occurred at the same time.

An ideal research design to determine the effects of mail ballot elections would randomly assign a group of registrants to vote by mail, while others just like them go to polling places or request absentee ballots, just as they do in most elections. A natural experiment quite close to this is conducted during every election in California: county election officials assign registrants in less populous precincts to vote by mail. A product of the intersections of California's many jurisdictional and voting district boundaries, these mail ballot precincts contain voters whose demographic and partisan characteristics are quite similar to those of voters in adjoining polling place precincts. Our study takes advantage of California's natural experiment to measure the impact of mandatory mail elections on voter participation. Since the natural experiment does not perfectly mimic random assignment, we use a statistical "matching" technique to pair each mail ballot precinct with traditional precincts that contain voters with similar demographic and political attributes. We compare voter participation between the two sets of precincts in several different elections, estimating the effect of voting by mail while holding political context and voter characteristics constant.

Based on our findings from this natural experiment, we predict that shifting to mail ballot elections will not increase voter participation in regularly scheduled general elections, counter to the conventional wisdom that is often cited in the current policy debate. In fact, it may produce a decline in turnout of up to three percentage points. We also examine whether voting by mail will, by allowing voters access to more information and more time to cast their ballot, slow the rate at which they “roll off” of races further down the ballot. Here again the small effect we observe is for mail balloting to reduce participation: Voters in mail precincts actually abstain from downballot contests somewhat more frequently than their polling place counterparts. However, we show that mail balloting may have a significant positive effect on turnout in local special elections, which generally receive less attention.

This report begins by discussing previous research on the effects of voting by mail on turnout and describing in greater detail the problems with using that research to predict the impact of shifting to mail ballot elections. We then introduce the California natural experiment and show how matching techniques can ensure that we are comparing similar populations of registrants who are assigned different methods of voting. Our first empirical section makes this comparison for the 2000 and 2002 general elections, providing estimates of the effect of voting by mail across the state and in individual counties. We then examine the rate at which mail ballot and precinct voters roll off of downballot candidate and proposition contests. Next, we look at the effects of voting by mail on participation in seven recent special elections held in three counties. Finally, we review some other pros and cons of vote-by-mail elections, based on experiences with their implementation thus far and on the observations of California election officials we interviewed. We conclude by exploring the lessons of our findings for the study of voter participation and for the current policy debate over mail ballot elections.

## **I. What Prior Research Can (and Can't) Tell Us about Vote-by-Mail Elections**

A wealth of studies identifies the factors that influence political participation, highlighting the importance of both individual characteristics and the political context and rules that govern elections. Personal attributes such as education, age, and residential stability (Wolfinger and Rosenstone 1980) as well as feelings of political efficacy (Abramson and Aldrich 1982) and civic skills (Verba, Scholozman, and Brady 1995) exert powerful influences on people's political activity. Studies of the overall political context find that voter turnout increases with partisan competitiveness (Caldeira and Patterson 1982; Jackson 1993; Patterson and Caldeira 1983) and mobilization by candidates and parties (Rosenstone and Hansen 1983; Cox and Munger 1989). Recent field experiments reinforce the importance of mobilization and identify the most effective strategies (Gerber and Green 2000a, 2000b, 2001; Gerber, Green, and Shachar 2003; Green, Gerber, and Nickerson 2003; Green and Gerber 2004). Finally, participation levels can be affected by administrative rules and practices such as registration deadlines (Highton 1997; Powell 1986; Wolfinger and Rosenstone 1980), the availability of registration materials (Highton and Wolfinger 1998), the provision of sample ballots and polling place location information (Wolfinger, Highton, and Mullin 2005), and polling place consolidation (Brady and McNulty 2004). It is individual-level factors that matter the most in explaining turnout, however, so the key to evaluating the effects of an administrative innovation such as mail ballot elections lies in controlling for the individual characteristics of potential voters.

Comparing turnout between voters who request an absentee ballot and other registrants fails to hold these characteristics constant. Predicting the effects of mail ballot voting by looking only at those voters who request absentee ballots is a bit like studying the effects of a medicine only upon healthy patients. Members of the "treatment group" differ systematically from the rest of the

population. Compared to other registrants, those who choose to vote by absentee ballot are more likely to be Republicans (Patterson and Caldeira 1985), male and politically conservative (Newton 1989), as well as older and better educated (Barreto et al. 2003). What's more, they are likely to be free from exactly the symptom that mail ballot elections are designed to cure: a low propensity to turn out. Oliver (1996) and Karp and Banducci (2001) find that registrants who choose to vote absentee are among the most likely to vote anyway. Because of the systematic differences between polling place voters and those who request absentee ballots, comparing their behavior is not a reliable way to predict the impact of mail ballot elections.

An alternative research strategy is to study elections that have been conducted entirely by mail. In California, state law permits vote-by-mail elections under certain circumstances. Monterey County conducted the nation's first mail ballot election in 1977, and jurisdictions throughout the state have experimented with the system for local special elections. Examples of these elections include San Diego's 1981 convention center proposition, Burbank's 2001 "Restore Our Airport Rights" initiative (Dobuzinskis 2004), the 2003 Modesto mayoral race (Sbranti 2003), and a 2005 race for a seat on the Oakland city council race (Wildermuth 2006). In Washington, 34 of the state's 39 counties vote entirely by mail (Roberts 2006). But the largest and best studied experiment with mail ballot elections has taken place in Oregon, which in 1995 became the first state to conduct a statewide election entirely by mail. Three years later, voters approved a measure to permanently implement vote-by-mail in all statewide primary and general elections. Voting by mail has proved very popular among the public: polls show widespread approval of the Oregon system (Southwell and Burchett 1997). Supporters argue that mail-in voting makes it easier to vote and therefore is likely to expand participation. Furthermore, they suggest that voting at home will lead to more informed vote choices by allowing people to take more time and consult resources while filling out a ballot (Bradbury 2000, 6; Rosenfield 1995, 45). Advocates paint a picture of a more thoughtful,

deliberative election process in which citizens carefully consider the issues and candidates and consult with family and neighbors before casting their vote.

To determine whether this policy shift boosted participation in Oregon, Southwell and Burchett (2000) examined aggregate turnout figures in 48 statewide candidate elections and showed that mail ballot elections increased turnout of registered voters by ten percent, controlling for the level and competitiveness of the race. Five years after full implementation of vote-by-mail, Southwell (2003) found that one third of respondents reported that they voted more frequently under the vote-by-mail system. Karp and Banducci (2000) also found that mail ballot elections increased voter turnout, particularly in low-salience elections. They used precinct-level data to assess how voting by mail changes the composition of the electorate and showed that turnout increased the most in precincts already expected to have high participation—those with larger percentages of residents who are white, educated, older, and have high incomes. Using survey data combined with background research on respondents' voting history, Berinsky, Burns, and Traugott (2001) employed a duration model to investigate the influence of mail balloting on turnover in the electorate. They found that vote-by-mail elections are not effective at mobilizing nonvoters, but that existing voters are more likely to continue turning out in future elections under a vote-by-mail system. Their findings support the conclusion that to the extent that vote-by-mail is effective in promoting participation, it does so among those groups that already are most likely to vote.

The strength of the Oregon studies for making inferences about the effects of vote-by-mail elections is that they eliminate the selection problem inherent to analyses of absentee voting, allowing scholars to separate the act of voting at home from the characteristics of people who choose to do so. They fairly and accurately report the changes in voter participation that have occurred in Oregon. Yet the problem with using these findings to predict the effects of a shift to mail ballot elections elsewhere is that the Oregon studies do not hold constant the political context

and the ways in which elections are administered. It is possible that unique features of Oregon's recent statewide elections account for the turnout effects that researchers have uncovered. The 1995 Senate primary and 1996 Senate general elections that initiated Oregon's experiment with voting by mail featured a tight race between Portland Congressman Ron Wyden and multimillionaire Gordon Smith for what had been Senator Robert Packwood's safe seat (Southwell 2003). The level of competition in this contest, the spending that it generated, and the intense statewide and national attention that it received could account for the fact that the mail ballot primary and general elections delivered higher turnout than previous special elections held at the polls. Another unique feature that accompanied Oregon's shift to mail ballot elections was the practice of providing campaigns with continually updated lists of those who have voted so they could contact those who had not and ask them to participate.<sup>2</sup> Since other jurisdictions may not have the capacity or willingness to engage in this practice, it is important not to combine its effects with the impact of voting by mail. Finally, the shift in policy itself in Oregon may have affected the size and composition of the electorate: Publicity about the transition to mail ballot elections might have played a role in the initial boost in turnout. Thus while the Oregon studies track the impact of voting by mail on similar sets of voters, they do not control for potentially important aspects of politics and election administration.

In order to predict how vote-by-mail elections will affect the behavior of voters, we need to disentangle the procedural effects of voting at home from differences in behavior that result from a specific election context or individuals' predispositions to vote. The ideal design would hold constant the election context and randomly assign registrants to a treatment group required to vote

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<sup>2</sup> Oregon's election officials use a bar code system to enter immediately the names of voters who have returned their ballot, and provide campaigns with daily updates so that they can contact those who have yet to turn in their ballots. A contributor to [www.blackboxvoting.org](http://www.blackboxvoting.org) wrote, "Anyone who has voted in Oregon knows that it's better to get their ballot in early. Otherwise, and until they do, they get hounded by phone calls from the campaign offices to get their ballot in" (accessed at <http://www.bbvforums.org/forums/messages/165/257.html?1154102635> in August 2006). According to Gronke (2005), during the 2004 campaign, the labor group America Coming Together frequently contacted those who had not yet mailed in their ballots, reminding them that "the sooner they vote, the sooner the phone calls will stop" (10).

by mail or a control group that can make the traditional choice of visiting a polling place or requesting and submitting an absentee ballot. This would allow us to assess whether voting by mail reduces the costs of voting enough to produce an increase in turnout. While it is impossible to randomly assign individuals to different election rules, the natural experiment that we analyze here comes close to this ideal design.

## II. How this Study Estimates the Effects of Voting by Mail

### *A. The Setting: California's Mail Ballot Precincts*

Our design takes advantage of a state law in California that allows county registrars to designate any precinct with fewer than 250 registrants as a mandatory mail ballot precinct. In these precincts, voters do not have the option to cast their ballots in a polling place; instead they vote exclusively by mail. Unlike absentee voters, they receive ballots automatically.<sup>3</sup> Since all precincts in California's two smallest counties, Alpine and Sierra, contain fewer than 250 registrants, those counties conduct all their elections entirely by mail.

Mail ballot precincts have received little attention from scholars or political observers. An exception is Patterson and Caldeira's (1985) investigation of absentee voting in California and Iowa, in which the authors attribute their finding of rural bias in absentee voting at least partially to the existence of mail ballot precincts.<sup>4</sup> While precincts are most likely to fall short of the polling place threshold in rural areas, many small precincts exist in urban and suburban communities as well. California's liberal use of district elections and special districts creates a mosaic of overlapping jurisdictions and district boundaries, isolating small pockets of voters throughout the state. Whether

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<sup>3</sup> Under the legislation that enables counties to create mail ballot precincts, county elections officials must notify each voter of the location of the two nearest polling places in case the voter chooses to return the mail ballot on election day (California Elections Code §3005).

a household gets assigned to a mail ballot precinct can change with each election, based on voter registration figures and the races that appear on the ballot. The more races at different levels of local and state government, the more likely it is that political boundaries will intersect in such a way as to create small mail ballot precincts.<sup>5</sup> Figure 1 shows the location of mail ballot precincts for the 2002 general election in four counties. As the figure demonstrates, these precincts are scattered among the traditional polling place precincts in each county.

The assignment of the mail ballot treatment in this natural experiment is not purely randomized, but it comes quite close. In order to evaluate the impact of some policy intervention on people's behavior, it is important that assignment of the policy treatment not be related to the behavior we want to measure. Treatment assignment is based on precinct size, a variable that should have no relationship with political participation.<sup>6</sup> Our conversations with county election officials indicate that the establishment of district boundaries is a purely administrative process, and therefore that the small mail ballot precincts should not differ systematically from polling place precincts apart from being somewhat more rural. Indeed, state law prohibits county elections officials from dividing a precinct in order to establish a mail ballot precinct (California Elections Code §3005). Since the literature on voter turnout provides little evidence that residence in a rural area has an impact on participation after controlling for an individual's demographic and political characteristics, we can safely assume that a precinct's location in an urban or rural area does not affect turnout and ballot roll-off. Note that the only way that living in a rural precinct might,

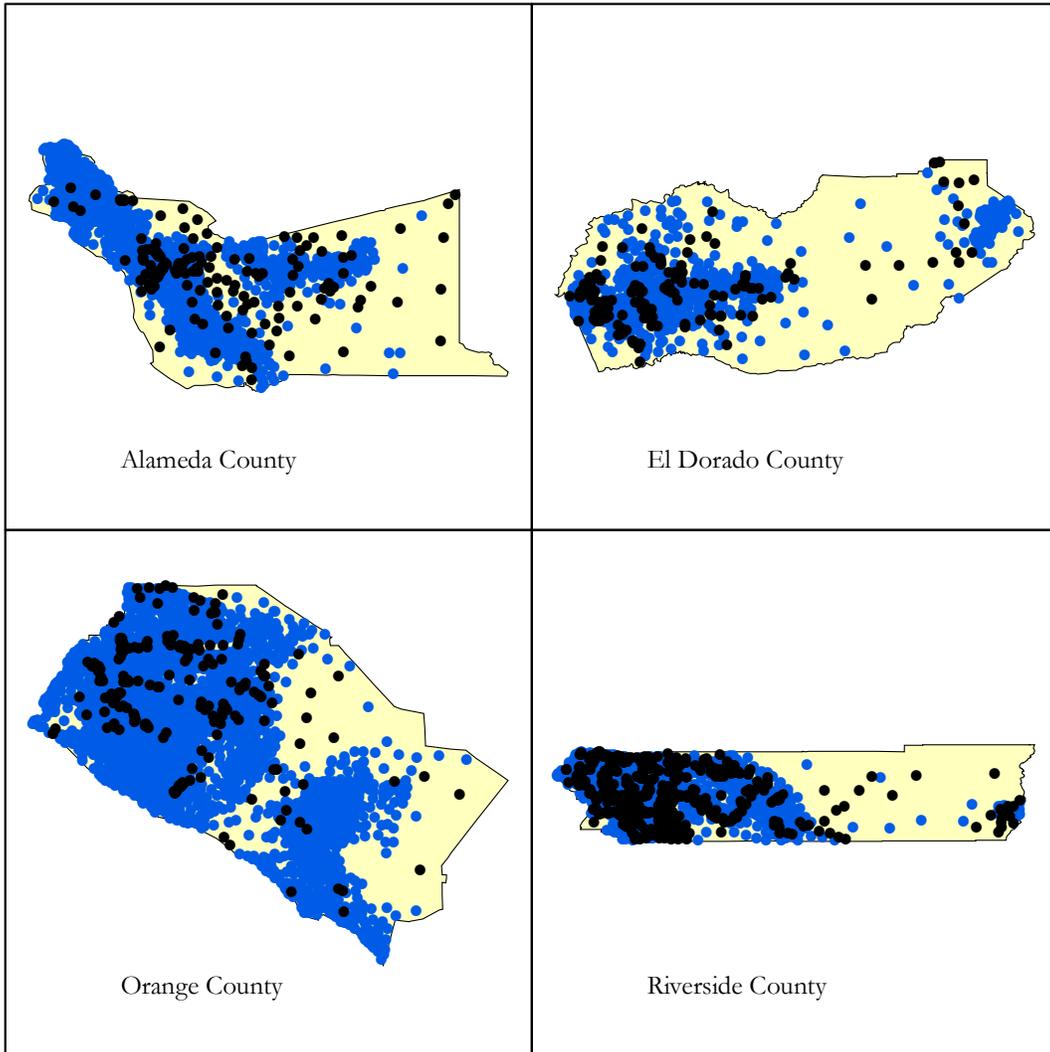
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<sup>4</sup> At the time of Patterson and Caldeira's study, registrars did not report the existence of mail ballot precincts and combined the votes from these precincts with absentee ballots.

<sup>5</sup> Mail ballot precincts received a flurry of attention in 2002, after state redistricting created even more complex political boundaries by breaking apart previously nested legislative districts. In advance of the primary election, a number of media outlets reported on the significant rise in use of these precincts and the disapproving response of voters who would no longer cast their ballots at a polling place (Davidow 2002; Keith 2002; Pool 2002; Trevilo 2002).

<sup>6</sup> In fact, in the data that we collected, variation in the number of registered voters in a precinct was not strongly correlated with turnout levels either within the set of traditional precincts (which yielded a correlation coefficient of -0.18) or within the set of mail ballot precincts (-0.009).

Figure 1. Examples of Mail Ballot Precinct Location,  
2002 General Election



- Mail ballot precincts
- Polling place precincts

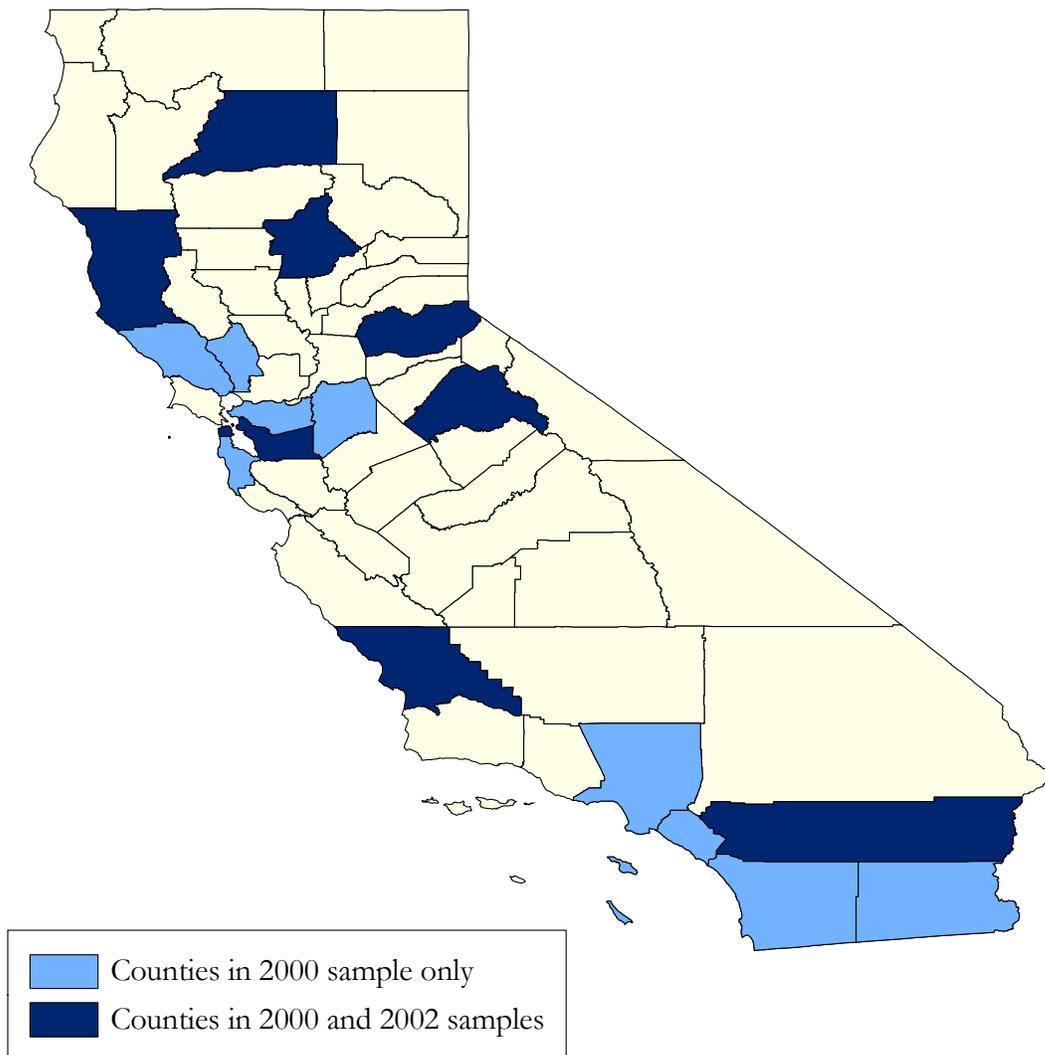
controlling for other characteristics, lead to lower turnout is that rural inhabitants likely live farther from a polling place. Since being assigned to vote by mail makes this obstacle irrelevant for those in our mail ballot precincts, it cannot be an alternative explanation of why we find that turnout is lower in mail ballot precincts in general elections. In the analyses that follow, we use data on precinct composition to help overcome any bias that might exist in the process of assigning some precincts to the mail ballot treatment.

To measure the effect of voting by mail on turnout and ballot roll-off, we examined consolidated precinct-level voting data for two general elections: the 2000 presidential election and California's 2002 gubernatorial election. Information about the demographic and partisan composition of precincts came from the Statewide Database, housed in the Institute of Governmental Studies at the University of California, Berkeley. The redistricting database for California, the Statewide Database aggregates voter registration data, election returns, and U.S. Census data to the precinct level. We contacted county registrar offices to obtain information identifying mail ballot precincts. Finally, we supplemented this precinct-level data with information about electoral competition and ballot propositions in the two elections we examined.

Figure 2 shows the counties that are included in our analysis. The 2000 analysis includes data from 18 of California's 58 counties, ranging from tiny Tuolumne County, composed of 56,000 residents living in the foothills of the Sierra Nevada, to giant Los Angeles County with a population approaching 10 million. The 18 counties encompass two-thirds of California's total population, and they contain portions of 45 of the state's 52 U.S. Congressional districts and 66 of the 80 state Assembly districts. Data availability restricts our 2002 analysis to just nine counties, but this smaller sample also covers a large geographic scope and includes a diverse set of demographic profiles. As

Figure 2. California Counties Included in the Analysis

Sample for the 2000 general election analysis: 18 counties  
Sample for the 2002 general election analysis: 9 counties



**Table 1. Turnout of the Registered in 2000 and 2002 General Elections**

	Sampled Counties	Statewide
2000 Election	70.91%	70.94%
2002 Election	52.00%	50.57%

*Notes: Calculated from the California Secretary of State's Statements of the Vote.*

shown in Table 1, turnout among the counties in our samples compares well with statewide turnout in the two elections, with somewhat more error in the smaller 2002 sample.<sup>7</sup>

### *B. The Method: Matching Precincts with Similar Voters*

Treating California's assignment of small precincts to vote by mail as a natural experiment allows us to avoid the inference problems that occur when extrapolating from vote-by-mail elections held in a specific political context or from voters who elect to cast their ballots absentee. Instead, we can compare two groups of nearly identical registrants who are voting in the same election—one group required to vote by mail, the other group with the typical choice to vote in a polling place or cast an absentee ballot. We think of assignment to a mail ballot precinct as an experimental "treatment," and we seek to estimate the effect of that treatment on political participation. Did the obligation to vote by mail have an impact on turnout among potential voters? Did it affect roll-off among those who did cast a ballot?

Our goal is to estimate the effect of requiring existing polling place precincts to vote only by mail. We can predict this best by comparing the voting behavior between pairs of precincts with similar composition, one of which received the mail ballot treatment and one that did not. We used a matching technique to select those precincts in the control group that were most similar to the

precincts that required voting by mail. We then estimated the effect of mail voting by comparing mail precincts only with similar traditional precincts, ignoring those that are very different from precincts that have received the mail ballot treatment.

Matching reduces the importance of any assumptions we make when estimating treatment effects. It is possible that the distribution of demographic and partisan characteristics in the small precincts that make up the treatment group differs from the distribution in traditional precincts. If that is the case, then we want to exclude cases from the control group that lie outside the range of data for our treatment group. By creating closer balance in the composition of treatment and control groups, matching lessens the importance of these outlying control observations and improves causal inference.<sup>8</sup>

We used nearest neighbor matching to pair each precinct in the treatment group with three traditional precincts in the same county that are similar to the mail ballot precinct. We then estimated the average treatment effect on the treated (the ATT, which here represents our best estimate at the effect of assigning voters to cast their ballot by mail) by calculating the difference in voter turnout and roll-off within each matched pair, and averaging those differences across the number of treated precincts. Precinct features used for matching included demographic and political characteristics as well as political context. To measure racial composition, we used 2000 Census data aggregated to the precinct level to calculate the percentage of the precinct's voting-age population that falls into each racial group. Partisan registration and a precinct's age and gender composition come from voter registration files. Measures of political competition include the

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<sup>7</sup> Counties were selected primarily based on how they treated voting returns from absentee voters. If we are to use this natural experiment to draw inferences about the likely effect of elections conducted entirely by mail, we must compare voting returns from assigned mail precincts to a full set of voting returns from traditional precincts, including both polling place voters and voters who cast their ballots absentee. Many counties count absentee ballots and record them separately, without reassigning those ballots to the voters' home precincts. Those counties are ineligible for inclusion in our sample. Fewer counties tallied absentee ballots separately in 2000 than in 2002, likely because vote returns from the 2000 election would be used for redistricting. This explains why we analyze fewer counties in 2002 than in 2000.

**Table 2. Similarities between Mail Ballot and Polling Place Precincts in 2002**

	Mail Ballot Precinct Mean	Pre-Match Polling Place Precinct Mean	Post-Match Polling Place Precinct Mean
Percent non-Hispanic white	71.0	60.5	70.8
Percent non-Hispanic black	3.1	7.6	3.4
Percent non-Hispanic Asian	4.5	14.0	6.0
Percent Hispanic	15.8	14.3	15.2
Percent multirace or other	5.6	4.8	4.6
Percent male	49.4	48.6	48.3
Percent age 18-24	7.2	7.5	7.6
Percent age 25-34	11.5	17.2	12.4
Percent age 35-44	17.4	19.8	18.2
Percent age 45-54	22.3	20.2	22.1
Percent age 55-64	18.4	13.9	16.5
Percent age 65+	23.1	21.4	23.2
Percent registered Democrats	37.5	47.0	38.7
Percent registered Republicans	42.8	29.4	42.0
Percent registered other parties	5.3	5.1	4.7
Congressional vote margin	40.8	49.1	40.7
Congressional contributions (all candidates, in millions)	0.8	0.9	0.8
Assembly vote margin	29.5	46.2	31.0
Assembly contributions (all candidates, in millions)	0.7	0.6	0.7

*Notes: The left columns for each election show mean values for each variable among mail precincts. The center columns show means among all polling place precincts, and the right columns show mean values among the sample of polling place precincts retained after matching. Diagnostics are based on 3:1 nearest neighbor matching without replacement using `nnmatch` in Stata.*

margin of victory between the top two contestants in the precinct's congressional and state

Assembly races, taken from official election results compiled by the Secretary of State, and the total

<sup>8</sup> See Kousser and Mullin (2006) for more detail about our methodology. For general discussions of matching, see Abadie and Imbens (2006); Ho et al. (2005); Imbens (2004); Rosenbaum and Rubin (1983).

amount of money raised during the calendar year by all candidates in the congressional and Assembly races. Contribution data come from the Institute on Money in State Politics.<sup>9</sup> Data availability posed some limitations on our analyses, as block group-level Census data on education and income cannot be aggregated to the precinct level without incorporating potentially large amounts of error. The other demographic variables in our analysis are highly correlated with education and income, and they serve as proxies in the matching process.

Table 2 shows the improvement in the balance of the 2002 general election sample obtained from matching. The first column for each year displays the mean values for each variable among mail precincts, the treatment group. The center columns show variable means for the full sample of traditional polling-place precincts, and the right columns include means only for those traditional precincts matched to a mail precinct (our control group). Prior to matching, the treated subsamples in both 2000 and 2002 had higher percentages of white residents and older, Republican registrants. After matching, little difference remains in the distributions of precinct characteristics between treatment and control groups.

### **III. The Effects of Voting-by-Mail on Turnout**

As we have seen, existing research suggests that the opportunity for voting at home—provided by either a mail ballot election or liberalized absentee laws—is effective in increasing turnout, because it eases the costs of voting for those who already are more likely to participate. Our research design allows us to test whether turnout is higher among voters assigned to mail ballot precincts than among voters placed in traditional polling place precincts. We also investigated

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<sup>9</sup> The Institute on Money in State Politics is more thorough in its reporting than the Cal-Access system operated by the California Secretary of State, reporting contributions and expenditures even by candidates with low levels of funding.

**Table 3. The Effect of Mail Balloting on Turnout**

	Effect of Mail Balloting, 2000 General Election		Effect of Mail Balloting, 2002 General Election	
	ATT	Mail Ballot Precincts	ATT	Mail Ballot Precincts
All counties	-2.60 *** (.36)	1,028	-2.87 *** (.56)	410

*Notes. The left columns for each election show sample average treatment effects on precincts with five or more registrants that received the mail ballot treatment. The right column shows the number of mail precincts in the sample for that election. Estimates are significant at \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .*

whether the effect of voting by mail varies between a presidential and an off-year election, when the marginal voter has different initial likelihoods of participating in the election.

Our findings indicate that voting by mail has a small negative impact on participation. Table 3 shows average treatment effects on treated precincts for 2000 and 2002.<sup>10</sup> Results are consistent across specifications and across the two elections: assigning precincts to vote by mail produces a 2.6 to 2.9 percentage point decline in turnout.<sup>11</sup> If a precinct's turnout rate among registrants in 2000 was equal to the sample mean of 71.5%, we estimate that the effect of requiring people to vote by mail would be to reduce that rate to 69.9% of registrants casting ballots.<sup>12</sup> Our robust and statistically significant finding runs counter to the conventional wisdom about the effects of voting by mail, raising serious questions about the potential use of this voting method in general elections.

<sup>10</sup> The sample includes the full universe of precincts from each of the counties in our analysis, but we omitted those precincts with fewer than five registrants so that the extreme outcome values for some of these precincts did not overly influence the estimation of treatment effects for the full sample. Deleting these small precincts had a modest influence on the size of the effect estimates but not their direction or statistical significance. Compliance with treatment does not pose the same challenge in this context as in other natural experiment settings (see Imbens and Angrist 1994), but some counties do make provisions for small precincts to opt out of mail balloting treatment. This is exceedingly rare, however, and removing the few precincts with fewer than 250 registrants from the control group prior to matching produces no change in results

<sup>11</sup> Estimates were obtained by 3:1 nearest neighbor matching on all covariates using an inverse variance weighting matrix. We used the `nnmatch` program in Stata (Abadie et al. 2004) for matching and calculation of ATTs. We adjusted estimates for bias (Abadie and Imbens 2006) and calculated robust standard errors. Altering the specification to include more or fewer matches and different bias adjustments did not affect the results.

## IV. The Effects of Voting-by-Mail on Ballot Roll-off

We now turn our attention to the effects of mail voting on ballot roll-off, or the difference in participation between races at the top of the ticket and those further down the ballot. Previous research has demonstrated that factors related to election administration such as ballot position and format (Bowler, Donovan, and Happ 1992; Darcy and Schneider 1989), ballot type (Walker 1966; Wattenberg et al. 2000), and voting technology (Nichols and Strizek 1995) can have an effect on downballot voting. Long or confusing ballots may contribute to voter fatigue and reduce the likelihood that individuals cast votes for all candidate races and ballot propositions. Does voting at home reduce fatigue by allowing voters to fill out the ballot on their own schedule? Are voters more likely to complete their ballot if they have endorsement lists, slate cards, campaign mailers, and other information resources at their side? If voting by mail encourages voters to spend more time considering their choices and to cast their vote in a greater number of downballot races and propositions, then it might still offer some benefit for political participation despite its negative effect on turnout in general elections.

Election reform advocates argue that voting by mail should promote more careful consideration about races on the ballot, and there is reason to expect that voting at home would promote participation in downballot races and propositions. Voters at the polling place might feel pressure to complete their ballot quickly in order to shorten the waiting time for others. They also are more likely to feel rushed, since unlike voters at home they cannot supervise children, cook dinner, or carry out any other daily activities while filling out their ballot. Furthermore, if they have not consulted a sample ballot or voter information guide before they start to cast their ballot, then it is too late—they do not have the opportunity to consult any information resources other than what

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<sup>12</sup> We find similar results when conducting a parametric analysis of the matched sample, controlling for the same precinct attributes that we used to create the match, along with county fixed effects. The parametric analysis also

they brought to the polling place. At this point, many voters choose to guess, relying on cues such as candidates' gender (McDermott 1997) or an initiative's backers (Lupia 1994). But individuals who wish to cast more fully informed votes might abstain, whereas if they were voting at home—possibly over the course of several days—they would have the opportunity to seek out information resources in order to make their decision.

We know of only two studies that have addressed this question, and neither indicates that voting at home has an important effect on roll-off. Hanmer and Traugott (2004) investigated the Oregon case and observed no real change in downballot participation after the state switched to mail ballot elections. The other study focuses on the propensity of absentee voters to cast a vote in statewide proposition races. Examining over ten thousand ballot images from the 1992 general election in Los Angeles County, Dubin and Kalsow (1996b) found no significant difference between absentees and polling place voters in overall proposition roll-off. In these contexts, voting at home does not appear to promote completion of an election ballot. However, due to the potential for bias that comes from drawing comparisons across different election contexts or between self-selected absentee voters and those who choose to visit the polling place, we take neither of these results to be decisive about the likely effect of a transition to mail ballot elections. Our natural experiment design avoids these issues with sample selection and more accurately predicts what might occur under an exclusively mail ballot election. It is important to note that the design likely underestimates the overall procedural effect of voting at home, since we do not separate requested absentees from voters who cast ballots in the polling place.

After matching precincts to create comparable treatment and control groups, we carried out two different types of analysis to estimate the effect of mail voting on roll-off. First, we estimated average treatment effects on the treated mail precincts to measure the influence of voting procedure

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weights precincts by size. For more detail on this alternative estimation strategy, see Kousser and Mullin (2006).

on ballot proposition roll-off. Roll-off is the difference between overall turnout in the election and votes cast for the individual ballot measure, calculated as a percentage of turnout. The treatment effects appear in Table 4, along with data on the length of the ballot measure, the amount of combined money raised by supporters and opponents, and the statewide margin of the final vote.<sup>13</sup>

The ATTs shown in Table 4 reveal a surprising result: Designated mail voters in 2000 cast fewer votes on ballot propositions than their counterparts in traditional precincts. Roll-off rates for mail voters were 1 to 1.5 percentage points higher than for voters who visited the polls or elected to vote absentee. Where average roll-off rates among traditional polling place precincts ranged from 5.8 to 14.5% across the eight propositions on the ballot in 2000, we predict those rates would be 1 to 1.5 points higher if mail voting were required. Again, this finding runs counter to the optimistic predictions of vote-by-mail advocates, and it points to another potential drawback of shifting to mail ballot elections.

The effect of mail voting does not appear related to the length of ballot measures or their political context. If any pattern exists, it is in ballot order. Bowler, Donovan, and Happ (1992) have found that roll-off rates are highest for ballot measures that appear in the middle of a list of measures; here we see a similar nonlinear pattern between ballot order and the effect of mail balloting. These results suggest that roll-off in the middle of the ballot may become more pronounced under a switch to mail ballot elections.

None of the results or patterns that we see in 2000 are evident in 2002, however. In the off-year election, mail balloting had no apparent effect on proposition roll-off. The one exception is for the proposition on the ballot that was most salient that year—Proposition 47, a successful bond measure for school construction. Even there, the effect of mail voting is smaller than for any

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<sup>13</sup> Treatment effects were estimated by 3:1 nearest neighbor matching, using `nmatch` in Stata. Estimates incorporate a bias adjustment and robust standard errors. Models included the same covariates as in the treatment effects on turnout, with the exception of variables measuring contributions and competition in congressional and Assembly races.

**Table 4. The Effect of Voting by Mail on Ballot Proposition Roll-off**

	ATT	Word Count	Total Contributions (in millions)	Statewide Vote Margin
<b>2000 Election</b>				
Proposition 32	1.21 *** (.21)	1,683	\$0	34.4
Proposition 33	1.03 *** (.22)	190	\$0.2	22.2
Proposition 34	1.45 *** (.21)	11,702	\$1.7	20.2
Proposition 35	1.46 *** (.22)	1,089	\$23.7	10.4
Proposition 36	1.18 *** (.19)	4,515	\$4.8	21.8
Proposition 37	1.33 *** (.23)	1,004	\$3.1	4.2
Proposition 38	1.18 *** (.16)	3,305	\$62.8	41.2
Proposition 39	1.00 *** (.19)	2,179	\$36.5	6.8
<b>2002 Election</b>				
Proposition 46	.12 (.27)	3,219	\$3.2	15.2
Proposition 47	.79 * (.31)	4,918	\$12.1	18.2
Proposition 48	.09 (.36)	2,337	\$0	45.8
Proposition 49	.08 (.25)	3,177	\$8.4	13.4
Proposition 50	-.05 (.25)	5,025	\$6.0	10.6
Proposition 51	-.02 (.31)	28,199	\$5.7	15.6
Proposition 52	-.22 (.26)	4,443	\$7.6	18.2

*Notes: Cells in the left-hand columns for each election show sample average treatment effect on precincts with five or more registrants that received the mail ballot treatment. Effect estimates are significant at \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .*

measure in 2000. We believe this difference between 2000 and 2002 has a simple explanation: in a lower turnout election, there are fewer marginal voters who would be most influenced by a change in voting procedures. Because California's 2002 election featured a drab gubernatorial contest

**Table 5. The Effect of Voting by Mail on Roll-off in Downballot Candidate Races**

	Average Treatment Effects	
	2000 Presidential Election	2002 Gubernatorial Election
Roll-off on Race for US Senate	.32 * (.14)	--
Roll-off on Race for Lieutenant Governor	--	.06 (.21)
Roll-off on Race for US House	.51 *** (.15)	.55 * (.27)
Roll-off on Race for State Assembly	.81 *** (.20)	.84 ** (.30)

*Notes: Cells show sample average treatment effect on precincts with five or more registrants that received the mail ballot treatment. Effect estimates are significant at \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .*

between Gray Davis and Bill Simon rather than the Bush versus Gore race, it attracted fewer but more motivated voters who were less affected by their mode of voting.

We find the same pattern in our analysis of roll-off in candidate races. As shown in Table 5, voters in mail ballot precincts were somewhat more likely to abstain from lower-level contests in the 2000 and 2002 general elections. Roll-off in the 2000 U.S. Senate race between Dianne Feinstein and Tom Campbell was 0.32 percentage points higher in mail ballot precincts, a small effect that is nonetheless statistically significant at the 95% confidence level. In both elections, those residing in mail ballot precincts rolled off at a rate approximately half a percentage point higher in Congressional contests and 0.8 points higher in Assembly races, all statistically significant effects. The only exception to this pattern is for the 2002 race for Lieutenant Governor, in which voting by mail made no difference for ballot roll-off. These are counterintuitive findings, but they are consistent with results on proposition roll-off and with the overall lesson of this analysis that voting by mail does not appear to boost participation levels in general elections.

## V. Turnout in Special Elections

Although we do not find any evidence that voting by mail increases turnout in presidential or gubernatorial general elections, it is possible that this reform may boost participation levels in special elections. These are contests held off of the traditional election calendar, often to fill a vacant seat or to consider a local proposition. Because of their timing, and because they usually do not feature high-profile, hotly-contested candidate campaigns at the top of the ticket, special elections typically attract very low turnout. As a consequence, voting by mail could have a different effect on turnout in special elections. When turnout is in the 20 to 50% range, the marginal voter who might be encouraged participate by a more convenient method is different from the marginal voter in a general election with 60 to 70% turnout. Because special elections receive less press coverage than general elections, receiving a ballot in the mail may be a more important reminder for voters than it is in a presidential race that generates lots of media attention and water cooler talk. To predict the effects of this limited version of the reform, we analyzed the impact of voting by mail on participation in local special elections.

There is one obstacle to this analysis that makes the scope of our study of special elections narrower than our evaluation of general elections, and our conclusions somewhat less certain: We do not have data on the demographic characteristics of precincts in special elections. The Statewide Database does not calculate precinct-level Census and voter registration data for special elections; therefore we cannot implement matching procedures to make the characteristics of polling place and mail ballot precincts similar. Instead, we have to focus on a smaller group of counties in which mail ballot precincts are most similar to polling place precincts. Using the demographic data from our 2000 and 2002 analyses, we identified three California counties in which voters in polling place and mail ballot precincts were quite similar in their partisanship, ethnicity, and age distribution. We assume that county elections officials drew precincts in a similar fashion for the special elections as

they did for the 2000 and 2002 general elections, and that there were no major demographic changes that occurred in one type of precinct but not the other type between 2002 and the more recent special elections—a fairly safe assumption, we argue. Since the precincts look similar, there is no need for matching in these counties. This allows us to estimate the effects of voting by mail by simply comparing turnout levels in polling place precincts to turnout in areas where residents were assigned to vote by mail.<sup>14</sup>

We examined a set of recent special elections held in El Dorado, Orange, and Sonoma Counties. These counties represent a diverse mix of geographic locations and include rural, urban, and suburban voters. The races contested in the special elections include both the contest to fill a vacant Congressional seat and a variety of local propositions. They were held in both even and odd years, during different months. To confirm that the treatment and control groups indeed contain comparable sets of voters in these elections, we first compared voting choices across precinct types. Vote returns were nearly identical for mail and polling place precincts. In five of the seven contests, these percentages were within three percentage points of each other, and the biggest difference (in Sonoma’s 2004 special election) was six percentage points. The fact that mail ballot and polling place voters made very similar political choices provides confirming evidence that they had similar characteristics in these special elections.

Table 6 presents the results of our analysis. We conclude that voting by mail did lead to a significant increase in turnout in these special elections. Participation rates for those who were assigned to vote by mail were higher in all seven special elections, with the size of the effect averaging 7.6 percentage points. Although the boost in turnout that resulted from voting by mail

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<sup>14</sup> We conduct this analysis only for turnout, and not for ballot roll-off, because all of the special elections that we studied featured only a single proposition or candidate race. As a result, there was no opportunity to roll off. The 2005 Statewide Special Election called by Governor Schwarzenegger did feature multiple propositions, but it was atypical of special elections. It took place in every part of the state, garnered much press attention and high levels of campaign

**Table 6. Turnout in Special Elections**

	Turnout in Polling Place Precincts	Turnout in Mail Ballot Precincts	Increase in Turnout
<b>El Dorado County</b>			
March 8, 2005 Measure D: Highway 50 Congestion	43.6% (42,741 of 98,034)	54.7% (3,431 of 6,272)	11.1%*
<b>Orange County</b>			
October 4, 2005 Congressional Primary	22.8% (91,269 of 400,427)	28.0% (442 of 1,579)	5.2%*
December 6, 2005 Congressional General	25.7% (103,845 of 403,959)	33.0% (560 of 1,696)	7.3%*
<b>Sonoma County</b>			
April 13, 2004 Measure G: North Sonoma County Hospital District	47.8% (12,399 of 25,917)	59.1% (877 of 1,485)	11.2%*
March 8, 2005 Measure B: West Sonoma County School District	42.6% (13,078 of 30,705)	44.9% (873 of 1946)	2.3%
June 7, 2005 Measure K: West Sonoma County School District	46.1% (14,189 of 30,751)	47.4% (612 of 1291)	1.3%
April 11, 2006 Measure B: Rincon Valley School District	37.7% (6,132 of 16,248)	52.2% (3,956 of 7,579)	14.5%*
<b>Average Increase in Turnout</b>			<b>7.6%</b>

*Notes: Numbers in parentheses indicated the number of ballots cast out of the number of total registered voters in each type of precinct. Effect estimates are significant at \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .*

fluctuates across elections, it is substantively quite large in all but the two West Sonoma County School District proposition elections that took place in 2005. Tests of statistical significance provide confidence that the turnout effect is unlikely to be due to random chance alone in five of the seven elections.<sup>15</sup> Overall, these findings show that voting by mail brings a clear and consistent increase in

spending, and featured turnout levels that were similar to gubernatorial general elections. For these reasons, it does not provide us with a good guide to how voters might behave in more typical, low-salience municipal special elections.

<sup>15</sup> We ran another statistical check to confirm that the high levels of participation that we observed in mail ballot precincts during special elections was not due to the fact that we lacked the data to take into account the demographic

turnout in municipal special elections. While our analysis shows that a shift to mail ballot elections would not raise participation rates in general elections, a more limited application of this reform could be expected to increase turnout in special elections by nearly eight percentage points.

## VI. Other Pros and Cons of Vote-by-Mail Elections

In addition to our analysis of original data measuring the effects of voting by mail on turnout and ballot roll-off, we also considered other important potential effects of this electoral reform. First, we conducted telephone interviews with California county elections officials throughout 2006, asking them about their experiences with running mail ballot elections and their predictions about how this policy shift would work in their communities. We talked to registrars, county clerks, and clerk-recorders from a range of counties, urban and rural, and we present their comments anonymously. Second, we reviewed media coverage of the implementation of mail ballot elections in California, Oregon, and elsewhere. This section, while relying more on anecdotal evidence, allows broader consideration of the many possible benefits and drawbacks of vote-by-mail elections.

**Voter sentiment.** In Oregon, the state that has had the most experience with mail ballot elections, a strong majority of voters favors this mode of voting. After the state conducted two special elections to fill a U.S. Senate seat by mail ballot, 67% of voters supported a 1998 initiative to hold all statewide contests by mail. Five years later, 81% of Oregonians told public opinion researchers that they preferred this type of election to one held in polling places (Southwell 2003, 5). In Washington, the other state most experienced with voting by mail, a 1997 survey found that 72%

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characteristics of voters in these special elections. For this check, we used data from the 2000 general election in El Dorado, Orange, and Sonoma Counties to compare turnout levels between polling place and mail ballot precincts, without running any “matching” procedure. In all three counties, the results that we obtained without doing any matching in the 2000 general election were very similar to what we found after we matched precincts, confirming our contention that voters in both polling place and mail ballot precincts are quite similar in these counties. Whichever procedure we used, we found that voting by mail led to a slight decrease in general election turnout but a large increase in turnout during special elections.

of respondents favored holding special elections by mail and 64% favored doing so for general elections (Harris 1999, 10). Yet voters who are less familiar with this type of election are less supportive of it. A national poll conducted in 2006 found that only 28% of voters supported replacing voting booths with voting by mail; this number rose to 41% among those surveyed in the West (Pew Research Center for the People and the Press 2006). Arizona's Proposition 205, which would have instituted a vote-by-mail system in the state's elections, attracted only 29% support in November 2006 (Arizona Secretary of State 2006).

In California, county elections officials reported hearing some complaints from voters who had been assigned to mail ballot precincts. "I think voters like options, and whenever you restrict options, that won't make people happy," said one. "When we have to put people in mail-only precincts, we send them a nice letter, and some of them still complain." Similar to what we see in the public opinion data, officials said that familiarity with this method of voting breeds comfort. One observed, "There are some who love it, and there are some who rail against it. It's the voters in the new mail precincts who are up in arms." Yet these complaints usually are not overwhelming. One official reported receiving only 20 phone calls after mailing out a notice informing thousands of voters that they would vote by mail. That registrar's office received more complaints when they mailed out ballots and on election day, but all but five of the 150 voters who complained were satisfied once they understood the reasoning behind the vote-by-mail system.

**Voter Fraud:** Many opponents of mail ballot elections worry that voting by mail will create opportunities for vote fraud or excessive pressure being exerted on voters at home. In California, Governor Pete Wilson cited concerns about fraud when he vetoed bills that would have given counties more authority to conduct elections by mail in 1992 (Smith 1994) and in 1998 (SB 2203 Veto Message). The day after voters approved Oregon's 1998 initiative to institute vote-by-mail elections, the Voting Integrity Project filed suit in a U.S. District Court to block it, on grounds that it

allowed people to vote early and perhaps often (Green 1999); a federal judge upheld the initiative. These worries held by political activists are echoed by independent analysts who have considered the issue. After the 2006 midterms, one of the nation's leading election law scholars warned that vote-by-mail elections could be plagued by fraud concerns, pointing out that, "Most of the documented cases of voting fraud in the United States in recent years involve absentee ballots" (Hasen 2006). One of these cases occurred in a vote-by-mail special election held in California, when a voter who appeared in registration rolls under two names because of a change in marital status cast and returned both ballots (Smith 1993).

However, elections officials often make the case that voting by mail is more secure than polling place voting, because their offices check to see that voter signatures on an absentee ballot match the signatures on registration cards. "Absentee ballots are held to a higher standard than people voting at the poll, because we verify their signatures," argued one official. Some registrars verify signatures electronically and others by hand, but this check is not performed in polling places. Only Oregon, with its mail ballot elections, and the state of New York check all voters' signatures against their registration cards (Esteve 2004). Another potential avenue for fraud is theft of completed mail ballots before they reach registrars. California elections officials report that some voters worry that their ballots have been taken out of mailboxes, and Oregon has banned the unofficial collection of ballots within 100 feet of a county election office or other official drop site (Mayer 2002). Overall, however, elections officials perceive the fraud concern as "knee jerk," as one county official described, because illegal voting promises "a lot of penalty for little benefit."

**Removing Voters from Registration Lists.** Mail ballot elections also give rise to the opposite concern. Instead of charging that people will be able to vote too often, some critics of mail ballot elections worry that eligible voters may be improperly removed from registration lists. An investigative report by *The Oregonian* newspaper found that postal errors caused many voters to be

purged from lists. According to the report, Oregon elections officials had purged hundreds of thousands of voters, including more than one in four registrants in a single county. As the report described, “Many of those accidentally listed as inactive are people with already fragile connections to the political system: the newly registered voter, the young, the poor, the homeless and those unaffiliated with a major party” (Suo 2000). Two court cases challenged the new system for infringing on the rights of inactive voters, especially the homeless.

**Cost Savings.** Next to their potential to boost turnout, the most common argument in favor of vote-by-mail elections is that they can greatly reduce administrative costs. County election officials point to the high cost of recruiting and paying election workers and argue that eliminating this burden could more than make up for the additional staffing, office space, and postage expenses of running an election by mail. Some warned, however, that it is difficult to predict whether, on balance, this would result in significant savings. The record of California counties that have experimented with vote-by-mail elections does suggest that it lowers election costs. Stanislaus County cities participating in a November 1993 mail ballot election saved a total of \$450,000 (Smith 1994). A vote-by-mail runoff election in Riverside cost the city \$24,793, more than \$10,000 less than the estimated \$34,805 cost of a polling place election (Pitchford 1996). San Diego’s 1981 special election saved 25 to 30%, and a county in Washington state reports cost reductions of approximately 10% from mail balloting (Harris 1999, 7). In Oregon, officials estimate that the state saves \$3 million on statewide elections (Cain 2000).

**Partisan Effects.** The record of election outcomes under voting by mail does not provide much evidence of a bias that favors either major political party, but political activists have voiced concerns nonetheless. According to Cain (1998), in Oregon “some Republicans privately have said vote-by-mail could have contributed to Republican Gordon Smith's narrow loss to Democrat Ron Wyden in a January 1996 U.S. Senate election.” Smith’s subsequent election to the other U.S. Senate

seat, along with a string of conservative victories on ballot measures, has quieted such fears. California's legislators may have anticipated a partisan effect when they opposed bills to allow counties to experiment with mail ballot elections. Noted Smith (1994): "In both houses of the Legislature, the vote on [a 1992 vote-by-mail pilot program] fell along party lines, with Republicans generally opposing the measure and Democrats generally favoring it." These fears have not been born out in practice, according to a survey of Oregon voters. The survey showed that the effects of voting by mail on turnout were not contingent on an individual's party identification or candidate preference (Southwell 2003).

**Logistics.** The logistical details of running an election entirely through the mail have produced some consequences unanticipated by election administrators. One of the most serious negative outcomes occurred in a 2004 West Contra Costa parcel tax proposition election. A large number of voters unfamiliar with the voting by mail process signed their ballots, rather than the envelopes that contained them, making their votes invalid (St. John, 2004). This experience demonstrates the importance of a public information campaign when implementing a new mail voting system. Another complication noted by a county elections official is that "absentee ballots lead to an incredible mountain of paper." Since every ballot needs to be flattened out and examined by hand, election administrators may require more time than current law allows to open ballots. But another official who had run elections by mail noted a potential advantage: "You have fewer people working on the product and less chance of error than with more people working on the project [in a polling place]. This gives you more control of what goes out and what comes in, because you are relying on a permanent staff rather than temporary precinct workers."

**Timeliness of Election Results.** One clear product of holding elections by mail is that the final vote tally will take longer to compile than the results of a polling place contest if the race is close. Elections officials note that most voters send back their mail ballots shortly after receiving

them, but a substantial portion wait until election day. These last-minute mail ballots take more time to count than polling place ballots, because mail voters' signatures need to be verified, delaying the results of an election if the margin of victory is small. In the 2000 presidential contest, it took three days to determine whether Al Gore or George Bush won in Oregon (Hosaka 2000). Reported Brandt (2000):

Oregon's election volunteers were swamped by voters returning ballots to drop-off points at the last minute—a major reason the state remained one of just two in the nation where the presidential winner was still unclear... [Secretary of State Bill] Bradbury blamed the delay on the huge last-minute turnout—an estimated 40 percent of those who voted turned in their ballots between Saturday and Tuesday.

Similar problems have occurred in Washington, where observers attributed a delay in calling the result of the 2000 U.S. Senate election to mail ballots (Mapes 2001).

**Disabled Voters.** Newspaper reports and the testimony of advocates show that voting by mail can have many advantages for voters with disabilities, but still there is room for improving the administration of mail ballot elections. A client survey conducted by the Oregon Office of Vocational Rehabilitation Services indicated that “mail-in ballots are a boon to people who have trouble traveling to polling places. Deaf clients, however, would like more special telephone services to stay informed about elections” (Goetze 2005). Here again, election administrators can ease implementation by providing good public information. Advocates for independent-living disabled groups in Oregon have argued that the state needs to make sure that disabled voters know about the tactile ballot, signature stamps, and other assistance that is available under the Oregon system (Associated Press 2002). On the whole, mail ballot voting systems have the potential to improve access to electoral participation. When Burbank considered holding more vote-by-mail municipal elections, a local community educator said the change would make it easier for the disabled to vote: “I think as long as we can find the right balance between security for our voters and accessibility, we would support those types of proposals” (Dobuzinskis 2004).

**Electioneering Timing and Campaign Finance Disclosure.** Nearly everyone who watches mail ballot elections closely notes that they change the traditional schedule of campaigns. In the state of Washington, widespread mail voting is “changing the face of campaigns, and expanding the notion of Election Day to encompass the idea of an Election Period,” according to the state elections supervisor (Ammons 1999). In Oregon, “The advent of vote-by-mail in Oregon’s statewide elections—which basically translates to three-week-long elections—largely has made frenetic, last-minute campaigning a thing of the past” (Cain 1999). One California county election official observed that receiving a mail ballot reminds people to vote, allowing campaigns to focus on voter persuasion: “Campaigns don’t do much GOTV [Get Out The Vote] anymore, because we take care of it for them. So now campaigns get their mailings out early. Anyone who sits and waits until last week has missed the vote. It really has changed the way campaigns are run.”

Because of this new schedule, campaign finance disclosure laws designed to fit the old system may prove ineffective. Observing a Central Valley special election, Mike Lynch, chief of staff to then-Congressman Gary Condit, described the problem to a reporter:

The snag arises because campaign finance disclosure report dates are set to correspond with election dates. The candidates must file several reports before election day outlining how much money they have collected, the names of people and groups who contributed to their campaign and how they are spending their money... The reports are public record and in contested races opponents keep a sharp eye out for any contributions that could reflect poorly on the recipient. But those disclosure dates don't mesh with this election because voters can return their ballots as soon as they receive them in the mail—well before the final reporting deadline (Smith 1993, B1).

Thus a large-scale shift to vote-by-mail elections may require reconsideration of campaign strategy and regulation.

## VII. Conclusions

Proponents of mail ballot elections contend that this reform will boost voter participation, basing their arguments upon the behavior of voluntary absentee voters or upon the record of elections that introduced this new form of voting to a politically-engaged state in a highly-charged electoral atmosphere. Looking for ways to increase turnout, policymakers at the local, state, and national level are now considering bills to allow more mail ballot elections. This policy change has the potential to deliver some benefits, such as cost savings, improved access for voters with disabilities, and lower reliance on a temporary work force. However, our study indicates that it will not fulfill the promise of increasing participation in general elections. Comparing voter participation between precincts assigned to vote by mail and traditional polling place precincts, we find that voting by mail may reduce turnout by up to three percentage points. This effect is consistent across two recent California general elections. Registrants assigned to vote by mail were also a bit more likely to roll off the ballot and abstain from voting in downballot candidate and proposition races, particularly in the 2000 presidential contest. These effects are small, but statistically significant. Instead of boosting turnout and giving voters the time to vote in every contest, it is likely that a shift to mail ballot elections will reduce both forms of participation in regularly-scheduled general elections. In local special elections that receive less public attention, our projection for mail balloting is more optimistic. Under these circumstances, we predict that a vote-by-mail system could increase turnout by an average of almost eight percentage points.

From one perspective, our results are surprising. Voting by mail fundamentally changes the location and timing of elections, moving them from a potentially inconvenient location to the comfort of voters' homes and from a single day to a range of weeks. Thus we might expect a positive effect on turnout in all election contexts. On the other hand, a large body of work on political behavior indicates that individual characteristics and registration laws are the primary

predictors of who votes, so changes in administrative procedures should bring about only modest if any shifts in participation. When voters are paying little attention to politics, receiving a ballot in the mail could be an important reminder to participate in a local election; in some cases, it may be one of the few signals a registrant receives that an election is taking place. During a regular election season, election processes are less influential in determining participation. Our results are consistent with another recent research study, which found that introducing the option of postal voting in Swiss cantons did not produce an increase in turnout (Funk 2005).

What is the public policy implication of our finding? We see the complex balancing of different potential effects of vote-by-mail elections—effects that include changes in voter turnout, cost savings, opportunities for fraud, and access among vulnerable groups of voters—as the domain of elected officials and election administrators. The aim of this study is to inform that discussion by clarifying the likely effects that mail ballot elections will have on political participation. In local special elections, offering voters a reminder about the election and a convenient way to cast their ballots can lead to significant increases in turnout. In general elections, however, when voters know about races and are accustomed to turning out at a polling place, our analysis shows that voting by mail leads to a minor decrease in participation.

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