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THE INFLUENCE OF INITIATIVE SIGNATURE GATHERING CAMPAIGNS ON POLITICAL PARTICIPATION

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Abstract

Does direct democracy increase political participation? Rather than focus on state-level effects of the initiative process, this paper studies the effect of signature gathering campaigns on participation within a state. To this end 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 measure 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

In the face of generally declining political participation by the American electorate, scholars have begun to document how direct democracy effects individual participation in politics. Direct legislation institutions such as the direct and indirect citizen initiative give voters an opportunity to have a straightforward say in state policy-making. This added form of participation may increase the incentive for voters to become more involved in politics, leading to greater levels of participation and possibly even greater informedness.

The potential of the initiative process to increase individual participation was not lost on many of its founders; at the turn of the nineteenth century they expected and desired to create a more involved and informed citizenry. Progressive Era advocates of 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] The solution to this 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 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

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

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 percent 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 part because of the perception that signature hurdles are mere financial tests, but also because of a general distrust of the initiative process on the part of many legislators, a variety of reforms have been proposed in recent years to alter signature requirements. Many states have attempted to ban the use of paid signature gatherers, though to little effect due to the court's willingness to interpret paid signature gathering as a form of free speech.[2] Other states, including Idaho and Oklahoma, have recently attempted to

[2]See Lowenstein and Stern (1989) for an extended discussion of the decision in *Meyer v. Grant* [486 U.S. 414 (1988)].

increase the number of signatures required to discourage future ballot measures.[3] Other proposals would eliminate the signature requirement altogether and impose a large qualification fee in its place.

Given the general perception that signature gathering campaigns do not activate or educate voters as Progressive reformers intended, combined with increased calls to reform this requirement, do signature campaigns increase engagement in specific ballot measures and elections in general? Do they produce debate that shapes public preferences on a given proposal? We seek to answer these questions using data on signature gathering for eight recent California initiatives spanning four elections. In this paper we use these data to construct a measure of the intensity of the signature gathering campaign in each county and then test whether intensity is related to measures of political participation, 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 forms of 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.[4]

[3] In Oklahoma, the legislature placed a constitutional amendment on the ballot to raise the number of signatures only for animal rights initiatives after voters finally passed a measure banning cockfighting.

[4] 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.

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 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.[5] Overall, though, the evidence suggests that turnout does increase with some measure of frequency of initiative use.[6]

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

[5]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.

[6]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.

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 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 in-

fluence in the legislature (Broder 2000; Ellis 2002; Schrag 1998; Smith 1998).[7] 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 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 have no 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

[7] 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).

while spending as little time as possible with each one.[8]

Given how the signature gathering process functions today, it seems unlikely that it would serve an important role in fostering political involvement among voters. In fact, it may be more of a nuisance than a means to encourage interest and debate about important issues, as Progressive and Populist reformers may have intended. Yet despite concerns that the signature gathering process is merely a monetary nuisance in a process that has been co-opted by wealthy groups, a host of studies have shown that the initiative process increases political engagement under a variety of circumstances. The question remains as the exact mechanism through which this happens, though. 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. None of the studies that we have mentioned, however, considers the potential effects of signature gathering campaigns on participation or engagement. Further, they all necessarily compare individuals' behavior across states; our study compares individuals within a single initiative state based on their exposure to an initiative's signature gathering campaign.

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

[8] 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).

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.

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. These data are discussed in the following section.

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.[9] These data

[9]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

include the number of signatures gathered for each measure in each county, as well as information resulting from tests performed to ascertain the number of signatures that are valid (i.e., from registered voters). Other research has addressed the question of how county-level demographic and political characteristics influence the number and validity of signatures gathered in each county (Boehmke and Alvarez 2004). In this paper we use these data to create a measure of the intensity of signature gathering across California's fifty-eight counties.

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 deal with drug treatment programs, and passed with 60.9% of votes cast. 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.

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.

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.[10] 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 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 voter's propensity to express a preference on it once they show up to vote.[11] Turnout and registration, on the other hand, do not vary across items in a specific election, but they may vary across counties based on overall signature gathering activity. For these two measures we calculate the average signature gathering intensity for all of our measures on the corresponding ballot. 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.

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". For 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

[10] 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.

[11] 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).

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.[12] 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.[13] One advantage of this measure is that it provides a direct link from signature gathering to participation for each measure. If signature gathering campaigns increase voters' attentiveness to an issue, then we should see a lower rolloff rate for that measure. This means that a greater proportion of voters decided to cast on a ballot on a given measure, perhaps because they had greater awareness or were more likely to have formed an opinion about the proposal. 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 to the polls on election day, so we calculate turnout as the proportion of registered voters who cast a ballot in each election.[14] This measure varies from 45% in the 2002 primary

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

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

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

election to 73% in the 2000 general election.[15] 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.[16]

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 fact that registration fluctuates over the four elections we study makes it more likely that part of these fluctuations may be caused by interest in ballot measures.

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 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 more intense campaigns have more discussion about the proposal and that this discussion may ultimately

[15]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.

[16]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.

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.[17] While the data are continuous, analyzing proportions using OLS introduces various statistical problems, including heteroskedasticity, and can produce

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

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. In fact, estimating grouped logit on proportions is equivalent to estimating binary logit on the underlying individual level data (if the same aggregate independent variables are used). 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 strong evidence that the intensity of the signature gathering campaign in a county is related to each of our three measures of political participation as the associated coefficients are significant and in the expected direction in all cases. Consider the results for rolloff: in counties with more signatures per capita on a specific measure, we find that a significantly lower percentage of voters choose not to cast a ballot on that measure.[18] This means that more intense signature gathering within a county on a specific measure results in more voters being familiar enough with the pro-

[18]Our analysis includes indicator variables for each measure, making it impossible to control for ballot position effect. 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.

posal to cast a ballot. We feel that this measure best approximates the direct effect of the signature gathering process on individual political participation.[19] To obtain an estimate of the 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). Such a change results in a decrease in rolloff from 8.3% to 9.4%, corresponding to an 11% decrease in rolloff relative to the 8.3% 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 ballot measure) have greater turnout in the corresponding election, with a coefficient of 0.55 that is significant at the 0.05 level. They also have a greater overall registration rate, with a coefficient of 0.57 that is significant at the 0.01 level. First difference calculations show that registration is 3.5% 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.

5.2 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

[19] 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: $E[\ln(p_i/(1-p_i))] = X_i\beta$.

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 4. 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.[20]

Insert Table 4 here.

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 near 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

[20] 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.

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 evenly distributed across counties (Boehmke and Alvarez 2004).

6 Discussion

The early 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 — 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.

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	Roll Off	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	$-0.23**$	$0.57**$	$0.55**$
	(0.11)	(0.12)	(0.23)
Percent Unemployed	-2.13	-0.73	-1.25
	(1.64)	(1.77)	(3.29)
Percent Completed HS	1.37	-0.80	-0.38
	(1.05)	(1.12)	(2.10)
Percent Hispanic	0.03	0.02	-0.05
	(0.03)	(0.03)	(0.06)
Percent Black	0.01	$-0.16**$	-0.07
	(0.05)	(0.05)	(0.10)
Per capita income	$-0.68**$	-0.04	0.71
	(0.34)	(0.31)	(0.62)
Population Density	$0.16*$	$0.68**$	$-0.37**$
	(0.09)	(0.10)	(0.18)
Median Age	$-48.30**$	$70.20**$	$45.55*$
	(11.17)	(12.43)	(23.30)
Democrat Vote for Governor	$1.40**$	$0.60**$	-0.35
	(0.21)	(0.23)	(0.43)
Proposition 36	$0.25**$		
	(0.04)		
Proposition 37	$0.18**$		
	(0.04)		
Proposition 45	$-0.15**$		
	(0.05)		
Proposition 51	$-0.26**$		
	(0.04)		
Proposition 52	$0.21**$		
	(0.04)		
Proposition 49	$-0.13**$		
	(0.04)		
Proposition 54	$-0.22**$		
	(0.04)		
Primary Election		$-0.10**$	$-1.10**$
		(0.03)	(0.06)
Recall Election		$-0.11**$	0.01
		(0.03)	(0.06)
Constant	-1.84	-1.28	-0.63
	(1.13)	(0.79)	(1.47)
Observations	464	232	232
R^2	0.57	0.52	0.68

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

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Table 4: 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
R^2	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.

A Grouped Logit Results for Individual Measures

Table 5: Grouped Logit Estimates of Turnout by County

	All	**2000 General**	**2002 Primary**	**2002 General**	**2003 Special**
Signatures per Capita	$0.54**$	0.03	-0.14	-0.15	0.18
	(0.23)	(0.23)	(0.25)	(0.20)	(0.19)
Percent Unemployed	-1.28	$-4.16*$	-0.70	3.69	$-5.30**$
	(3.30)	(2.16)	(2.35)	(3.11)	(2.47)
Percent Completed HS	-0.45	-1.51	-1.46	-0.72	-0.53
	(2.12)	(1.39)	(1.51)	(2.04)	(1.57)
Percent Hispanic	-0.05	-0.01	$-0.11**$	$-0.18**$	-0.03
	(0.06)	(0.04)	(0.04)	(0.06)	(0.04)
Percent Black	-0.08	0.04	-0.06	$-0.29**$	0.05
	(0.10)	(0.06)	(0.07)	(0.09)	(0.07)
Per capita income	0.74	$0.84**$	$0.97**$	1.00	0.36
	(0.64)	(0.41)	(0.46)	(0.61)	(0.47)
Population Density	$-0.37**$	$-0.45**$	$-0.41**$	-0.12	$-0.54**$
	(0.18)	(0.12)	(0.13)	(0.17)	(0.14)
Percent Male	-0.07	$-0.46**$	-0.16	-0.04	-0.12
	(0.27)	(0.19)	(0.20)	(0.26)	(0.20)
Median Age	$45.39*$	$64.43**$	$38.40**$	14.10	$44.95**$
	(23.35)	(15.40)	(16.86)	(21.56)	(17.65)
Democrat Vote for Governor	-0.36	$-0.52*$	-0.32	$-0.71*$	$-0.73**$
	(0.44)	(0.31)	(0.31)	(0.41)	(0.33)
Primary Election	$-1.10**$				
	(0.06)				
Recall Election	0.01				
	(0.06)				
Constant	-0.20	2.45	0.98	0.23	0.62
	(2.17)	(1.53)	(1.54)	(2.14)	(1.57)
Observations	232	58	58	58	58
R^2	0.68	0.73	0.74	0.79	0.79

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

Table 6: Grouped Logit Estimates of Registration by County

	All	**2000 General**	**2002 Primary**	**2002 General**	**2003 Special**
Signatures per Capita	$0.57**$	$1.24**$	$0.79**$	$0.86**$	0.02
	(0.12)	(0.42)	(0.39)	(0.20)	(0.24)
Percent Unemployed	-0.72	3.27	-1.07	-2.56	-0.49
	(1.78)	(3.81)	(3.73)	(3.24)	(3.20)
Percent Completed HS	-0.79	0.73	-0.65	0.35	-2.12
	(1.13)	(2.41)	(2.36)	(2.12)	(2.03)
Percent Hispanic	0.02	0.05	0.03	$0.12*$	-0.06
	(0.03)	(0.07)	(0.07)	(0.06)	(0.06)
Percent Black	$-0.16**$	$-0.24**$	$-0.19*$	-0.10	$-0.18*$
	(0.05)	(0.11)	(0.11)	(0.09)	(0.09)
Per capita income	-0.05	-0.63	-0.12	-0.31	0.61
	(0.32)	(0.67)	(0.67)	(0.58)	(0.59)
Population Density	$0.68**$	$1.14**$	$0.47**$	$0.46**$	$0.63**$
	(0.10)	(0.26)	(0.21)	(0.19)	(0.19)
Percent Male	0.01	0.54	0.11	-0.06	-0.14
	(0.15)	(0.35)	(0.32)	(0.26)	(0.28)
Median Age	$70.25**$	$81.34**$	$66.41**$	$75.24**$	$55.70**$
	(12.48)	(26.84)	(26.18)	(22.54)	(22.91)
Democrat Vote for Governor	$0.60**$	$1.50**$	0.42	0.50	0.38
	(0.23)	(0.56)	(0.47)	(0.42)	(0.44)
Primary Election	$-0.10**$				
	(0.03)				
Recall Election	$-0.11**$				
	(0.03)				
Constant	-1.35	$-6.20**$	-1.74	-2.15	1.04
	(1.18)	(2.73)	(2.47)	(2.15)	(2.16)
Observations	232	58	58	58	58
R^2	0.52	0.64	0.50	0.63	0.59

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

Table 7: Grouped Logit Estimates of Roll-Off for Ballot Measures by County

	All	**Prop 35**	**Prop 36**	**Prop 37**	**Prop 45**	**Prop 51**	**Prop 52**	**Prop 49**	**Prop 54**
Signatures per Capita	−0.23**	0.17	−0.25	−0.68**	0.36	0.04	−1.06**	−0.92**	−0.47
	(0.11)	(0.28)	(0.24)	(0.31)	(0.29)	(0.44)	(0.35)	(0.46)	(0.57)
Percent Unemployed	−2.13	−5.96*	−6.70*	−7.20*	8.34*	1.66	−1.17	1.76	−0.99
	(1.64)	(3.32)	(3.37)	(4.10)	(4.31)	(5.61)	(3.59)	(4.99)	(5.66)
Percent Completed HS	1.37	1.28	0.00	1.43	3.87	2.57	1.97	2.90	0.52
	(1.05)	(2.10)	(2.14)	(2.61)	(2.90)	(3.77)	(2.29)	(3.16)	(3.61)
Percent Hispanic	0.03	0.07	0.03	0.07	0.11	0.05	−0.01	−0.01	0.06
	(0.03)	(0.06)	(0.06)	(0.07)	(0.09)	(0.11)	(0.07)	(0.09)	(0.11)
Percent Black	0.01	0.08	0.14	0.16	−0.11	−0.35*	−0.12	−0.04	−0.03
	(0.05)	(0.10)	(0.10)	(0.12)	(0.13)	(0.18)	(0.10)	(0.14)	(0.16)
Per capita income	−0.68**	−0.22	−0.21	−1.91**	−1.60*	−4.39**	−0.13	0.13	0.37
	(0.34)	(0.66)	(0.67)	(0.93)	(0.93)	(1.60)	(0.72)	(0.97)	(1.08)
Population Density	0.16*	0.02	0.15	0.25	0.43	0.28	0.30	0.08	0.18
	(0.09)	(0.17)	(0.17)	(0.23)	(0.26)	(0.34)	(0.19)	(0.27)	(0.30)
Percent Male	0.01	0.29	0.13	−0.09	−0.14	−0.24	0.10	−0.05	−0.37
	(0.14)	(0.29)	(0.32)	(0.39)	(0.39)	(0.47)	(0.31)	(0.43)	(0.50)
Median Age	−48.30**	−54.05**	−40.26*	−63.67**	−42.94	8.78	−70.30**	−89.84**	−40.08
	(11.17)	(22.57)	(22.81)	(27.95)	(31.03)	(39.78)	(24.32)	(34.65)	(37.93)
Democrat Vote for Governor	1.40**	1.68**	1.25**	1.06*	1.89**	2.93**	1.14**	0.82	1.19*
	(0.21)	(0.49)	(0.42)	(0.62)	(0.59)	(0.86)	(0.46)	(0.63)	(0.71)
Proposition 36	0.25**								
	(0.04)								
Proposition 37	0.18**								
	(0.04)								
Proposition 45	−0.15**								
	(0.05)								
Proposition 51	−0.26**								
	(0.04)								
Proposition 52	0.21**								
	(0.04)								
Proposition 49	−0.13**								
	(0.04)								
Proposition 54	−0.22**								
	(0.04)								
Constant	−1.84	−3.27	−1.38	0.01	−4.23	−3.64	−1.47	−1.21	−0.15
	(1.13)	(2.23)	(2.45)	(2.95)	(3.09)	(3.80)	(2.43)	(3.39)	(4.03)
Observations	464	58	58	58	58	58	58	58	58
R^2	0.57	0.72	0.70	0.67	0.50	0.33	0.51	0.28	0.35

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