CALTECH/MIT
VOTING TECHNOLOGY PROJECT

A multi-disciplinary, collaborative project of
the California Institute of Technology – Pasadena, California 91125 and
the Massachusetts Institute of Technology – Cambridge, Massachusetts 02139

THE INFLUENCE OF INITIATIVE SIGNATURE GATHERING CAMPAIGNS ON POLITICAL PARTICIPATION

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Key words: *political participation, initiatives, signature gathering, ballot rolloff*

The Influence of Initiative Signature Gathering Campaigns on Political Participation

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December 12, 2005

Abstract

Does direct democracy increase political participation? How? Rather than focus on state-level effects of the initiative process, this paper studies the direct effect of signature gathering campaigns on participation within a state. We test whether parts of the state that are subject to more intense signature gathering campaigns, measured by the number of signatures gathered per capita, experience greater levels of political participation. We examine three measures of participation: registration, turnout, and ballot rolloff. Our key variable is the intensity of the signature gathering campaign across eight specific ballot measures or across measures for four specific elections. Grouped logit analysis demonstrates that the intensity of signature gathering campaigns is strongly related to these measures of political participation. In addition, we also study how signature gathering intensity influences vote choice on associated measures, finding that on average increased signature gathering intensity increases support for a measure.

1   Introduction

Political participation by citizens is a crucial component of democracy. In recent decades, there has been substantial research documenting the basic correlates of voter turnout (e.g., Wolfinger and Rosenstone 1980: Rosenstone and Hansen 1993), of broader patterns of political participation (Verba, Scholzman and Brady 1995; Putnam 2000), and on the decline in political participation (Patterson 2002). The literature on political participation is rich and extensive, and this no doubt reflects upon the importance that political scientists place on the role of participation in democratic society.

Given this concern with political participation (especially the distressing declines in some forms of participation [Patterson 2002]), some scholars have turned their attention to the effect of political institutions, including the initiative and referendum process, on participation (Tobert, McNeal and Smith 2003). Forms of direct legislation such as the direct and indirect initiative process give voters the opportunity to participate directly in state policymaking decisions. By expanding opportunities for involvement in this manner, the initiative process may give voters greater incentives to participate.

The potential of the initiative process to increase individual political participation was not lost on many of its founders; at the turn of the nineteenth century these reformers expected and desired to create a more involved and informed citizenry. Progressive Era advocates of the initiative process hoped that the adoption of various reforms, particularly the initiative, referendum and recall, would be an important step in this process. Part of their motivation was a perceived tilt in the balance of power towards increasingly large and important business interests, often corporate monopolies, that were subjugating state governments to their needs.[1] Their institutional solution to this governance problem was to institute a variety of checks on state government that would increase its responsiveness to the interests of the general population.

In the eyes of these reformers, the institutions of direct legislation would energize

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[1]See Cain and Miller ([2001]) or Goebel ([2002]) for a discussion of the various goals and motivations for Progressive and Populists reformers.

and activate average citizens. By seizing control of their state government from narrow economic interests, reformers anticipated that citizen confidence in the political process would return. By providing citizens with the opportunity to directly participate in government decisions through the initiative and referendum and to control officials that moved out of step with their preferences through the recall, reformers hoped to produce greater civic engagement by the common person.

Of course, reformers realized that untrammeled access to the ballot could lead to an excess of proposals that would overwhelm voters, so they adopted various requirements to ensure sufficiently broad support for proposals before they were placed on the ballot. The chief mechanism for demonstrating this support was (and continues to be) the requirement to gather signatures from a minimum percentage of a state's voters, usually between five and fifteen percent of turnout in the previous gubernatorial election. Besides demonstrating the existence of a sufficiently large and dedicated set of volunteers to circulate petitions and obtain signatures from a sizable number of interested voters, the purpose of these signature gathering campaigns was to generate discussion between petitioners and citizens and ultimately between citizens and other citizens about the relative merits of each proposal. This would produce meaningful public policy debate and lead to intelligent, informed decisions about public policy by voters on election day.

And while it is unlikely that this vision of Progressive reformers was ever truly realized, even in their day and time, it is clear that we are far from it today (see, e.g., Ellis [2002]). Modern initiative campaigns are often said to be battles among wealthy economic interest groups who use ballot access as just one more ploy in their attempts to leverage their financial resources to obtain more favorable policy. Signature requirements have been reduced from campaigns of activation and debate to tests of the depth of supporters' pockets. The rise of the initiative industry means that signatures can be contracted for and treated as just one more expense and that groups no longer have to be supported by a passionate and mobilized set of supporters who will sacrifice their time to get their interests on the ballot.

In this paper we seek to determine whether the general perception that signature gathering campaigns do not activate or educate voters is accurate, or whether they do in fact result in increased engagement and debate that manifest themselves through increased participation and differences in opinion. We address these issues using data on signature gathering for eight recent California initiatives spanning four elections. Using these data we construct a measure of the intensity of signature gathering campaigns across counties. We then conduct regression analysis to test whether this variable relates to measures of political participation and opinion, including rolloff and vote choice for the corresponding ballot measures, and overall turnout and registration in the corresponding election. Our results indicate that signature gathering intensity has a strong effect on both participation and vote choice.

2 The Initiative Process and Political Engagement

The Progressive ideal was that increasing the involvement of the average citizen in the process of state policy-making would lead to a more educated and informed populace. By asking citizens to vote directly on policy matters, the initiative and referendum process would increase their stake in the political process. Whether this intention has played out as expected is the subject of much interest, particularly in the face of increasing criticism of the process in general and voters' ability to cast informed ballots on potentially complicated policy matters that may involve a host of unanticipated consequences.[2]

Over the past quarter century a variety of scholars have returned to the question of whether the initiative process has any effect on individuals' political engagement and informedness (Everson [1981]; Smith [2001]; Tolbert, Grummel and Smith [2001]; Tolbert and Smith [2005]; Smith and Tolbert [2004]; Tolbert, McNeal and Smith [2003]). The primary behavior of interest is usually state-level or individual turnout, though other measures have been employed. Overall, the results indicate that states with the initiative

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[2]See Bowler and Donovan ([1998]) and Lupia ([1992], [1994]) for theoretical and empirical arguments that voters are able cast informed votes on initiatives, often by relying on a variety of cues and information shortcuts.

process have greater turnout compared to states without the initiative process. Estimates range from zero to eight percent, with midterm and low-information elections exhibiting greater increases than general elections.

Recently, more detailed analyses have sought to obtain a better understanding of how the initiative process alters turnout. The variance across states in the rules, use and importance of the initiative process suggest that its effect on participation may vary as well. Perhaps the most important variable that has been considered is the frequency with which initiatives appear on the ballot. This variable can have different interpretations. First, if initiatives directly spur participation we would expect turnout to increase when states have more initiatives on the ballot. Second, the recurring use of the initiative process might generate a more involved and active electorate, suggesting that average use of the initiative process matters. In practice it is difficult to separate these two explanations because they are often highly correlated.[3] Overall, though, the evidence suggests that turnout does increase with some measure of frequency of initiative use.[4]

An alternate way to distinguish long-term from short-term effects of the initiative process is to separate salient initiatives from less salient ones. If there is a short-term effect for a single election, then we would expect turnout to be greater when the number of salient initiatives on the ballot goes up. Using newspaper coverage of initiatives in the months before an election, Smith ([2001]) finds that this relationship holds for midterm, but not for general elections.

Besides turnout, scholars have examined other measures of political participation. Tolbert, McNeal and Smith ([2003]) find that individuals in states with the initiative process are more likely to make contributions to organized interests, suggesting that the initiative process increases overall political engagement and not just election-day behavior. Other studies of interest group behavior indicate that states with the initiative

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[3]For example, Smith ([2002]) employs them in separate regressions, but not jointly, finding that average use has a significant effect on knowledge whereas current year use does not.

[4]Though see Bowler and Donovan ([2004]) for a discussion of how to measure variation in the effect of the initiative process across states and the construction a more general index of the ease of ballot access across states.

process have more interest groups, particularly more broad-based citizen interest groups (Boehmke [2002]). Additionally, interest groups in initiative states have more members, on average, than groups in non-initiative states (Boehmke [2005]). This evidence is consistent with a greater propensity for citizens to join interest groups in direct legislation states.

Finally, scholars have found that voters in initiative states may be more politically informed as well (Smith [2002]; Smith and Tolbert [2004]; Tolbert, McNeal and Smith [2003]). When asked questions regarding general political knowledge (unrelated to the initiative process), voters in initiative states correctly answered more questions. This result, along with the turnout and interest group contributions findings, is not consistent across elections, suggesting that additional circumstances must obtain for the initiative process to influence individual behavior. In particular, the effect seems to be greatest in midterm and low-information elections, or when initiative politics and federal elections become intertwined (Tolbert, McNeal and Smith [2003]).

Taken together, these findings indicate that the initiative process may yet produce a more active and involved citizenry. Further, because the effect is not limited solely to turnout, it appears that the initiative process can generate a generally more interested and politically active populace. These findings are consistent with the hopes of Progressive reformers that the tools of direct legislation would encourage greater involvement and activity by common citizens in the face of increasing dominance on the part of business interests. In addition, these consequences of the initiative process provide an important counter to claims that direct legislation has been co-opted by wealthy economic interests to further their own goals rather than serving as a check on their already dominant influence in the legislature (Broder [2000]; Ellis [2002]; Schrag [1998]; Smith [1998]).[5] Yet none of these studies directly address the role of the signature gathering process in the modern initiative process to determine whether it still plays an important role in activating citizen

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[5]Whether the initiative process ever truly captured original reformers ideal is not entirely clear as business interests immediately saw its potential and began using it to their advantage (Ellis [2002]; Goebel [2002]).

involvement.

3   Signature Gathering and Political Engagement

The recent history of the initiative process suggests that even if signature gathering increased citizen interest in the past, it may struggle to do so in its current form. With the rise in the involvement of economic interests in the initiative process, combined with a resurgence in overall use of the process in the last thirty years has come a concomitant rise in the number of firms and consultants available to assist sponsors in qualifying and passing their measures (see, e.g., Donovan, Bowler and McCuan [2001]). The growth in the initiative industry has fueled the charge that all that matters for qualification is the depth of the sponsor's pockets. And while the existence of an industry devoted to qualifying and promoting initiatives is not a new phenomenon (Goebel [2002]; McCuan, Bowler, Donovan and Fernandez [1998]), its profile has certainly increased in the recent past, particularly following the Supreme Court's 1988 ruling in *Meyer v. Grant* that lifted states' bans on paid signature gatherers.

One of the biggest roles that this industry plays is to circulate petitions and gather signatures to qualify measures. In many of the high profile initiative states volunteer-based signature gathering campaigns are a thing of the past. One consequence of this is that signature gathering campaigns today are driven by profit motives and petition circulators who have little incentive to discuss and debate the merits of various proposals when seeking signatures. Often, voters who affix their names to a petition have little idea what they are supporting and who is bankrolling it. The signature gathering hurdle has become a numbers game, putting a premium on the ability to solicit as many voters as possible while spending as little time as possible with each one.[6]

Given how the signature gathering process functions today, it might seem an unlikely means to foster expansion of political involvement. In fact, it may be more of a nuisance

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[6]A variety of studies document and summarize the signature gathering process as practiced today, including Boehmke and Alvarez ([2004]); Broder ([2000]); Cronin ([1989]); Ellis ([2002], [2003]); Lowenstein and Stern ([1989]); Magleby ([1984]); and Tolbert, Lowenstein and Donovan ([1998]).

than a means to encourage interest and debate about important issues, as Progressive and Populist reformers may have intended. Yet despite this, a host of studies discussed above have shown that the initiative process increases political engagement under a variety of circumstances. The open question is the exact mechanism through which this happens. Certainly the ability to directly vote on proposed measures may attract greater participation. Yet it may be the case that signature gathering campaigns also affect participation.

We test this proposition by studying county-level data from California on eight initiatives from four different elections. By moving the level of analysis from the state level to the county level, we are able to provide a new understanding of how the initiative process influences individual behavior. Our data include information on signature gathering campaigns for these eight initiatives, including the number of signatures gathered in each county. If signature gathering campaigns are one of the mechanisms through which individual citizens become more involved in state politics, then we expect that citizens that are exposed to more intense signature gathering efforts should experience a greater change in their level of political activity. We test this proposition by examining county-level turnout and registration in each election and rolloff and vote choice for each measure.

Focusing on variation in political engagement within a state offers certain methodological advantages by eliminating variation in many factors, including rules and regulations governing initiative use, frequency of use and state political culture regarding the initiative process. Once the effects of these factors are eliminated, the primary source of variation across individuals is their exposure to the specific measures on an upcoming ballot. The first type of exposure that citizens may experience is a request to sign a petition to place a measure on the ballot. Individuals who have been approached about a specific measure may, as the Progressives envisioned, become more interested in that measure or the upcoming election in general and therefore be more likely to vote. Granted, the chance of a single individual being approached is relatively small — the average statutory and constitutional proposals in California gather a little over 750,000 and 1,000,000

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signatures (Boehmke and Alvarez [2004]) in a state with almost 16 million registered voters in 2000 — but individuals who are approached may multiply the effect by discussing the proposal with their friends and family. So if a greater number of signatures are gathered within a geographic area, it should produce a greater "buzz" among voters in that area. We therefore expect that voters in areas with more intense signature gathering campaigns are more likely to be active in the upcoming election than citizens in areas with smaller signature drives.

4   The Intensity of Signature Gathering

To measure the intensity of a signature gathering campaign in a county, we obtained data on eight initiative petitions from the California Secretary of State's office.[7] Importantly for our purposes, these data include the number of signatures gathered for each measure in each county, which we use to construct our measure of signature gathering intensity.[8]

A description of the eight measures for which we have data is included in Table 1. Note that our measures include a variety of issue areas and appeared on the ballot over three years and in four different elections. There are three measures from the 2000 general election. Proposition 35 covered state public works projects and issues associated with the use of private contracts for those projects; it passed with 55.2% of the votes cast. Proposition 36 dealt with drug treatment programs, and passed with 60.9% of votes cast.

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[7]Between 2000 and 2003, there were six initiative constitutional amendments that made it to the ballot; we have data for four of these six measures (we lack data for Propositions 38 and 39 in the 2000 general election). In this same period, there were five initiative statutes that made it to the ballot, of which we have four; we did not receive data on Proposition 50 in the 2002 general election. Proposition 38 in the 2000 general election focused on school vouchers, while Proposition 39 regarded lowering the voting threshold for school bonds to 55%. Proposition 38 failed to pass, receiving only 29.4% of yes votes, while Proposition 39 passed with 53.4% voting yes. Proposition 50 in the 2002 general election concerned water quality, water projects, and wetland protection; this measure passed with 55.3% voting yes. We received this data as part of research we were undertaking for another project, as in the course of communications with officials in the Elections Division we learned that they retained some data on signature checks for some recent ballot measures. We asked them to provide all of the data they had retained. We received a spreadsheet with data on the eight ballot measures, and only these eight. Expansion of this database, including more data from earlier proposed ballot measures, is the subject of future research.

[8]See Boehmke and Alvarez ([2004]) for an analysis of how county-level demographic and political characteristics influence the number and validity of signatures gathered in each county.

Proposition 37 would have lowered the vote threshold for passage of new taxes and it failed to pass, with 47.9% of votes. One of the initiatives we have data on appeared on the 2002 primary election ballot as Proposition 45. This measure would have altered the term limits law for legislators in California, and it was defeated after receiving 42.3% of votes cast. From the 2002 general election we have data on three Propositions: Proposition 51 regarding the distribution of transportation taxes received only 42.2% of yes votes; Proposition 52 would have changed voter registration laws to usher in election day registration in California and received 40.9% of the vote; and Proposition 49 providing new funding for before and after school programs passed after receiving yes votes from 56.7% of voters. The last initiative in our database appeared on the October 2003 statewide recall ballot as Proposition 54. This measure would have barred the state from collecting racial and ethnic data, but it failed to pass with only 36.1% of voters casting ballots in support of passage.

Insert Table 1 here.

For each of these eight initiatives, we use our data on signature gathering to construct a measure of the intensity of the signature gathering campaign in each county. Specifically, we calculate the number of *Signatures per Capita* by dividing the number of signatures from each county by the total population of that county at that time.[9] If increased campaign intensity helps promote political involvement, then we expect that counties with a greater number of signatures per capita gathered experience greater levels of political involvement.

To test whether signature campaigns influence political engagement we focus on three other measures. First, we follow previous studies by examining turnout; second, we also examine county registration rates; third, we study ballot rolloff for each individual measure. Rolloff — the proportion of total ballots cast that do not contain a vote for a specific item — tells us whether signature gathering on a specific measure increases voters'

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[9]We also calculated signatures per registered voter and found few differences in the final results. Since registration is not fixed and since non-registered citizens may be approached for signatures or discuss the measure, we prefer signatures per capita.

propensities to express a preference on an item once they show up to vote.[10] Each of these three measures captures different elements of participation. Reduced rolloff rates are perhaps the most direct link between signature gathering and participation. If signature gathering increases citizens' awareness of specific measures, then their attentiveness should reveal itself through increased participation on that same measure. The participation effects may extend beyond specific measures, however; citizens whose interest is piqued by one ballot measure must turn out to vote in order to express their preferences on that measure. Further, their interest in politics in general may also increase. Combined, these two effects suggest that overall participation rates may increase. We believe that both turnout and registration capture these more general effects of signature gathering.

While we can link signature gathering intensity on specific measures to rolloff on the same measure, we cannot do this for turnout and registration as there are multiple initiatives on each ballot. To test the effect of signature gathering on these two forms of participation, then, we calculate the average signature gathering intensity for all of our measures on the corresponding ballot. While the effect of signature gathering on any one citizen may be very small, we expect that it may reveal itself when aggregated over millions of citizens, resulting in increases in each of our three forms of participation.

Finally, we also study the effect of signature gathering intensity on vote choice using the proportion of voters in a county who vote for each measure. If the signature gathering process does increase citizens' interest in specific ballot measures then they may seek out or acquire more information about that measure. As initiative voters are often characterized as realtively uninformed (Magleby [1984]), increased attention to a measure may facilitate the opinion formation process. If this increased information has a net influence on opinion, then the vote share for the measure may shift a little in counties with more intense signature gathering. The direction of this shift may be different across measures,

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[10]We assume that rolloff, as measured here, is the result of a conscious decision by a voter to not cast a ballot for a particular measure — not that the voter made a mistake by skipping the ballot measure accidentally. This is consistent with the usage of the term rolloff in many studies (e.g., Burnham 1965; Darcy and Schneider 1989; and Vanderleeuw and Engstrom 1987).

however, since increased information can either increase or decrease a measure's appeal.

Insert Table 2 here.

Summary statistics for each measure of participation and our signature gathering intensity variable are presented in Table 2. Our measure of signature gathering intensity across measures is summarized in the column labeled "Signatures". Regarding the four statutory measures, which require signatures equivalent to five percent of turnout in the previous gubernatorial election, the average number of signatures per capita varies from 0.016 to 0.018. For the four constitutional proposals, which require eight percent, it varies from 0.020 to 0.023. The standard deviation of these measures across counties ranges from 0.012 to 0.020, indicating a fairly large amount of variation in signature gathering campaigns statewide. Note that unlike other states, California has no distribution requirement that mandates that signatures must be from a sufficiently diverse set of geographic entities.[11] This means that the distribution of signatures is not distorted by state regulations, though most of these proposals would have qualified even with a mild or moderate distribution requirement (Boehmke and Alvarez [2004]).

Our first measure of political participation is the rolloff for each ballot measure. Rolloff is the difference between the number of ballots cast in a election and the number of votes tabulated for each question on the ballot. We divide this by the total number of ballots cast in each county to produce the rolloff rate.[12] If signature gathering campaigns increase voters' attentiveness to an issue, then we should see a greater share of voters casting a ballot on that measure, resulting in a lower rolloff rate. The rolloff rate varies across measures from 8.13% for Proposition 52 to 11.16% for Proposition 51.

Our next measure of political activity is the turnout rate for an election. While the link between signature campaign intensity is perhaps not quite as direct as for rolloff, we expect that more intense signature campaigns should generate greater interest in the upcoming election. This would lead a greater proportion of registered voters to show up

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[11] A typical distribution requirement exists in Nebraska, where a five percent signature requirement must be met in at least two-fifths of its counties.

[12] Data for each of our four dependent variables are available from the California Secretary of State's website: http://www.ss.ca.gov.

to the polls on election day, so we calculate turnout as the proportion of registered voters who cast a ballot in each election.[13] This measure varies from 45% in the 2002 primary election to 73% in the 2000 general election.[14] Because this measure does not vary for proposals on the ballot in the same election, we ultimately use the average intensity of signature gathering campaigns for each measure and analyze turnout in each of the four elections in our data.[15]

A related measure of political interest and activity is the county-level registration rate. We calculate this as the proportion of voters who are eligible to register who do so. Registration varies from 71.68% in the 2002 primary election to 75.98% in the 2000 general election. If more intense signature gathering campaigns produce a greater attention to the issues on the upcoming election, then registration rates may increase so that people can express their preference in the upcoming election. Of course, registration is something many voters may have already done and specific ballot measures may play a relatively small role in a citizen's decision, but a relationship may still exist nonetheless.

The last column presents the average yes vote for each measure. This varies dramatically from a low of 32% for Proposition 36, which sought drug treatment programs, to a high of 67% for Proposition 35, which affected the use of private contracts for public works projects. Three of our eight measures received majority support, which is typical of the 35.5% historical average passage rate for initiatives in California (Shelley [2002]). The variation in the vote across counties for each measure is typically about six percent. Unlike our other three measures of participation, it is not straightforward to state what effect signature gathering intensity has on the level of support for a measure. If signature gathering does influence individual interest, then it may be the case that counties with

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[13]Our results are not substantially changed if we use the proportion of eligible voters instead of registered voters.

[14]The numbers for the 2000 general election are slightly inconsistent for Proposition 36 because the data are themselves inconsistent in the Secretary of State's Statement of the Vote for Yolo County. The sum of votes for, against or abstaining are 2000 less for this proposition, resulting in a 2.4% difference in our turnout estimate.

[15]Recall that for two of our four elections we do not have data for every citizen-initiated measure on the ballot: two are missing for the 2000 general election and one for the 2002 general election.

more intense campaigns have more discussion about the proposal and that this discussion may ultimately influence how people in the county cast their ballots. Interestingly, previous research on signature gathering did not reveal much ideological targeting on the part of signature gatherers: counties that were more Democratic produced more signatures for each measure (Boehmke and Alvarez [2004]). This suggests that our results will not reflect targeting by signature gatherers of sympathetic voters, thereby creating a false relationship between intensity and vote choice.

5   Signature Gathering and Political Outcomes

In this section we test whether the intensity of signature gathering campaigns increases citizen participation on specific measures and in associated elections. We also test whether signature gathering helps shape vote outcomes for specific measures. In addition to the intensity of signature gathering campaigns, we control for a variety of other factors that may be related to political participation and vote choice at the county level: we include measures of race (*Percent Hispanic* and *Percent Black*), *Median Age*, *Percent Completed High School*, *Percent Unemployed* and *Per capita Income*. More educated, older citizens and those with greater income are known to be more likely to register and to vote in general (Wolfinger and Rosenstone [1980]) and also on ballot measures (Magleby [1984]). In addition, they may have different preferences regarding specific proposals and may cast different ballots. We also include a measure of political ideology, measured with the *Democratic Vote Share* in the 2002 gubernatorial election. This variable should have its greatest effect for the level of support for each measure, but it may also influence overall levels of political engagement. Finally, we include fixed effects as appropriate for each measure or for whether it appeared during a *Primary Election* or the 2003 special *Recall Election*.

Because our dependent variable in each case is a proportion, we analyze our data using grouped logit.[16] While the data are continuous, analyzing proportions using OLS

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[16]See Greene ([1993]) or Maddala ([1983]) for more information on grouped logit (also referred to as minimum logit chi-square method).

introduces various statistical problems, including heteroskedasticity, and can produce substantive problems as well since predictions may be greater than 100% or less than 0%. Like binary logit for individual-level data, grouped logit does not suffer from these problems. Because we expect the effect of signature gathering intensity to be the same across measures for rolloff, turnout and registration, we pool the data and present the results from a single grouped logit model for each of these. Since vote share may be either increased or decreased depending on how attention to a specific measure alters vote choice, we report separate regressions for each initiative. For registration and turnout we use our four elections as the level of analysis and use the average intensity for each measure on that ballot as our key independent variable.

5.1   The Effect on Participation

The results for our analysis of the first three measures of participation are presented in Table 3. Overall, the models do a good job of predicting the variation in the dependent variables, with R^2 values ranging from 0.52 for the registration model to 0.68 for the turnout model. In addition, tests for joint significance of our independent variables reject the null model with no explanatory variables at the 0.001 level or better in every case.

Insert Table 3 here.

Our grouped logit results provide evidence that the intensity of the signature gathering campaign in a county is related to each of our three measures of political participation, with all coefficients in the expected direction and all but one significant as well. Consider the results for rolloff: in counties with more signatures per capita on a specific measure, we find that a lower percentage of voters choose not to cast a ballot on that measure.[17] This means that more intense signature gathering within a county on a specific measure results in more voters casting a ballot on it. As noted, we feel that this measure best approximates the direct effect of the signature gathering process on individual political

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[17]Our analysis includes indicator variables for each measure, precluding the inclusion of a control for ballot position. If we replace the indicators with the position of each Proposition relative to all referred measures, we find that lower ballot position significantly increases rolloff.

participation since it links signature gathering for a specific measure to rolloff for the same measure.[18]

While the effect of signature gathering on rolloff is positive, the coefficient is not significant in the baseline model (though it would pass a weak one tailed test at the 0.10 level). Inspection of the model's predicted values indicated that the results were influenced greatly by Los Angeles County. This is particularly important in a grouped logit analysis because observations are weighted proportionate to the number of individuals in each unit, exacerbating Los Angeles County's outlier status. We therefore modified the analysis by including an indicator variable for LA. These results are presented in the second column; the coefficient on signature gathering is now significant at the 0.05 level.[19] Further, we also ran a grouped probit analysis, which produced a significant coefficient whether or not a Los Angeles County indicator is included. While we have no reason to favor one distribution over the other, we feel that these results offer additional evidence consistent with our hypothesis.[20]

To obtain an estimate of the substantive effect of signature gathering on rolloff, we calculated the change in predicted rolloff associated with a change in per capita signatures from one standard deviation below its mean to one standard deviation about its mean (holding all other variables constant at their mean values and using the model with the Los Angeles indicator). Such a change results in a decrease in rolloff from 7.7% to 8.3%, corresponding to a 7.5% decrease in rolloff relative to the 7.7% baseline.

The results for turnout and registration also indicate a positive relationship between signature gathering and participation. Counties with a greater average signature gathering intensity (recall that the level of analysis is now an election rather than a specific bal-

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[18]Note that the marginal effect of an independent variable is not given directly by its coefficient, so care should be taken in comparing marginal effects across variables or regressions. The coefficients represent the marginal effect of an independent variable on the log-odds of the proportion of successes in each county: $E[\ln(p_i/(1-p_i))] = X_i\hat{\beta}$.

[19]Based on these results, we tested whether the effect of signature gathering varied with county size and did not find sufficient evidence to warrant such a conclusion.

[20]Grouped logit analysis of the eight individual measures produced negative coefficients for six of them, of which three were significant at 0.10 level or better (four with the Los Angeles County indicator as well as one positive and significant coefficient).

lot measure) have greater turnout in the corresponding election, with a coefficient of 5.65 that is significant at the 0.05 level. They also have a greater overall registration rate, with a coefficient of 5.72 that is significant at the 0.01 level. First difference calculations show that registration is 3.7% and turnout 4.3% larger when per capita signatures increases two standard deviations. These results indicate that signature campaigns not only increase the chance that a voter who shows up at the ballot booth expresses a preference for a given measure, but that more voters expend the time to show up at all and also take the steps to ensure their ability to vote by registering.[21]

5.2 Controlling for Lagged Participation Behavior

One concern is whether these results are driven by variation in the underlying willingness to participate across counties. That is, signature gatherers may seek out counties where levels of participation are high since it may be easier to secure signatures there. While we have included a number of demographic and political variables to control for variation in levels of participation, there may still be some uncaptured variation. Therefore, in order to assess the robustness of our results, we specified alternate models that attempted to control for participatory behavior.

To set a baseline for participation rates across counties, we included the corresponding 1998 participation rates in each of the four equations we reported in Table 3. While it is straightforward to include lagged turnout and registration rates, rolloff is trickier since the number and content of Propositions varies from election to election. We choose to capture baseline rolloff rates by using rolloff from the 1998 gubernatorial race. Ideally, these lagged participation measures capture any unobserved propensity to engage in each type of behavior without being affected by signature gathering for the measures included in our analysis.[22] On the other hand, because the values of our independent variables, in-

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[21]Analyzing each election separately produced significant coefficients in three of four cases for registration and no cases for turnout.

[22]In order to put these measures on the same scale as the dependent variable in the groups logit, we transformed them by taking the logit of each of them (i.e., $t'_i = \ln(\frac{t_i}{1-t_i})$, where t_i is 1998 turnout in county i). The results are virtually the same if we include t_i directly.

cluding signatures per capita, are correlated (or unchanging) over time, including lagged participation may absorb part of their estimated impacts. Despite these concerns, however, the regression results reported in Table 4 continue to indicate that signatures per capita has a significant effect on each type of behavior.[23] In fact, including this variable strengthens our results for rolloff such that the coefficient is significant even when the Los Angeles County indicator is not included.

Insert Table 4 here.

5.3 The Effect on Choices

We now turn to the analysis of vote share for our eight measures. It is clear from the previous results that signature gathering influences participation, but now we ask whether it influences vote choice as well. As we mentioned earlier, it does not appear that petition circulators target ideologically sympathetic citizens when seeking signatures (at least not at the country level). This implies that any effect of signature gathering on vote choice is likely a consequence of increased debate or attention to the measure among citizens more likely to have been contacted for a signature, or who are more likely to be exposed to people who signed the petition.

The results for our grouped logit of the percent who cast a ballot for each measure are presented in Table 5. Again, the results show that our models do a good job explaining the data, with R^2 measures ranging from 0.47 to 0.96 and five of the eight measures producing R^2 values above 0.8. We also include a pooled analysis of the eight measures that incorporates fixed effects through the inclusion of indicator variables for each measure. While the R^2 is 0.84, it appears that a lot of the explanatory power moves from the substantive variables to the fixed effects.[24]

Insert Table 5 here.

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[23]In the separate analyses of each measure/election only the results for registration were affected, with a significant effect remaining in only one (rather than all four) of the specific elections.

[24]A regression with just the substantive variables produces an R^2 of 0.08 whereas with just fixed effects it jumps to 0.80. This is not surprising given the different ideological components and issues embodied in the eight measures.

In five of the eight individual analyses, the coefficient for signatures is positive, indicating that increased attention to these measures leads to more support on election day. For Propositions 35, 42 and 45 the coefficient is significant at the 0.05 level; for Proposition 49 it is significant at the 0.10 level; and for Proposition 51 it narrowly misses significance at the 0.10 level ($p = 0.149$). In the three cases where the coefficient is negative, it does not approach traditional significance levels. These results indicate that when signature gathering does affect votes, it tends to increase support for a measure. It also appears to have a relatively consistent effect — in five of eight cases the coefficient is positive and significant or nearly significant. Not surprisingly, then, the effect in the combined model is also positive and significant.

These results are interesting in light of variation in the effect of the other independent variables. Ideology has a positive and significant effect on vote share for five measures, but a negative and significant effect on the sixth (Proposition 54). In fact, six of the other eight independent variables have positive and significant effects for some measures and negative and significant effects for other measures. So while a variety of factors may either increase or decrease support for a specific measure, the effect of signature gathering intensity appears to consistently act in the same direction.

This raises the question of why vote share is consistently increased by more intense signature campaigns. One potential answer lies in how voters make up their mind on ballot measures. Research suggests that when voters are unsure of how to vote on a measure, they often behave in a risk-averse fashion and vote against it (see, e.g., Bowler and Donovan [1998]). If this is the case, then measures with less intense signature campaigns in a county have more voters who feel unsure about how to vote. If these voters then vote against the measure, it follows that counties with less intense signature gathering would produce less favorable vote shares. If petition managers are aware of this relationship, it might help explain why signatures are relatively evenly distributed across counties (Boehmke and Alvarez [2004]).

6   Discussion

The founders of the initiative process were interested in the creation of institutions that would give citizens the ability to be more directly involved in the affairs of government. They assumed that citizens would be interested in greater involvement in decisions on public policy, and that citizens would become informed about public debates and participate in their adjudication when issues were placed on the ballot for citizens to decide.

These basic assumptions of the founders of the initiative process have received little attention in the research literature, until quite recently. Our work presented here helps to further support the inference that the initiative process can itself lead to a more informed and politically engaged citizenry. We have shown that signature gathering campaigns for recent elections — one of the institutional mechanisms put in place by the founders of the initiative process to facilitate informed public debate about important public policy issues — are associated with greater political engagement. Our empirical analysis shows that in counties where there was greater participation in initiative signature gathering efforts, there are higher levels of voter registration and turnout.

Our research also shows that where there is greater involvement in signature gathering campaigns, there is also reduced rolloff on the ballot. As rolloff is a more precise measure of public interest and information about individual ballot measures than overall turnout, documenting this clear relationship (while controlling for other variables that might also influence rolloff) supports the inference that greater involvement in signature gathering campaigns appears to lead to increased public awareness of, and interest in, the issue once it is on the ballot.

Interestingly, our analysis also indicates that heightened public involvement in signature gathering campaigns leads to greater numbers of voters who are willing to support the measure once it is on the ballot. We hypothesized that perhaps this might be a secondary effect of voter awareness of the issues involved in the ballot measure; with more voters knowledgeable about the issue, fewer voters may be acting in a risk averse manner by voting against the measure. This hypothesis requires additional research.

In recent years, there has been some discussion in states like California about increasing the signature requirement for ballot measures, in an attempt to make it more difficult for issues to get on the ballot. Often, these discussions are motivated by an assumption that there are too many issues on the ballot, and that voters in initiative states are too frequently asked to turnout and decide important policy matters. Our results here may indicate that proposals to increase the signature requirement for ballot measures should be examined critically, as an unintended consequence of any such change might be reductions in voter awareness of policy issues, and of voter participation (at least as measured by registration and turnout).

The process by which initiatives get on the ballot, and the effects of that process on voting behavior and political outcomes, has received little study. We hope that our research, using only a limited set of recent initiatives, may help spark additional study of the components of the initiative process that take place *before* measures are on the ballot, and thereby provide academics and policymakers with a more complete perspective on the merits of the initiative process.

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Table 1: Descriptive Information on Ballot Measure Petitions

Petition Number	Measure Number	Description	Election
830	35	Public works projects: Use of private contracts for engineering and architectural services. Initiative constitutional amendment and statute	2000 General
865	36	Drugs. Probation and treatment program. Initiative statute	2000 General
874	37	Fees: Vote requirements. Taxes. Initiative constitutional amendment	2000 General
918	45	Legislative term limits. Local voter petitions. Initiative constitutional amendment	2002 Primary
935	51	Transportation: Distribution of existing motor vehicle sales and use taxes. Initiative statute	2002 General
936	52	Election day registration. Voter fraud penalties. Initiative statute	2002 General
952	49	Before and after school programs. State Grants. Initiative statute	2002 General
933	54	Classification by race, ethnicity or color, or national origin. Initiative constitutional amendment	2003 Recall

Table 2: Average Signature Gathering and Participation Measures by Proposition

	Year	Election	Signatures	Rolloff	Turnout	Registration	Yes Vote
All			0.020	8.94%	62.38%	74.34%	45.46%
Prop 35	2000	General	0.022	8.15%	73.42%	75.98%	66.77%
Prop 36	2000	General	0.016	10.43%	73.37%	75.98%	32.05%
Prop 37	2000	General	0.023	9.51%	73.42%	75.98%	58.67%
Prop 45	2002	Primary	0.022	8.47%	45.04%	71.68%	37.46%
Prop 54	2003	Special	0.024	8.64%	64.44%	73.50%	41.25%
Prop 51	2002	General	0.016	11.16%	56.46%	73.85%	39.19%
Prop 52	2002	General	0.018	8.13%	56.46%	73.85%	36.98%
Prop 49	2002	General	0.018	7.00%	56.46%	73.85%	51.32%

Table 3: Grouped Logit Estimates of Roll-Off, Registration and Turnout by County

	Roll-Off		Registration	Turnout
Signatures per Capita	−1.36	−1.89**	5.72**	5.65**
	[1.03]	[0.96]	[1.26]	[2.34]
Percent Unemployed	−1.98	−0.04	−0.16	−1.23
	[1.54]	[1.46]	[1.82]	[3.34]
Percent Completed HS	1.69*	3.10**	−0.61	−0.31
	[0.97]	[0.93]	[1.15]	[2.13]
Percent Hispanic	0.07**	−0.03	0.02	−0.05
	[0.03]	[0.03]	[0.03]	[0.06]
Percent Black	−0.01	−0.15**	−0.18**	−0.07
	[0.04]	[0.04]	[0.05]	[0.10]
Per capita income	−0.74**	−0.49*	−0.15	0.77
	[0.31]	[0.29]	[0.32]	[0.65]
Population Density	0.23**	0.15*	0.72**	−0.40**
	[0.08]	[0.08]	[0.11]	[0.19]
Median Age	−37.84**	−84.10**	71.33**	47.99**
	[10.78]	[11.56]	[12.86]	[23.71]
Democrat Vote for Governor	1.23**	1.09**	0.67**	−0.34
	[0.20]	[0.19]	[0.24]	[0.44]
Petition 865	0.23**	0.22**		
	[0.04]	[0.03]		
Petition 874	0.14**	0.15**		
	[0.04]	[0.03]		
Petition 918	−0.17**	−0.16**		
	[0.05]	[0.04]		
Petition 933	−0.30**	−0.30**		
	[0.04]	[0.04]		
Petition 935	0.19**	0.18**		
	[0.04]	[0.04]		
Petition 936	−0.14**	−0.14**		
	[0.04]	[0.04]		
Petition 952	−0.23**	−0.23**		
	[0.04]	[0.04]		
Los Angeles		0.36**		
		[0.04]		
Primary Election			−0.10**	−1.16**
			[0.03]	[0.06]
Recall Election			−0.12**	−0.03
			[0.03]	[0.06]
Constant	−2.56**	−1.77**	−1.47*	−0.74
	[0.67]	[0.63]	[0.82]	[1.49]
Observations	464		232	232
R^2	0.57	0.63	0.52	0.70

Standard errors in parentheses. * Significance at 10% level, ** at 5% level.

Table 4: Grouped Logit Estimates of Roll-Off, Registration and Turnout by County, Controlling for 1998 Behavior

	Roll-Off		Registration	Turnout
Signatures per Capita	−1.57*	−1.97**	2.42**	5.72**
	[0.94]	[0.89]	[1.00]	[2.33]
Percent Unemployed	0.46	1.78	−2.55*	2.08
	[1.44]	[1.38]	[1.42]	[3.79]
Percent Completed HS	3.21**	4.20**	−0.72	1.81
	[0.91]	[0.88]	[0.89]	[2.42]
Percent Hispanic	0.12**	0.03	0.01	0.01
	[0.03]	[0.03]	[0.03]	[0.07]
Percent Black	−0.07*	−0.18**	−0.16**	−0.06
	[0.04]	[0.04]	[0.04]	[0.10]
Per capita income	−0.45	−0.28	−0.25	0.66
	[0.29]	[0.28]	[0.25]	[0.64]
Population Density	0.23**	0.17**	0.41**	−0.24
	[0.07]	[0.07]	[0.09]	[0.20]
Median Age	−31.33**	−70.68**	21.28**	29.14
	[9.92]	[10.91]	[10.63]	[25.75]
Democrat Vote for Governor	0.81**	0.75**	0.23	−0.20
	[0.19]	[0.18]	[0.19]	[0.45]
1998 Behavior	0.27**	0.23**	0.55**	0.17*
	[0.03]	[0.03]	[0.05]	[0.09]
Petition 865	0.22**	0.22**		
	[0.03]	[0.03]		
Petition 874	0.14**	0.15**		
	[0.03]	[0.03]		
Petition 918	−0.17**	−0.16**		
	[0.04]	[0.04]		
Petition 933	−0.30**	−0.30**		
	[0.04]	[0.03]		
Petition 935	0.19**	0.18**		
	[0.04]	[0.03]		
Petition 936	−0.14**	−0.14**		
	[0.04]	[0.04]		
Petition 952	−0.24**	−0.23**		
	[0.04]	[0.04]		
Los Angeles		0.30**		
		[0.04]		
Primary Election			−0.08**	−1.16**
			[0.02]	[0.06]
Recall Election			−0.10**	−0.03
			[0.02]	[0.06]
Constant	−3.03**	−2.31**	0.32	−2.08
	[0.61]	[0.59]	[0.65]	[1.65]
Observations		464	232	232
R^2	0.64	0.68	0.72	0.71

Standard errors in parentheses. * Significance at 10% level, ** at 5% level.

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Table 5: Grouped Logit Estimates of Support for Ballot Measures by County

	All	Prop 35	Prop 36	Prop 37	Prop 45	Prop 54	Prop 51	Prop 42	Prop 49
Signatures per Capita	0.45**	0.25**	−0.11	−0.02	0.21**	−0.04	0.31	0.62**	0.32*
	(0.09)	(0.10)	(0.12)	(0.09)	(0.10)	(0.10)	(0.21)	(0.24)	(0.19)
Percent Unemployed	−1.80	−1.02	−4.34**	−0.48	−1.39	2.41*	−6.27**	−3.04	−1.72
	(1.33)	(1.12)	(1.80)	(1.34)	(1.62)	(1.32)	(2.16)	(2.61)	(1.80)
Percent Completed HS	−0.54	−2.23**	−1.38	0.27	−0.38	1.78**	−1.88	−2.66	1.82
	(0.84)	(0.71)	(1.13)	(0.85)	(1.05)	(0.83)	(1.37)	(1.64)	(1.14)
Percent Hispanic	0.03	−0.05**	0.01	0.04*	0.09**	0.04	−0.04	−0.01	0.17**
	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.04)	(0.05)	(0.03)
Percent Black	0.07*	0.06*	0.09	0.06	−0.10*	−0.06	0.21**	0.12	0.16**
	(0.04)	(0.04)	(0.05)	(0.04)	(0.05)	(0.04)	(0.06)	(0.08)	(0.05)
Per capita income	0.15	0.25	1.06**	−0.19	−0.60*	−0.03	0.07	−0.01	−0.69*
	(0.26)	(0.22)	(0.35)	(0.26)	(0.32)	(0.25)	(0.43)	(0.51)	(0.35)
Population Density	−0.07	−0.27**	0.35**	−0.18**	0.39**	−0.21**	−0.68**	0.11	−0.03
	(0.08)	(0.06)	(0.10)	(0.08)	(0.09)	(0.08)	(0.13)	(0.15)	(0.10)
Median Age	12.09	28.99**	−6.22	−0.36	13.83	−14.57	9.88	48.38**	−8.92
	(9.46)	(7.90)	(12.64)	(9.47)	(11.48)	(9.44)	(15.23)	(19.07)	(13.01)
Democrat Vote for Governor	0.65**	1.02**	1.26**	0.25	2.24**	−2.83**	0.91**	2.27**	−0.05
	(0.18)	(0.17)	(0.23)	(0.19)	(0.22)	(0.19)	(0.29)	(0.35)	(0.24)
Proposition 36	−1.13**								
	(0.04)								
Proposition 37	−0.33**								
	(0.03)								
Proposition 45	−1.02**								
	(0.04)								
Proposition 51	−1.26**								
	(0.04)								
Proposition 52	−1.00**								
	(0.04)								
Proposition 49	−1.05**								
	(0.04)								
Proposition 54	−0.42**								
	(0.04)								
Constant	0.19	0.86	0.01	0.06	−1.65**	−0.15	0.62	−1.29	−1.05
	(0.58)	(0.52)	(0.77)	(0.57)	(0.74)	(0.57)	(0.93)	(1.12)	(0.79)
Observations	464	58	58	58	58	58	58	58	58
R²	0.84	0.81	0.88	0.46	0.91	0.96	0.69	0.82	0.74

Standard errors in parentheses. * Significance at 10% level, ** at 5% level.