Voting by Mail: Turnout and Institutional Reform in Oregon*

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Objectives. I test the impact of Oregon's vote-by-mail system on voter turnout. *Methods.* To determine the impact, I create a cross-sectional time-series regression model of state turnout in presidential elections from 1980 to 2004 and mid-term elections from 1982 to 2006. *Results.* I find that Oregon's turnout increases by around 10 percentage points of registered voters in both presidential and mid-term elections due to the voting-by-mail reform. *Conclusions.* These results suggest that one of the reasons that the United States has comparatively lower turnout is due to its more onerous voting procedures.

If everyone voted by mail, would the more convenient voting procedures increase turnout? In 2000, Oregon became the first state to vote exclusively by mail. In this new system, all ballots are mailed to the voter's home, eliminating the polling place. The reformers who promoted the change to voting by mail predicted it would raise voting rates due to its convenience (Bradbury, 2001). Participation increased in the first vote only by mail presidential election in 2000 by eight and half percentage points of registered voters when compared to the traditional 1996 election. Oregon's turnout was 79.8 percent of registered voters in 2000 and 71.3 in 1996.[1] Several studies, however, doubt the positive influence of vote by mail. Using data from presidential elections from 1980 through 2004 and mid-term elections from 1982 through 2006, I determine voting by mail's impact using a cross-sectional time-series (CXTS) regression model of aggregate state-level turnout data, while controlling for changes in levels of electoral competition, third-party performance, senate and governor elections, referendums and initiatives, and state-level demographics. The results show a significant positive effect from voting by mail of around 10 percentage points of registered voters in both mid-term and presidential elections.

*Direct correspondence to Sean Richey, Assistant Professor, Department of Political Science, Georgia State University, 38 Peachtree Center Ave., Ste. 1005, Atlanta, GA 30303-2514 ⟨srichey@gsu.edu⟩. I will share this data and coding information with those wishing to replicate the study.

[1]The data on turnout rates I use in this research come from each state's office of elections. These data on Oregon's percentage of registered voter's turnout can be found online at ⟨http://www.sos.state.or.us/elections/nov7 2000/other.info/genstats.pdf⟩for 2000 and at ⟨http://www.sos.state.or.us/elections/nov596/other.info/totbycty.htm⟩for 1996.

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Testing both presidential and mid-term elections controls for possible confounding variables such as Oregon's battleground status in the recent close presidential elections. After the reform, mid-term turnout in Oregon increased at about the same rate as for the presidential elections even though it was not a battleground state. Other factors, such as the additional media coverage and campaign advertising in the 2000 and 2004 presidential campaigns, are also controlled by examining the mid-term elections time series, which lacked these influences. Thus, the similar impact in both styles of elections produces convincing evidence that this reform increased turnout by around 10 percentage points of registered voters.

The Institutional-Barriers Theory

A seminal theory to explain U.S. lower comparative turnout is the instuitional-barriers theory (Amy, 1993; Berelson, Lazarsfeld, and McPhee, 1954; Bowler, Brockington, and Donovan, 2001; Brady, Verba, and Schlozman, 1995; Jackman and Miller, 1995; Lijphart, 1997; Teixeira, 1992; Polsby, 1963; Powell, 1986). It states that complicated voting procedures make turnout difficult, so less people vote. In particular, it is argued that the institutional barriers created after 1896 made voting more difficult and lowered turnout rates (Piven and Cloward, 2000). Various scholars dispute this premise. For example, Burnham (1974) and Schattschneider (1960) posit that the decline in party competition after 1896 and the subsequent control of parties by opportunistic elites made elections so unrewarding that fewer people voted. However, Converse (1974) and Rusk (1974) counter that the Progressives made voting procedures more difficult to control party machine influence and that this accounts for the drop in turnout. Verba, Nie, and Kim (1978) posit that one of the reasons that only specific groups show declining turnout is that elite dominance of parties produces few class-based policies that excite marginalized groups to vote. Rosenstone and Hansen (1993) argue that the lack of party mobilization led to declining turnout. Piven and Cloward (2000) synthesize some of these arguments and posit that circumstances after 1896 allowed party elites to dominate, and that the elites then produced the legal-institutional structural barriers that depressed turnout.

Convenience voting reforms address the concern that the U.S. comparatively onerous voting requirements depress turnout. Voting by mail's convenience eliminates some of the barriers to voting and is proffered as a possible solution to the problem of low turnout (Bradbury, 2001). This new innovative Oregon electoral system is designed to boost turnout by reducing the requirements to vote for those who are registered. Although it does not make registering to vote easier, it reduces how much effort is required to cast a ballot. Thus, the results of the reform can test the propositions that underlie the debate on whether difficult procedures influence people to not

vote. The change to voting by mail allows an opportunity to test if convenience voting—that is, lower barriers—equates to higher turnout. If voting rates increase after the reform, and it is the sole reason for this increase, then structural barriers were limiting voting.

Voting by mail's impact on turnout, however, is debated in the literature. One early study by Berinsky, Burns, and Traugott (2001) finds that groups with high turnout vote at even higher rates after the reform and thus the reform results only in a minor increase in turnout. Other early studies, however, find a greater increase in turnout using aggregate data from early special elections that used vote by mail (e.g., Southwell and Burchett, 2000; Karp and Banducci, 2000). Studies conducted after vote by mail's full-time use in 2000 also come to mixed conclusions. For example, Traugott and Hammer (2001), using voting-age population turnout data, find that voting by mail adds little contribution to Oregon's already high levels of turnout. Gans (2003), also using voting-age population data, states that mobilization, due to Oregon's battleground state status, is driving the turnout increase. Yet, Southwell (2004), using survey data, finds that voting by mail has many beneficial effects, such as increased turnout, lower costs, and greater participation from the marginalized, that make this a valuable reform. Finally, one recent report using voting-age population turnout data shows an increase in turnout in Oregon (Gronke, Galanes-Rosenbaum, and Miller, 2007), while another shows mixed results for vote by mail at the county level in California (Kousser and Mullin, 2007). To answer this debated question, I use percentage turnout of registered voters and include state-level mid-term data from 1982 through 2006, which have not been previously examined. It is important to test the impact of full statewide usage in more than just the first vote only by mail election of 2000. The additional data and time series greatly strengthen the argument that the reform was responsible for the increase, and that it was not a one-time increase created by a special circumstance in 2000.

Measuring Turnout

Prior vote-by-mail studies use data either from the turnout of the voting-age population or self-reported voting from survey research as measures of voter turnout. I show below that voting-age population is not as precise as turnout of registered voters for studying voting reforms that are not meant to affect registration levels. Voting-age population data include registration and population changes that are unrelated to the impact of the reform. Fundamentally, the reform is intended only to make it easier to vote if registered. Examining the impact on those already registered is clearly a more precise measure for this reform. The effectiveness of voting by mail should not be judged by changes in registration levels, which are outside the domain of the reform. Voting-age population data are important to measure

the impact of some institutions on turnout, including registration laws. Timpone (1998) shows the clear distinction between the acts of voting and registration. It requires two steps to vote in the United States; the first step is to register, the second is to turn out to vote (Highton, 2004). Some convenience reforms, such as Motor Voter, are intended to ease the first step (Piven and Cloward, 2000) and thus require measures of voting that incorporate the turnout of the nonregistered, such as voting-age population. However, the vote-by-mail reform was more narrow in scope and focused only on easing Step 2. Thus, while voting-age population data remain very useful to study for democracy generally, the appropriate measure should be used to study the intended effect on the subset of the population who are registered. Indeed, there are other reforms that could be used in combination with vote by mail to address difficulties in registration.

Other studies use individual-level survey data, but there is a known overreporting bias where survey respondents often incorrectly state their voting behavior (Traugott and Katosh, 1979). Social desirability effects are nontrivial, being as much as 20 percentage points in some surveys. The effect of vote by mail was predicted to be only about a 10 percentage point increase (Bradbury, 2001), so the use of surveys may not accurately measure the impact. If survey overreporting is the same before and after the reform is implemented, then it may not pose a problem, but there is no way to determine if this is true, and it remains beneficial to examine the results using multiple measures.

Oregon was hotly contested in 2000 and the site of get-out-the-vote efforts. A recent report claimed that Oregon's turnout is lower than expected in 2000 since its increase was less than other "battleground states" (Gans, 2003). This report uses voting-age population turnout data for its analysis. McDonald and Popkin (2001) propose using voting-eligible population data as a better measure of turnout. Voting-eligible population is similar to voting-age population, except that it subtracts noneligible people—for example, felons—from the total. Thus, it results in a higher voter turnout rate than voting-age population data. A recent review article of the 2004 elections claims that using voting-eligible population turnout data is the "best and correct" measure of turnout (Althaus, 2005). I show below that voting-age population and voting-eligible population data are not adequate to study the vote-by-mail reform in Oregon. There is a much lower increase in 2000 when using voting-age population and voting-eligible population data rather than percentage of registered voters in Oregon. Gans's (2003) assessment of Oregon's turnout change is only accurate if voting-age population data are used. Using percentage of registered voters as the measure, Oregon's 8.5 percentage point increase from 1996 to 2000 is the highest in the country, and is significantly larger than the 3.1 percent average increase in other battleground states. To illustrate how large an impact changing the measure of turnout can have, consider that Pennsylvania's turnout actually decreases in 2000 when percentage of registered voters is

used, but increases when using voting-age population and voting-eligible population turnout data.

Why is there a striking difference in Oregon's turnout when using percentage of registered voters instead of turnout of the voting-age population or voting-eligible population in these elections? Oregon's voting-age population increased by 120,000 from 1996 and 2000, but registered people decreased by 20,000.[2] Turnout in 2000 was 1,559,215. The additional 100,000 unregistered nonvoters in 2000 makes Oregon's voting-age population or voting-eligible population turnout increase appear less than if one uses percentage of registered voters. This shows that percentage of registered voters is a more precise and accurate measure of determining the effectiveness of the vote-by-mail reform. To illustrate these differences, I test the impact using all three measures below. As this is a state-level reform, I focus on state-level aggregate data and do not examine county- or precinct-level data.

One problem with using turnout of registered voters as the measure is that states have different methods of removing voters from registration lists. Some states do not update aggregate state-level registration totals from the local precincts for long time, and this distorts the number of registered people. If all states have a small or equal amount of bias, then the change in Oregon can still be measured. Oregon did not change its procedures for counting the number of registered people in the state between 1980 and 2006. Still, if there is a unique or large change in other states, then these changes in measurement of the number of registered voters can bias the results. Figure 1 shows a scatterplot matrix of the relationship between percentage of registered voters, voting-age population, and voting-eligible population for each presidential election in each state from 1980 to 2004. As expected, voting-age population and voting-eligible population turnout data are highly correlated, but turnout of registered voters has more variance in relation to the other measures. In analyzing the data below, I conducted formal tests to identify outliers in percentage of registered voters, using Hadi's (1992) method. These tests reveal that Wyoming's data from the 2000 and 2004 elections are outliers.[3] Due to its outlier status, I ran sensitivity tests including and dropping Wyoming from the regression models below.[4] As the substantive results are similar, I show the model with all states below. Also, some states, such as North Dakota, do not have registration. For these states, I use voting-eligible population data, which are equivalent to percentage of registered voters, since all state-eligible voters are automatically registered.

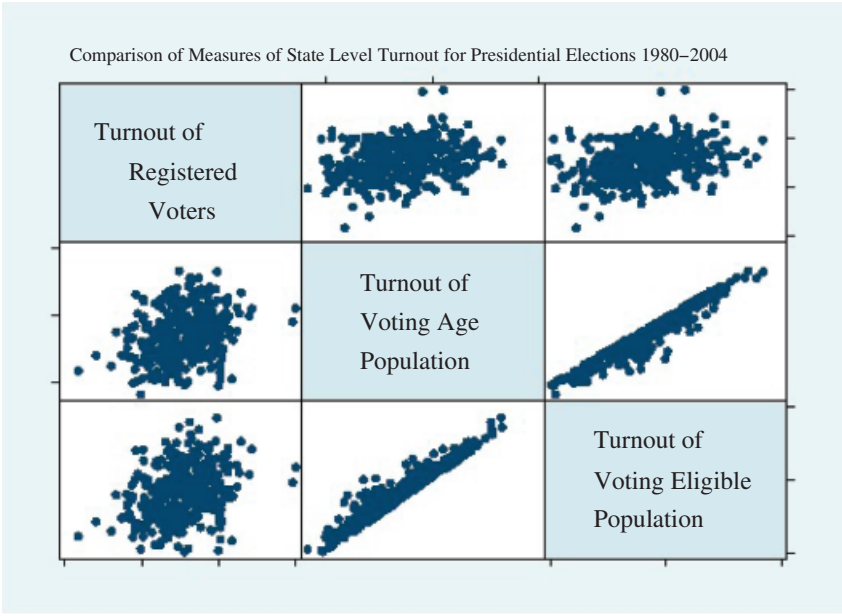
[2]The data on registration rates I use in this research come from Oregon's office of elections.

[3]The Stata command hadimvo tests outlier status. It rejects the Wyoming 2000 and 2004 data at the $p > 0.05$ level. For more details on this test, see Hadi (1992).

[4]These results are available on request. Voting by mail shows a 10 percentage point effect in this model, with a standard error of around five.

FIGURE 1

Scatterplot Matrix Comparing Three Measures of Voter Turnout in State Presidential Elections; Data are from the 1980 Through 2004 Elections



Data and Methods

I create models based on state-level independent variables for U.S. elections from 1980 to 2006 to determine if the reform increases voter turnout. Due to the known difference between mid-term and presidential elections, I create separate models for each type of election. The data are over time and also cross-sectional for each state for each election, and thus may be described as longitudinal, also known as panel data (Woodbridge, 2002:6). Because the dependent variable is nested within states, I create a CXTS regression model to account for the within-state and between-state variability. This model will account for changes in elections over time, and also changes in each state. The results below use a cross-sectional time-series feasible generalized least squares (FGLS) model. I used the Breusch-Pagan test to determine the presence of panel heteroskedaticty. It finds both models to have heteroskedasticity, which I correct for. I also use the White test to examine autocorrelation in both time series. It does not find autocorrelation in the presidential time series, but does find it in the mid-term series, which I correct for. The results below are robust to other model specifications, including ordinary least squares with panel-corrected standard

errors, and population-averaged panel-data models such as generalized estimation equation.[5]

The dependent variables are percentage of registered voters and voting-age population, as measured by each state's office of elections, and voting-eligible population data.[6] The voting-by-mail variable is dichotomous, with 0 being the years before the reform and 1 thereafter, only in Oregon. The other independent variables are strongly correlated with voter turnout in various studies. I control for demographic predictors of turnout: education, age, race, urbanization, and income (Wolfinger and Rosenstone, 1980; Teixera, 1992; Miller and Shanks, 1996). The data are from the U.S. Census estimates for each state from the 1980, 1990, and 2000 Censuses. Education is measured as a percentage of adults in each state (25 years and older) who have completed a baccalaureate degree or more. Income is measured as the state's per-capita personal income in $10,000s. Age is measured as percentage of the state that are youth (under 25 years old) and elderly (65 and above), as these age groups have larger differences in voting rates than other age groups, and an increase in either population may affect turnout rates (Wolfinger and Rosenstone, 1980; Teixera, 1992; and Miller and Shanks, 1996). The black and Hispanic variables are coded as the percentage of these groups in the state, as they vote at lower levels (Miller and Shanks, 1996). I also control for the percentage of urbanization in each state by using population density.

Not represented in the socioeconomic data are political influences on voting rates. The closeness of an election can increase turnout. If a third party is stronger than normal, it may affect voting rates. A particular presidential candidate may have charisma or be aligned with a social movement that can motivate voters (Lacy and Burden, 1999). For example, the 1992 election had high turnout—including in Oregon—due to the closeness of the presidential election, the Gulf War, interest in third-party candidate Ross Perot, and several other issues and reasons (Lacy and Burden, 1999). I control for these potential political factors that can raise turnout: level of competition, senate or governor election, third-party performance, and the number of referenda.

Senate elections and governor elections are both coded 1 if there was this type of election in the state the same year as the election, and 0 if not. Competition is measured as the percentage point difference between Democratic and Republican candidates for president or top-of-the-ticket in a mid-term election. Competition is related to party mobilization efforts, as battlegrounds are where the most intense get-out-the-vote efforts occur. Optimally, I could control for party mobilization directly; however, data limitations prevent controlling directly for party mobilization, and here electoral competition is included. Third party is measured as the percentage

[5]These results are available on request.

[6]The voting-eligible population data are from ⟨http://elections.gmu.edu⟩.

TABLE 1

Summary Statistics for Presidential Elections 1980–2004

Variable	Mean	*SD*	Min	Max
Percentage of registered voters	54.966	10.173	20.7	85.8
Voting-age population	40.39	8.227	19.9	61.5
Voting-eligible population	42.429	8.129	20.2	64.009
Voting by mail	0.01	0.099	0	1
Early voting	0.217	0.413	0	1
Permanent absentee	0.26	0.439	0	1
Governor election	0.734	0.442	0	1
Referendum	1.42	2.88	0	19
Senate election	0.699	0.471	0	1
Third party	3.078	5.391	0	41.8
Competition	12.029	10.138	.01	50
Education	22.967	7.372	10.4	40.4
Elderly	11.961	2.184	2.9	17.567
Youth	19.636	4.989	11.7	28.86
Hispanic	5.554	7.672	0.3	42.076
Black	9.519	9.298	0.2	36.155
Income	21960.947	6830.360	7804	42706
Urbanization	168.136	233.139	0.702	1118.734

point vote gained by all third parties for each state in each election for president or top-of-the-ticket in a mid-term election. Interest in a referendum may drive turnout. Here, as a proxy for REFERENDUM interest, I use the total number of referenda, initiatives, or ballot measures asked for each state in each election, with states that do not have referenda coded as 0. There are two other voting reforms that previous research has shown not to be effective in raising voter turnout (e.g., Gronke, Galanes-Rosenbaum, and Miller, 2007). To control for any effect these reforms have had, I include dichotomous control variables for a state conducting an election under the reforms, early voting and permanent absentee voting. Although permanent absentee voting may seem like vote by mail, it actually requires an additional step to sign up for the program. The vote-by-mail reform automatically enrolled every registered person in Oregon, so no additional step is required. Thus, the different mechanisms of the reform will influence turnout rates differently. There are no missing data, except in the competition variable in the mid-term time series. This variable has a few cases imputed. The substantive results do not change when removing these imputed data. (See Tables 1 and 2.)

Results

In Table 3, the vote-by-mail variable shows a strong positive effect on turnout in the presidential elections of 2000 and 2004 in Oregon. The

TABLE 2

Summary Statistics for Mid-Term Elections 1982–2006

Variable	Mean	*SD*	Min	Max
Percentage of registered voters	53.832	10.001	20.7	85.8
Voting-age population	39.773	7.855	22	59.7
Voting-eligible population	42.289	7.759	23.4	64.099
Voting by mail	0.01	0.099	0	1
Early voting	0.217	0.413	0	1
Permanent absentee	0.26	0.439	0	1
Governor election	0.251	0.434	0	1
Referendum	1.323	2.64	0	18
Senate election	0.699	0.471	0	1
Third party	6.791	7.355	0	31.98
Competition	24.425	16.467	0.01	55.8
Education	22.967	7.372	10.4	40.4
Elderly	11.961	2.184	2.9	17.567
Youth	19.636	4.989	11.7	28.86
Hispanic	5.554	7.672	0.3	42.076
Black	9.519	9.298	0.2	36.155
Income	21960.947	6830.360	7804	42706
Urbanization	168.136	233.139	0.702	1118.734

introduction of voting by mail accounted for about an 11 percentage point increase in percentage of registered voters while holding all other independent variables constant. The voting-age population and voting-eligible population models also show a positive effect of around three percentage points, but the standard error is also around three. As previous research has shown, early voting and permanent absentee voting do not have a significant effect in any model. The presence of a senate election increases turnout in Model 1, and a governor election shows a significant negative effect in all models of about one percentage point. In the percentage of registered voters model, third-party performance shows a significant increase. This impact is less in the voting-age population and voting-eligible population models, probably due the extra burden of registering third-party voters. In all models, education shows a large increase in turnout. This is an expected result, as education has long been known to boost turnout. Income has a significant influence. A larger youth population decreases a state's aggregate turnout. Race has an effect in the voting-age population and voting-eligible population models, and the black variable is negative and significant at the $p > 0.10$ level in the percentage of registered voters model. The competition, referendum, and elderly variables do not have a significant impact on turnout, but the signs of their coefficients match their theoretical expectations. In general, these results suggest that turnout of registered voters in Oregon presidential elections increased due to the vote-by-mail reform.

TABLE 3

CXTS Regression Models of State Turnout in U.S. Presidential Elections from 1980–2004

Variable	1	(S.E.)	2	(S.E.)	3	(S.E.)
Voting by mail	11.007***	(4.166)	3.896	(3.071)	3.029	(3.354)
Permanent absentee	−1.237	(0.797)	−0.811	(0.631)	−0.455	(0.687)
Early voting	0.425	(0.821)	0.904	(0.671)	−1.309^{+}	(0.719)
Senate election	1.288*	(0.549)	0.641	(0.468)	0.419	(0.497)
Governor election	−1.719**	(0.646)	1.216*	(0.569)	−1.311*	(0.600)
Referendum	0.055	(0.113)	−0.038	(0.087)	0.172^{+}	(0.098)
Third party	0.172**	(0.052)	0.018	(0.045)	0.011	(0.046)
Competition	0.005	(0.029)	0.051^{+}	(0.028)	0.042	(0.027)
Hispanic	−0.033	(0.061)	−0.409***	(0.035)	−0.234***	(0.036)
Black	−0.062^{+}	(0.036)	−0.275***	(0.034)	−0.247***	(0.035)
Youth	−0.572***	(0.094)	−0.484***	(0.085)	−0.431***	(0.082)
Elderly	0.106	(0.151)	0.173	(0.151)	0.153	(0.149)
Education	0.779***	(0.112)	0.713***	(0.094)	0.719***	(0.098)
Urbanization	0.007***	(0.001)	−0.001	(0.001)	0.001	(0.001)
Income	−0.001***	(0.000)	0.000***	(0.000)	0.000***	(0.000)
Intercept	77.574***	(3.169)	60.243***	(3.068)	58.662***	(2.966)
N	350		350		350	
Wald χ^2	237.46***		508.08***		322.68***	

$^{+}p<0.10$; $*p<0.05$; $**p<0.01$; $***p<0.001$.

NOTE: Cells represent unstandardized coefficients and standard errors of a FGLS regression model for determinants of state turnout in U.S. presidential elections from 1980–2004. The dependent variables are state-level turnout percentage of registered voters in Model 1, voting-age population in Model 2, and voting-eligible population in Model 3.

Voting by mail's impact on mid-term elections is similar to its impact on presidential elections in all models. In Table 4, there is around a nine percentage point increase when using percentage of registered voters, and a lower and nonsignificant effect when using voting-age population and voting-eligible population turnout data In these elections, the presence of a governor or senator election increases the turnout significantly, with the impact from governor elections being about five and a half percentage points, and senate elections at two and a half percentage points. Permanent absentee voting does not have a significant effect in any model, while early voting shows negative impact in all models. More referenda on the ballot boosts turnout in some models. Here, competition shows a significant positive effect in all models. The impact from race and ethnicity also shows in mid-term elections, as states with higher black or Hispanic populations have less turnout. Also, age has a similar impact as with presidential elections, with states with a higher population under 25 having less turnout. Again, a large factor in promoting turnout in all models is education, which has the largest relative impact. Income shows a similar impact as in Table 3, as does the lack of influence from the level of urbanization in the state. In sum, both

TABLE 4

CXTS Regression Models of State Turnout in U.S. Mid-Term Elections from 1982–2006

Variable	1	(S.E.)	2	(S.E.)	3	(S.E.)
Voting by mail	8.770*	(4.048)	1.743	(2.838)	1.985	(2.823)
Permanent absentee	−0.440	(1.043)	0.100	(0.728)	0.882	(0.736)
Early voting	−3.344**	(1.079)	−2.075**	(0.741)	−2.730	(0.753)
Governor election	5.681***	(0.962)	3.139***	(0.748)	3.645***	(0.746)
Senate election	2.572***	(0.550)	2.084***	(0.364)	2.199***	(0.384)
Referendum	0.259+	(0.135)	0.135	(0.095)	0.194*	(0.096)
Third party	−0.057	(0.058)	0.010	(0.034)	0.013	(0.036)
Competition	0.084***	(0.019)	0.035**	(0.013)	0.035*	(0.014)
Hispanic	−0.063	(0.052)	−0.440***	(0.042)	−0.287***	(0.040)
Black	−0.225***	(0.056)	−0.424***	(0.038)	−0.401***	(0.038)
Youth	−0.708***	(0.133)	−0.425***	(0.092)	−0.401***	(0.094)
Elderly	−0.242	(0.253)	0.097	(0.170)	0.098	(0.170)
Education	1.163***	(0.146)	0.653***	(0.098)	0.642***	(0.100)
Urbanization	0.001	(0.002)	−0.003*	(0.001)	−0.001	(0.001)
Income	−0.001***	(0.000)	0.000***	(0.000)	0.000***	(0.000)
Intercept	59.207***	(3.048)	42.501***	(2.048)	41.504***	(2.073)
N	349		349		349	
Wald χ^2	272.27***		462.02***		390.17***	

+$p<0.10$; *$p<0.05$; **$p<0.01$; ***$p<0.001$.

NOTE: Cells represent unstandardized coefficients and standard errors of a FGLS regression model for determinants of state turnout in U.S. mid-term elections from 1982–2004. The dependent variables are state-level turnout percentage of registered voters in Model 1, voting-age population in Model 2, and voting-eligible population in Model 3.

time series show that voting by mail creates a large increase in turnout of registered voters while controlling for these other factors. The lack of an impact in the voting-age population and voting-eligible population models shows that these different measures of turnout can lead to different results. However, due to the reform's intention of encouraging registered voters to vote, it seems that turnout of registered voters is the better measure to use.

Conclusion

I analyze aggregate state-level data from U.S. presidential elections from 1980 through 2004 and mid-term elections from 1982 to 2006, and determine that this reform facilitates greater turnout of registered voters. The results substantiate the institutional-barriers theory. The reform increases turnout of registered voters in a state where voting is typically higher than other states (Rusk, 2001). The results show that other suggested causes of turnout change did not impact voting rates in Oregon. Although Oregon usually follows regional and national trends in voting (Rusk, 2001), after the

reform the highest percentage of registered voters increase was in Oregon in 2000 and remained high in 2004. Oregon's status as a battleground state and the consequent mobilization efforts of parties were not responsible for the change since the increase also occurs in mid-term elections when the state was not a battleground. The similar impact in both time series provides strong evidence that the reform is the source of a large increase in turnout of registered voters.

Voting by mail is a reform that can be recommended elsewhere to facilitate participation. Before adoption, however, other concerns also must be considered, such as the potential for increased fraud, costs, and undue influence. Additionally, if we are concerned with increasing turnout from all eligible citizens, then the reform does not meet that challenge. To facilitate greater turnout generally, we must consider combining simpler registration procedures with vote by mail. It is important to note that this research also cannot test if working-class or marginalized populations vote more with voting by mail. As Berinsky (2005) points out, there is a chance that extra turnout among the registered—who tend to have higher socioeconomic status—will actually exacerbate the bias in the electorate. Determining how the reform influences the makeup of the electorate is an important topic for future research into voting by mail.

The reform achieves its primary goal of increasing voting rates for registered voters, whereas other voting reforms did not. What does the increase in turnout after the vote-by-mail reform tell us about participation in the United States? First, the style of reform is important, as some reforms have designs that encourage turnout, while others do not. Second, there are two types of theories on U.S. low voting rates (Piven and Cloward, 2000). The first is the legal-institutional school, which points to decreased party competitiveness, decreased party constituencies, and complicated voting and registration requirements; as opposed to individual attributes. Alternatively, the social-psychological scholars state that who a person is—his or her culture, education, and socioeconomic status—decides the person's participation. The social-psychology model does well, as most of its variables significantly influence turnout in the models above as predicted, but the evidence that voting by mail increases turnout supports the legal-institutional scholars' theory that structural barriers keep some Americans from voting.

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