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What is This?

Voting by Mail and Turnout in Oregon: Revisiting Southwell and Burchett

Paul Gronke[1] and Peter Miller[2]

Abstract

In the most widely cited result on the turnout effects of voting by mail, Southwell and Burchett report that Oregon's system increased turnout by 10 percentage points. We attempt to replicate this finding and extend the analysis to additional years to test whether the originally reported effect is due to the novelty of the first three voting by mail elections in 1995 and 1996. We are unable to reproduce earlier findings, either via replication or extending the time series to include 2010 electoral data. We find evidence for a novelty effect when all elections between 1960 and 2010 are included in our analysis, and a consistent impact of voting by mail on turnout only in special elections.

Keywords

vote-by-mail, early voting, elections, turnout

Supporters of voting by mail (VBM)—systems where voters receive and return their ballots by mail—argue that VBM increases turnout and produces a more reflective, thoughtful electorate, reduces administrative costs, and produces a more accurate ballot count (Hamilton, 1988).[1] The claims of increased procedural integrity are sustained by other analyses (Alvarez & Hall, 2004; Hanmer & Traugott, 2004; Traugott, 2004). The State of Oregon

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claims a savings of 30% by transitioning away from polling places (Bradbury, 2006). Whether or not VBM improves the quality of democratic deliberation is more difficult to assess,[2] but it is clear that Oregonians like the system (Southwell, 1998, 2004; Southwell & Burchett, 1997). Nationwide opinion on the matter is more divided. The 2008 Survey of the Performance of American Elections found just 14.7% of respondents supported running elections fully by mail (Alvarez et al., 2009), while, in a separate poll, a higher percentage (43.5%) supported VBM only as one additional voting option (Milyo, Konisky, & Richardson, 2009).

The discipline has also been divided on the turnout effects of VBM. The classic rational choice theory of turnout suggests voting is an irrational activity; a single vote has virtually no chance of being pivotal in an election of any appreciable size (Downs, 1957). However, voters may participate in an election for other, expressive reasons related to a sense of civic duty (Riker & Ordeshook, 1968); in other words, voters "consume" voting (Fiorina, 1976). Aldrich's (1993) thoughtful review of the rational choice approach to turnout notes that voting is a low-cost, low-benefit activity, and choosing to vote is a decision made "at the margin," responsive to minor changes in the cost and benefits side of the equation. The implications are that election reforms will have, at best, minor effects on turnout, particularly in Federal contests, where variations in voter information and candidate and party mobilization efforts explain most of the variation in turnout (Hanmer, 2009; Rosenstone & Hansen, 1993).

One of the most influential pieces on the turnout effects of VBM is an article by Southwell and Burchett (2000). Southwell and Burchett explicitly adopt the classic model's predictions regarding the turnout effect of VBM (Southwell & Burchett, 2000, p. 17). They report a 10 percentage point increase in participation among Oregon voters based on three VBM elections in 1995 and 1996. This piece has received widespread attention since its publication. Reform advocates such as the Vote by Mail Project (http://votebymailproject.org), Washington Secretary of State Sam Reed, and Oregon Secretary of State Kate Brown have cited Southwell and Burchett's results as an argument in favor of fully VBM elections.[3]

To date, however, there has been no attempt to replicate this result. We worry about the generalizability of Southwell and Burchett's result for three reasons. First, Oregon has always been a high turnout state. The average level of turnout among all eligible citizens in Oregon, considering primary and general elections, rose from 56.5% in 1990-1998 to 63.3% in 2000-2008.[4] This compares to national figures of 45.5% and 51.2% for the same periods.[5] The methodological implication of this disparity is that studies of turnout that

compare Oregon to other states may attribute the higher level of turnout to VBM, when it may in fact be a product of other features of Oregon's demographic makeup and political culture.

The second reason to wonder about the generalizability of the results is that the circumstances surrounding the first three vote-by-mail elections were unique. The primary (December 1995) and general (January 1996) Senate contests attracted considerable local and national media attention because they were special elections to replace a Senator, Bob Packwood, resigning during his term due to charges of sexual harassment and ethics violations. The March 1996 presidential preference primary was a "beauty contest" with no delegates at stake—the only time Oregon had ever held such a contest. These conditions raise the possibility that the high turnout in these elections was a function of the political circumstances of the three elections rather than a product of administrative reform.

Third, the 2000 paper needs to be reevaluated because Southwell herself has called it into question. In two recent articles Southwell reports variously that VBM has a statistically significant impact on turnout only in primaries and special elections (Southwell, 2009, p. 214) or only in special elections (Southwell, 2010, p. 110).[6] Laying the three articles next to one another, the number of elections, specifications, and conclusions are difficult to reconcile. We remark more on these inconsistencies later, and believe that this provides a strong rationale for an independent reexamination of the results.

VBM remains a hot topic in the election reform community. Unlike in 2000, when only a small number of states had either full VBM or no-excuse absentee balloting, 30 states and the District of Columbia now have these systems,[7] and legislation is regularly proposed in Congress that would mandate no-excuse absentee balloting for all federal elections.[8] Scholars have noted that no-excuse absentee voting systems experience much higher "ballot leakage" (Stewart, 2011) and "residual vote" (Gronke, Stewart, & Hicks, 2010) rates, while other critics point to the use of absentee ballots as a way commit fraud (Fund, 2008; Minnite, 2010, for a contrasting view). Nationwide, voters who cast a ballot by mail express lower levels of confidence that their vote will be counted as cast (Alvarez, Hall, & Llewellyn, 2008), and even in Oregon and Washington, those who remain opposed to vote by mail have less confidence than supporters (Stewart, 2011). Given the ongoing controversy, it is critical that we understand as fully as possible the costs and consequences of this policy reform. Thus, this article seeks to replicate Southwell and Burchett's findings, to extend the original analysis through the 2010 general election, and to test for the possibility of "novelty effects" in the first few VBM contests.

A Brief History of VBM in Oregon

Oregon adopted VBM as a local option in 1987. VBM was first used on a statewide basis to administer a 1993 special election.[9] By 1996, debates over VBM were in full force, but state legislators were wary of changing the rules of the electoral game. For elections officials, such as Secretary of State Phil Keisling, administering a "two-track" election system had become an administrative headache. Well over 80% of Oregonians were already voting via the absentee ballot, and Keisling (among others) saw no reason not to switch to a fully VBM system. The resignation of Senator Packwood gave Keisling the opportunity he needed; he ruled by administrative decree that the statewide elections to replace Packwood would be conducted entirely by mail. Furthermore, because the 1996 presidential primary in Oregon was a "beauty contest" that did not allocate delegates, Keisling also had the authority to administer this election by mail. Thus, the first elections for a candidate for public office administered by mail were (a) the special Senate primary in December 1995, (b) a special Senate general election in January 1996, and (c) a presidential preference contest in March 1996. After two unsuccessful attempts by the state legislature to implement the reform, VBM was adopted for all elections after the citizenry passed Measure 60 in November 1998.

A first cut at assessing the role of VBM in boosting turnout is a simple visual inspection of turnout trends, and this does not lend much support to the claim that VBM boosted turnout. Figure 1 displays turnout rates in general elections in Oregon from 1960 to 2010. The vertical line at 1998 indicates when VBM was adopted for all statewide races. The January 1996 special Senate election—with the third lowest rate of voter turnout among the elections in the figure—is also indicated in relation to other elections in the time period. The best-fit lines indicate turnout in presidential and midterm election years has remained fairly stable at 81% and 71%, respectively, since 1960. The special Senate election sits, relative to the best-fit lines, slightly below the average turnout in midterm elections.

Figure 2 displays turnout rates for primary elections, the special Senate primary, and the 1996 presidential primary for the same time period. Voter turnout in these elections has steadily declined over time. This figure highlights the distinctiveness of the 1995 Senate primary and 1996 presidential beauty contest, both of which deviate substantially from the trend line as well as the most proximate primary elections. The adoption of VBM does not appear to have affected the trend appreciably, although the 2008 primary election had about the same level of voter participation as the 1996 presidential primary (58.3% and 57.6%, respectively).
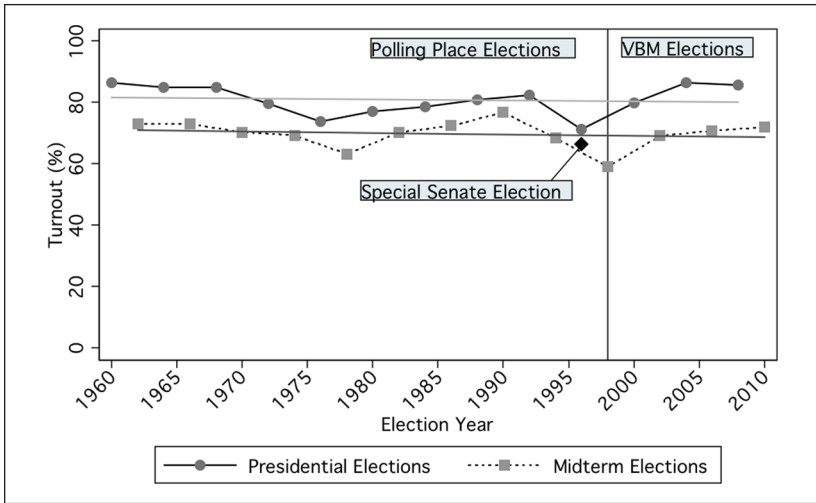
Figure 1. Turnout in Oregon general elections, 1960 to 2010
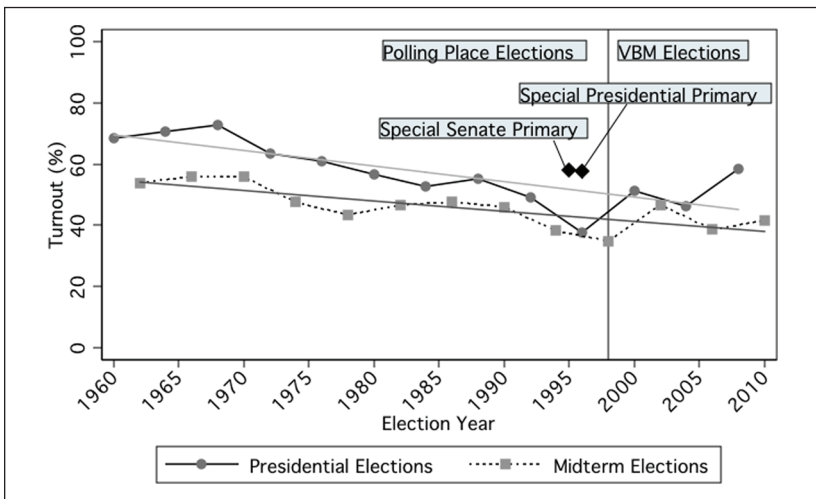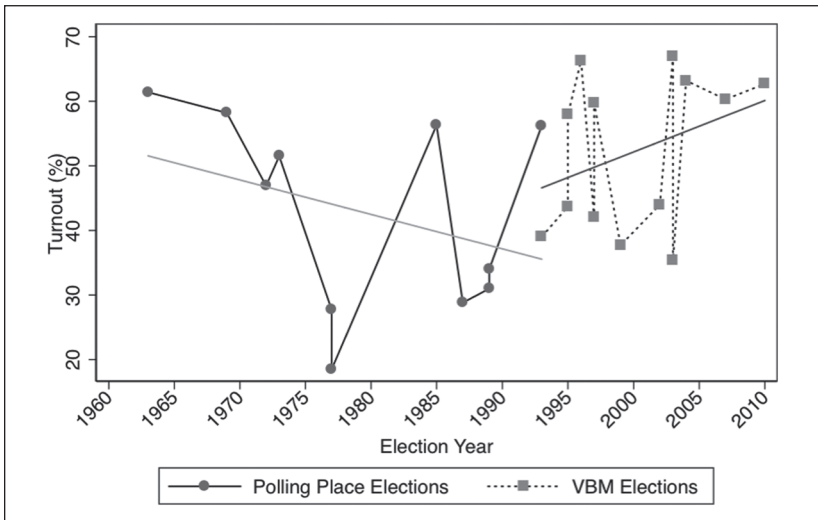

Figure 2. Turnout in Oregon primary elections, 1960 to 2010

One simple method to examine the link between turnout and VBM is to compare turnout in the first three VBM elections with average turnout in comparable elections from the 1960 to 1996 period. In the special Senate

Figure 3. Turnout in Oregon special elections, 1960 to 2010

primary turnout was 57.9%—compared to 47.4% in the seven Senate prima-
ries without a presidential race on the ballot. Turnout in the special Senate
general election was 66.3%—the average turnout in the six Senate general
elections without a presidential race is 71.2%. Finally, the turnout in the 1996
presidential primary was 57.6%—compared to an average turnout of 62.2%
in the three presidential primaries without a Senate race on the ballot. The
special Senate general and 1996 presidential primary show a *lower* level of
turnout than the comparable set of elections.[10] It is difficult to ascribe a posi-
tive turnout effect to VBM given these comparative statics.[11]

Our dataset includes 24 elections conducted at times other than May or
November. Figure 3 graphs the turnout in these special elections (11 con-
ducted with polling places and 13 by VBM) between 1960 and 2010. These
elections, given varying subject matter and electoral salience, exhibit higher
variability in turnout than either general or primary elections. Here, visual
inspection reveals a potential impact of VBM: special elections conducted
entirely by mail tended to have higher turnout than elections conducted
before the 1993 transition.[12] But, because of the varying subject matter of the
ballot measures, it is not entirely clear that the increase in turnout in special
elections is due solely to the implementation of VBM.

In summary, visual inspection of the turnout trends over time does not
lend much support to a claim that VBM stimulated turnout in Oregon.

Oregon was a high turnout state before VBM was adopted in 1998 and continues to be a high turnout state.

VBM and Turnout: A Review of the Literature

A second cut at assessing the role of VBM in boosting turnout is to examine other research. A close reading of this scholarship leads us to conclude that Southwell and Burchett's finding may be an outlier. Previous work (Gronke, Galanes-Rosenbaum, & Miller, 2007) that considered all types of early voting reforms estimated that VBM increased turnout by 4.7 percentage points in presidential and midterm elections in the 1980 to 2004 period.[13] Richey (2008) finds that VBM is associated with a positive effect, and of the same magnitude as Southwell and Burchett, but this may be a result of higher rates of voting in Oregon when compared to the rest of the United States, as noted earlier. Another study found no turnout effects of unrestricted absentee voting, early in-person voting, or mobile in-person voting, but did not include VBM in the estimated model (Fitzgerald, 2005). While it was once true that VBM was a "uniquely American form of election administration" (Hamilton, 1988, p. 860), VBM has been used in other nations with a modest turnout effect. A study of Swiss voters (Luechinger, Rosinger, & Stutzer, 2007) finds a turnout effect of 4.1 percentage points from 1970 to 2005. In one study where VBM is found to decrease turnout, the effect is also small. Kousser and Mullin (2007) analyze results from two general elections in California and find that VBM *decreases* turnout by 2.6 to 2.9 percentage points in general elections, but increase turnout in local elections by 7 percentage points. Furthermore, Giammo and Brox (2010) find any turnout effect of either VBM or early in-person voting is due to novelty of the reform and not sustained over time. These studies reinforce the claim that liberalized ballot access leads to a marginal change in turnout.[14]

Other studies develop a more nuanced claim: that VBM stabilizes turnout by retaining wavering, infrequent voters but does not bring new voters into the system (Berinsky, Burns, & Traugott, 2001; Karp & Banducci, 2000). According to this argument, there is a segment of the population that will not turn out to vote for almost any reason. VBM does not induce these voters to participate, but may transform occasional voters into frequent voters. Resource-rich voters tend to vote more frequently, and are more likely to become frequent voters in a VBM system.

A review of the existing literature indicates that VBM is associated with an increase in turnout, but its effect is modest in magnitude. Both the literature review and a visual inspection of turnout data in Oregon indicate that the 10 percentage point effect found by Southwell and Burchett is

potentially an outlier, and should be reexamined in light of fourteen additional years of experience with VBM in Oregon.

Data and Methods

In this section we replicate, as closely as possible, Southwell and Burchett's original findings. First, we extend the time-series dataset to include 14 additional years of Oregon elections. This is done to test for potential novelty effects of the reform. Second, we explore the possibility that the turnout effects of VBM are primarily evident in low-profile, low-interest contests, a pattern in line with the model of turnout as low-cost, low-benefit activity (Aldrich, 1993). We do so by adding all special (noncandidate ballot initiatives and referenda) elections to our dataset.

In their 2000 article, Southwell and Burchett analyze 48 candidate elections between 1960 and 1996.[15] Of these elections, the three 1995 and 1996 elections identified earlier were conducted by mail. We originally hoped to append elections conducted since 1996 onto the original dataset, but were unable to obtain the original data from the authors. Consequently, we have independently collected data on all elections conducted in Oregon since 1960.[16] The complete data series, including all sources and coding, is included in the appendix.

The original authors include independent dummy variables to control for the type of election (primary or general), the races included in the election (presidential, senatorial, and gubernatorial), the use of VBM, and a measure of competitiveness.[17] To demarcate those elections with a high rate of absentee voting (>50%) before the statewide adoption of VBM, they added a dummy variable for these "mixed" elections where the state was effectively running two voting systems in parallel: a system of polling places for voters who chose to vote on Election Day, and an absentee by mail system for voters opting to mail their ballot to the elections offices around the state. We reproduce these measures in our dataset, and code the 1996 and 1998 primary and general elections and the two 1997 special elections as mixed, based on absentee usage reported in the results of those elections.

Southwell and Burchett employ Beach–MacKinnon feasible generalized least squares to control for autocorrelation in the data (Beach & MacKinnon, 1978).[18] We question this methodological choice. We find only weak indications of autocorrelation in the data, for both the 1960 to 1996 subset and the full dataset.[19] In order to remain as true to the original study as possible, but also use the appropriate methodology, we employ two different estimation techniques.[20] These are:

1. Ordinary least squares
2. Models estimated via Prais–Winsten (AR[1])

Prais–Winsten should replicate the FGLS results of Southwell and Burchett. To make certain that we are estimating the same model using the same data, as well as to test our hypotheses, we report estimates for two separate datasets:

1. Data from 1960 to 1996 as originally reported by Southwell and Burchett
2. Data from 1960 to 2010 (including special elections)

We then broaden the scope of the analysis to include a study of *all* statewide elections during the 1960 to 2010 period, including special elections (all ballot referrals and initiatives). While these variations are relatively elaborate, we think these are essential in order to fairly replicate the original analysis, account for the likely lower turnout in special elections, and to isolate any potential novelty effects of VBM.

Replication Results

The findings of Southwell and Burchett and our replication of the 1960 to 1996 and 1960 to 2010 data are shown in Table 1. The most direct comparison, we believe, is between column one and column three—Southwell and Burchett's table 1 and our Prais–Winsten estimates for the same period. Two things are evident from this first set of results. First, we are unable to fully replicate Southwell and Burchett's findings. The OLS results are closest to their estimates, but the Prais–Winsten estimation, which should replicate their FGLS results, produces only a small and statistically indiscernible impact of VBM on turnout. Using the full dataset, we continue to find a nonsignificant impact of VBM on turnout.

Our inability to replicate the original finding is troubling. We and the original authors are working from the same set of data—Oregon electoral statistics since 1960—but our findings, in large part, refute the original claim that VBM increases turnout.

It is possible, of course, that we have misunderstood or misestimated the model in some way—the different observation counts may indicate as much—but a manual inspection of the data series from this period provides support for our model and casts further doubt on the original estimation (because all the variables other than election competitiveness are dummy variables, making these comparisons is straightforward). The average turnout in elections without

Table 1. Original Findings and Replications

	1960-1996			1960-2010	
	Original findings	OLS	Prais–Winsten	OLS	Prais–Winsten
Primary election	−21.89***	−18.35***	−17.94***	−19.41***	−19.4***
	(3.22)	(3.56)	(3.11)	(3.10)	(2.96)
Presidential election	17.62***	32.8***	30.02***	28.84***	28.50***
	(4.52)	(4.11)	(3.80)	(3.45)	(3.41)
Senatorial election	0.39	5.96**	5.87*	4.92*	4.57
	(2.21)	(3.13)	(3.26)	(2.71)	(2.77)
Gubernatorial election	7.11	22.17***	19.68***	16.85***	16.48***
	(4.73)	(4.29)	(4.05)	(3.51)	(3.50)
Voting-by-mail	10.17**	8.63*	2.53	2.8	2.33
	(4.9)	(5.01)	(5.45)	(2.51)	(2.71)
Mixed election	−0.13	−1.17	−1.72	−4.26	−3.85
	(2.39)	(7.35)	(8.41)	(4.32)	(4.7)
Election competitiveness	0.18	−1.01	2.43	3.68	5.2
	(0.83)	(6.99)	(6.92)	(5.85)	(5.85)
Constant	61.35***	43.26***	43.20***	44.28***	43.73***
	(5.84)	(5.46)	(5.53)	(4.89)	(4.97)
AR(1) error detected?	Yes	Inconclusive	Inconclusive	Inconclusive	Inconclusive
Adjusted R^2	0.78	0.66	0.71	0.63	0.65
Observations	48	53	53	76	76

Notes. Original findings are from Table 1 in Southwell and Burchett (2000). Other results are from data collected by the authors. ** indicates $p < .05$; *** indicates $p < .01$. First-order autocorrelation is detected by means of Durbin−Watson critical values, except for the original findings where first-order autocorrelation is assumed. The excluded category is general elections. Standard errors are in parentheses.

a presidential, senatorial, or gubernatorial race on the ballot between 1960 and 1996 was 40.9%. Turnout in year where there was a presidential contest averaged 71%. This 31 percentage point boost is virtually identical to what we report in columns two and three of Table 2. Adding a gubernatorial contest increases turnout to 58.3%, again nearly identical to our estimates. These comparisons strengthen our confidence that our estimates are accurate.

We now turn to the full set of all elections, including the special elections, to test our hypotheses that (1) any turnout effect of VBM in Oregon is due to a novelty effect and (2) that the turnout effect of VBM will be higher in special elections. We elaborate on the previous model by capturing novelty effects directly.

The first panel in Table 2 demonstrates a novelty effect when the full set of elections is included in the analysis. The boost to turnout observed in the

Table 2. Extended Models Adding Novelty Effects, Special Elections, and Alternative Turnout Estimates

	Novelty effects	Specials and primaries	Using voting age population	Using voting eligible population
Primary election	−21.22***	−21.73***	−19.68***	−19.00***
	(3.1)	(3.47)	(2.66)	(2.75)
Presidential election	29.74***	14.94	10.86	10.52
	(3.43)	(10.43)	(8.32)	(8.40)
Senate election	3.82	2.68	2.19	2.62
	(2.70)	(2.61)	(2.23)	(2.29)
Gubernatorial election	18.27***	3.57	2.36	2.56
	(3.54)	(10.35)	(8.24)	(8.31)
Vote-by-mail election	0.98	-0.66	0.51	1.1
	(2.52)	(4.15)	(1.99)	(2.11)
Mixed election	−3.59	−8.26**	−0.65	−0.96
	(4.25)	(4.12)	(3.46)	(3.51)
Election competitiveness	1.54	−1.79	3.74	4.47
	(5.76)	(5.59)	(4.64)	(4.72)
First three VBM elections	13.74**	15.53**	9.14*	8.41*
	(6.29)	(6.34)	(4.81)	(4.89)
Special election	—	−22.14*	−14.68*	−14.38*
		(11.34)	(8.71)	(8.80)
VBM*Special	—	10.97*	—	—
		(5.84)		
VBM*Primary	—	−5.79	—	—
		(5.74)		
Constant	46.45***	66.06***	45.41***	44.28***
	(4.70)	(11.96)	(9.46)	(9.58)
AR(1) error detected?	No	No	No	No
Adjusted R^2	0.64	0.68	0.69	0.68
Observations	77	77	65	63

Notes. Results are from data collected by the authors. * indicates $p < .10$; ** indicates $p < .05$; *** indicates $p < .01$. First-order autocorrelation is detected by means of Durbin–Watson critical values. The excluded category is general elections. Voting age population (VAP) data is based on Census reports from 1970 to 2010. Voting eligible population (VEP) is based upon state-level estimates calculated by Michael McDonald for general elections 1980-2010. We use interpolated values of VEP estimates for missing cases. Standard errors are in parentheses.

first three VBM elections is larger than the original finding presented by Southwell and Burchett.[21] Importantly, we find no statistically discernible impact of VBM on turnout after the first three elections. The second column in Table 2 includes a dummy variable for special elections as well as interactive terms for the use of VBM in special and primary elections. Here, the data indicate a substantial turnout boost associated with the first three VBM elections, on the order of 15 percentage points. Second, we find that special

elections (importantly, not including the two special Senate elections) display turnout 22 percentage points below the average general election. It is in the specials where we find a notable impact of VBM, reducing the turnout decline by about 11 percentage points. These effects are maintained regardless of whether we use OLS or Prais–Winsten.

Thus far, we have operationalized turnout as the proportion of registered voters casting a ballot. A second common conceptualization of turnout is based on the voting-age population, regardless of registration status. Other scholars have developed a third measure of turnout, measuring the "voting eligible" population that participates in an election (McDonald & Popkin, 2001). There is some reason to conclude an alternate measure of turnout may be appropriate in Oregon, as registered Democratic voters are more likely to be moved to the list of inactive voters by Republican election officials than fellow Republican voters (Dyck & Seabrook, 2009). To test the robustness of our results thus far, we estimate two additional models of turnout in Oregon using voting-age and voting-eligible population estimates. Table 2 includes these results. These results do not differ greatly from our main argument, that VBM has not increased turnout in Oregon.

Conclusion

Since the election debacle of 2000, election administration in the United States has come under scrutiny by advocates, academics, and legislators at both the state and federal levels. One commonly suggested reform is VBM. Following the lead of Oregon, VBM will, its supporters claim, lower costs, improve efficiency, and increase voter turnout. We have focused on this last claim, attempting to replicate and extend one of the most commonly cited results, Southwell and Burchett's (2000) article showing a 10 percentage point boost in turnout after the adoption of VBM.

We examined the result in three ways. First, we provided graphical displays of turnout in Oregon. Visual inspection revealed that the first three VBM elections were clearly outliers from long-term trends in turnout in the state. Second, we reviewed other academic studies of VBM, most of which showed a significant but small (2% to 4%) bump in turnout. Finally, we attempted as best we could to replicate and extend the results. Our analytical results demonstrated that the original 10 percentage point finding was a consequence of a novelty effect of the first three VBM contests and was not a long-term effect of the new voting system. Our final analysis shows that any turnout effects of VBM are most likely limited to subfederal contests, precisely where voter interest is lowest and the relative impact of a minor lowering of the costs of voting would be greatest.

Appendix

In the interests of transparent and reproducible research, we felt it necessary to provide open access to the data we collected in the course of this project examining the effect of VBM in Oregon elections. We provide the data in tabular form in this appendix and can provide a Stata dataset to users upon request.

Election[a]	Turnout (% registered voters)[b]	Turnout (% eligible)	VBM election[c]	First 3 VBM elections	Presidential election	Senatorial election	Gubernatorial election	Mixed election	Competition	Top race[d]	Number of ballot measures[e]
1960 Primary	68.50		0	0	1	1	0	0	0.46	Presidential	1
1960 General	86.50		0	0	1	1	0	0	0.948	Presidential	15
1962 Primary	53.90		0	0	0	1	1	0	0.622	Senatorial	2
1962 General	73.00		0	0	0	1	1	0	0.874	Gubernatorial	9
October 1963 special	61.40		0	0	0	0	0	0	0.555	Ballot issue	1
1964 Primary	70.70		0	0	1	0	0	0	0.479	Presidential	1
1964 General	84.90		0	0	1	0	0	0	0.722	Presidential	4
1966 Primary	55.90		0	0	0	1	1	0	0.547	Senatorial	2
1966 General	73.00		0	0	0	1	1	0	0.965	Senatorial	2
1968 Primary	72.80		0	0	1	1	0	0	0.747	Presidential	3
1968 General	84.80		0	0	1	1	0	0	0.94	Presidential	7
June 1969 special	58.20		0	0	0	0	0	0	0.229	Ballot issue	1
1970 Primary	55.80		0	0	0	0	1	0	0.315	Gubernatorial	6
1970 General	70.30		0	0	0	0	1	0	0.886	Gubernatorial	11
January 1972 special	46.90		0	0	0	0	0	0	0.982	Ballot issue	1
1972 Primary	63.40		0	0	1	1	0	0	0.491	Presidential	6
1972 General	79.60		0	0	1	1	0	0	0.899	Presidential	9
May 1973 special	51.50		0	0	0	0	0	0	0.829	Ballot issue	1
1974 Primary	47.50		0	0	0	1	1	0	0.849	Gubernatorial	6
1974 General	69.30		0	0	0	1	1	0	0.844	Gubernatorial	14

(continued)

Appendix (continued)

Election[a]	Turnout (% registered voters)[b]	Turnout (% eligible)	VBM election[c]	First 3 VBM elections	Presidential election	Senatorial election	Gubernatorial election	Mixed election	Competition	Top race[d]	Number of ballot measures[e]
1976 Primary	61.00		0	0	1	0	0	0	0.943	Presidential	4
1976 General	73.80		0	0	1	0	0	0	0.998	Presidential	12
May 1977 special	27.70		0	0	0	0	0	0	0.617	Ballot issue	3
November 1977 special	18.50		0	0	0	0	0	0	0.977	Ballot issue	2
1978 Primary	43.40		0	0	0	1	1	0	0.774	Gubernatorial	6
1978 General	63.20		0	0	0	1	1	0	0.902	Gubernatorial	12
1980 Primary	56.70		0	0	1	1	0	0	0.775	Presidential	6
1980 General	77.10	64.32	0	0	1	1	1	0	0.903	Presidential	8
1982 Primary	46.60		0	0	0	0	1	0	0.422	Gubernatorial	5
1982 General	70.20	56.12	0	0	0	1	1	0	0.745	Gubernatorial	6
1984 Primary	52.70		0	0	1	0	0	0	0.365	Presidential	2
1984 General	78.70	66.38	0	0	1	1	0	0	0.878	Presidential	9
September 1985 special	56.30		0	0	0	0	0	0	0.45	Ballot issue	1
1986 Primary	47.60		0	0	0	1	1	0	0.469	Gubernatorial	5
1986 General	72.40	56.42	0	0	0	1	1	0	0.96	Gubernatorial	17
May 1987 special	28.80		0	0	0	0	0	0	0.891	Ballot issue	2
1988 Primary	55.10		0	0	1	0	0	0	0.632	Presidential	2
1988 General	80.80	62.31	0	0	1	1	0	0	0.953	Presidential	8
May 1989 special	31.00		0	0	0	0	0	0	0.825	Ballot issue	1
June 1989 special	34.00		0	0	0	0	0	0	0.196	Ballot issue	2
1990 Primary	46.00		0	0	0	1	1	0	0.177	Gubernatorial	9
1990 General	76.70	55.06	0	0	0	1	1	0	0.942	Gubernatorial	11
1992 Primary	49.10		0	0	1	1	0	0	0.69	Presidential	1

(continued)

Appendix (continued)

Election[a]	Turnout (% registered voters)[b]	Turnout (% eligible)	VBM election[c]	First 3 VBM elections	Presidential election	Senatorial election	Gubernatorial election	Mixed election	Competition	Top race[d]	Number of ballot measures[e]
1992 General	82.40	68.18	0	0	1	1	0	0	0.9	Presidential	9
June 1993 special	39.00		1	0	0	0	0	0	0.554	Ballot issue	1
November 1993 special	56.20		0	0	0	0	0	0	0.504	Ballot issue	1
1994 Primary	38.20		0	0	0	0	1	0	0.566	Gubernatorial	1
1994 General	68.40	56.26	0	0	0	0	1	0	0.915	Gubernatorial	18
May 1995 special	43.70		1	0	0	0	0	0	0.259	Ballot issue	2
1995 Special senate primary	57.90		1	1	0	1	0	0	0.781	Senatorial	0
1996 Special senate general	66.30		1	1	0	1	0	0	0.985	Senatorial	0
March presidential primary	57.60		1	1	1	0	0	0	0.405	Presidential	0
1996 Primary	37.80		0	0	0	1	0	1	0.527	Senatorial	3
1996 General	71.30	60.60	0	0	1	0	0	1	0.919	Presidential	23
May 1997 special	42.10		1	0	0	0	0	1	0.886	Ballot issue	2
November 1997 special	59.70		1	0	0	0	0	1	0.802	Ballot issue	2
1998 Primary	34.90		0	0	0	1	1	1	0.406	Senatorial	1
1998 General	59.00	48.95	0	0	0	1	1	1	0.727	Senatorial	13
November 1999 special	37.70		1	0	0	0	0	0	0.905	Ballot issue	9
2000 Primary	51.30		1	0	1	0	0	0	0.279	Presidential	6
2000 General	79.80	65.95	1	0	1	0	0	0	0.996	Presidential	26
2002 Primary	46.70	33.70	1	0	0	1	1	0	0.86	Gubernatorial	3

(continued)

Appendix (continued)

Election[a]	Turnout (% registered voters)[b]	Turnout (% eligible)	VBM election[c]	First 3 VBM elections	Presidential election	Senatorial election	Gubernatorial election	Mixed election	Competition	Top race[d]	Number of ballot measures[e]
September 2002 special	44.00	32.10	1	0	0	0	0	0	0.712	Ballot issue	2
2002 General	69.10	51.84	1	0	0	1	1	0	0.834	Senatorial	12
January 2003 special	66.90	49.26	1	0	0	0	0	0	0.92	Ballot issue	1
September 2003 special	35.40	25.49	1	0	0	0	0	0	0.895	Ballot issue	1
February 2004 special	63.20	45.15	1	0	0	0	0	0	0.821	Ballot issue	1
2004 Primary	46.40	33.27	1	0	1	1	0	0	0.239	Presidential	0
2004 General	86.50	72.59	1	0	1	1	0	0	0.958	Presidential	8
2006 Primary	38.60	28.82	1	0	0	0	1	0	0.818	Gubernatorial	0
2006 General	70.80	53.24	1	0	0	0	1	0	0.92	Gubernatorial	10
November 2007 special	60.30	42.33	1	0	0	0	0	0	0.815	Ballot issue	2
2008 Primary	58.30	41.86	1	0	1	1	0	0	0.488	Presidential	3
2008 General	85.70	68.11	1	0	1	1	0	0	0.443	Presidential	12
January 2010 special	62.70	45.24	1	0	0	0	0	0	0.915	Ballot issue	2
2010 Primary	41.60	29.55	1	0	0	1	1	0	0.787	Gubernatorial	2
2010 General	71.90	53.49	1	0	0	1	1	0	0.985	Gubernatorial	7

[a]Election dates: 1995 to 2010 from http://oregonvotes.org/pages/history/archive/index.html. Pre-1995 dates from http://bluebook.state.or.us/state/elections; these data are also used to replicate the Oregonvotes website.

[b]Turnout: http://oregonvotes.org/history/stats/turnout.html

[c]VBM: http://oregonvotes.org/pages/history/stats/specsumm.html for specials and http://library.state.or.us/databases/subjects/Voters_Pamphlet.php (the first page of describes the voting method, necessary for coding special elections prior to the 1998 initiative).

[d]Top race: 1995-present, Oregon Elections website (http://oregonvotes.org/pages/history/archive/index.html); replication and pre 1995 data older data obtained from the Official Abstract of Votes (Oregon Elections Division).

[e]See Bluebook cited in footnote (a) and Pamphlets cited in footnote (c).

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Notes

1. It should be noted that not all "mail" ballots are necessarily returned by mail and not all ballots are cast "early." In Oregon, between 15% and 25% of ballots are dropped off by hand on election day, and there is no tracking of how many ballots are dropped off in satellite locations such as public libraries.

2. Thompson (2004, 2008) claims that early voting is associated with a dilution of civic engagement. Conversely, Richey (2005) finds that voting by mail increases the level of political discussion, but this study is limited to just 1998 and 2000, and we have not found any other studies of this type.

3. The piece is the first article returned on a Google Scholar search of "vote-by-mail turnout" and has been cited 79 times. Search conducted on March 16, 2012.

4. Voting by mail was adopted on an experimental basis for two special elections in 1995 and 1996 and for a presidential preference primary in 1996. In 1998, voting by mail was adopted statewide by referendum. The figures reported here are for 1990 to 1998 for "before adoption" and 2000 to 2008 for "after adoption." The magnitude of the change is similar if calculated for other periods.

5. Percentages calculated from voting eligible population figures are available at: http://elections.gmu.edu/voter_turnout.htm.

6. Southwell does note a "boost to turnout in presidential elections as a result of VBM (that) is somewhat remarkable" (Southwell, 2010, p. 111) and goes on to speculate that this may be due to the removal of the "bad day" phenomenon for habitual voters. The explanation does not work on two counts. First, theoretically, a "bad day" phenomenon, if there is such an effect, would be more evident in midterm elections, where voter enthusiasm is generally lower, yet the results show a 15.5% *decline* in midterm turnout after the implementation of VBM. Second, the absolute effect of VBM, given a dummy variable specification, is the difference between the coefficient in non-VBM elections (0.174) and in VBM elections (0.263). It is not clear if Southwell was interpreting that difference as "remarkable," but the result, 0.089, is statistically indiscernible from zero given the reported standard errors (Southwell, 2010, Table 2, p. 110).

7. A list of states with no-excuse absentee and fully VBM is available from the National Conference of State Legislatures' "Absentee and Early Voting" page, http://www.ncsl.org/default.aspx?tabid=16604, accessed April 20, 2011.

8. The Voter Confidence and Increased Accessibility Act of 2009 (HR 2239), the Universal Right to Vote by Mail Act of 2009 (HR 1604) and the Universal Right to Vote by Mail Act of 2010 (S.3299) are three examples of Congressional action aiming to expand no-excuse absentee voting to all voters in the United States.

9. By "special election" we mean an election conducted at a time other than the regularly scheduled May primary and November general elections. Typically these special elections are called to put ballot measures (variously referred to as initiatives, referenda, or petitions) before the electorate. The 1995/1996 elections to replace Senator Bob Packwood and the "beauty contest" in March 1996 for the presidential primary are unique exceptions to this rule.

10. The seven Senate primaries without a presidential race are 1962, 1966, 1974, 1978, 1986, 1990, and 1996. The six Senate generals without a presidential race are 1962, 1966, 1974, 1978, 1986, and 1990. The three presidential primaries without a Senate race are 1964, 1976, and 1988.

11. These three figures are, in our mind, an important caveat to recent testimony given by Oregon Secretary of State Kate Brown before the Postal Commission, in which she claimed that VBM increases turnout, particularly in small, lower profile elections (Brown, 2010). It is possible that this statement is accurate with respect to specials, and we have not to date collected information on state legislative, county, or municipal contests, but with respect to statewide elections, the statement is not accurate.

12. As noted, Southwell came to the same conclusion in her two most published pieces (Southwell, 2009, 2010), which shows that voting by mail increases turnout in Oregon *only* in special elections, but she finds no statistically significant impact of VBM in presidential, primary, or off-year elections (Southwell, 2009, p. 214).

13. Because only Oregon has voting by mail in the time period considered by this research, the estimate was essentially an estimate of the effect of VBM in that state, independent of the other covariates included in the model.

14. Another outlier study is that of David Magleby, who conducted one of the first studies of VBM, and found a turnout effect of 19% (Magelby, 1987). We surmise the Magleby's work, which compares turnout from 1980 to 1984 in Oregon, Washington, and California may provide insight into how voting by mail, and by implication, other convenience voting reforms, interact with campaign intensity to affect turnout. The only elections in which voting by mail was legal during this period was for some local and special (ballot measure) elections, so essentially

Magleby is comparing apples and oranges—voting by mail in local and ballot measures to turnout in federal elections where voting by mail was not allowed. In order to precisely estimate the effect of voting by mail on, say, a local election, we need to compare a federal election and a local election, both of which are administered under voting by mail.

15. In the abstract of the paper and Table 1 of Southwell and Burchett report a sample size of 48 elections, but the text reports 46 elections (Southwell & Burchett, 2000, p. 73). We are not sure which is the correct number; we find 38 candidate elections occurred between 1960 and 1996. Multiple cuts at the data indicate to us that they must have unwittingly included special elections in the original dataset; however, including these still does not result in 48 cases.

16. Professor Southwell generously provided a dataset covering a different time period (1980-2004), but after independent coding, we differed with her both on the number of elections that were conducted during this period and also on the coding of some elections. Our count of the total number of statewide elections conducted from 1960 to 1996 is 38, excluding the three VBM specials in 1995/1996. If we count elections from 1960 to 1996 and include all elections, *including all specials*, our total count is 54, which is closer but not equal to the total reported in the 2000 article. We include special elections in our model in Table 1 because these results are a closer replication of the original findings than a model that excludes special elections. In addition, diagnostic tests described later make it clear that Southwell and Burchett must have included special elections. We have not focused on the 2009 and 2010 papers for reasons noted in the introduction, but the election totals in those papers also do not correspond to our data, and we were unable to obtain these data from Professor Southwell.

17. The original authors operationalize competitiveness as "the percentage difference between the winner and the candidate finishing second in the statewide race on the ballot with the largest number of ballots cast" (Southwell & Burchett, 2000, p. 75). However, this really describes the *noncompetitiveness* of the election in question as low values of this measure actually indicate a close race. We quantify competition in general and special elections as:

$$\text{Competition} = 1 - \frac{V_1 - V_2}{B}$$

where V_1 and V_2 are the vote totals for the winner and runner-up, respectively, and B is the total ballots cast in the race with the most ballots cast. For primary elections, we adapt the above formula to account for intraparty competition:

$$\text{Competition} = 1 - \frac{\dfrac{V_{D1} - V_{D2}}{B_D} + \dfrac{V_{R1} - V_{R2}}{B_R}}{2}$$

where D and R subscripts apply to the Democratic and Republican candidates, respectively. Competition is scaled from 0 to 1; 1 indicates an electoral result where the vote was evenly split between two candidates or issues (as competitive as possible) and 0 indicates a case where one candidate or ballot measure captured every vote (no competition). In our data, competitiveness ranges between 0.117 and 0.998.

18. Prais–Winsten is analogous to Beach–MacKinnon and is readily available in current statistical packages (Beach–MacKinnon is unavailable in any current statistical program with which we are familiar).

19. The Durbin–Watson statistic in both the subset and full dataset is between the lower and upper critical values, an inconclusive result, although close to the upper bound indicating positive autocorrelation.

20. We test for first-order autocorrelation in each of our models. We present both OLS and Prais–Winsten estimates because most of the tests for autocorrelation are inconclusive.

21. One reason we do not observe a turnout effect of VBM in Table 1, but do see an effect in Table 2 is that, as Figure 2 makes clear, the 1995 special Senate primary and the 1996 presidential primary exhibited higher turnout than average, even when considering subsequent VBM elections.

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