Is Spending More Potent For or Against a Proposition?
Evidence From Ballot Measures.

Abstract
The recent academic literature suggests that pressure from special interest groups has little or no influence on whether initiatives and referendums are passed or defeated. Further, there is a consensus that, to the degree that groups’ campaigning is important for explaining outcomes, groups opposing the initiative and favoring the status quo have an advantage over groups which support change. These studies have not considered that interest groups campaign strategically, and therefore that campaigning is endogenous in ballot measure elections. This study examines the effect of campaigning on ballot proposition elections and develops a research design that accounts for strategic and endogenous campaign advertising. The research design uses a two-way fixed effects model to estimate the effect of interest group pressure on ballot measure outcomes. The data are based on television advertising for or against California ballot measures from 2000 to 2004. The results show that supporting and opposing interest groups’ campaigning has a quantitatively important and statistically significant influence on ballot measure outcomes. The campaigning of supporting interest groups is at least as productive as that of opposing interest groups.

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1. Introduction

A large body of literature examines the effect of ballot measures on political outcomes.\textsuperscript{1} A smaller literature examines the importance of campaign spending to pass or defeat ballot measures. Lupia and Matsusaka (2004) recently reviewed this academic literature. Based on their review, there is a consensus that spending against ballot measures is effective while spending in favor is not. However, this literature has not addressed the endogeneity of interest group campaign spending, leading to potentially biased estimates of campaign spending. This study addresses this issue.

An example of recent work in this area is Gerber (1999), who assesses the quantitative importance of initiative spending in a regression framework. She analyzes the effects of contributions from economic groups, defined as groups which are rich but have a small membership base, and of citizen groups, which have the opposite characteristics. In her regression analysis, she finds that campaigning in favor of passage has no effect on ballot measure election outcomes, and sometimes even leads to a lowering of the likelihood of passage. Gerber concludes that “the empirical evidence provides further basis for rejecting the allegation that economic interest groups buy policy outcomes through the direct legislation process” (Gerber, 1999, p.138). Gerber’s research suggests that money has a very limited role for the passage of initiatives and referendums. Related work by Bowler and Donovan (1998) comes to

\textsuperscript{1}Much of this literature shows that direct democracy can have direct and indirect effects on political behavior (Bowler and Donovan 2004). For example, states with direct democracy may produce policies that more closely reflect popular preferences than states without direct democracy (Matsusaka 1995, 2004, Gerber 1996). They also have more interest groups (Boehmke 2002, Smith and Tolbert 2004), increased turnout (Tolbert and Smith 2005), and higher levels of political awareness (Nicholson 2003).
similar conclusions. Although a great advance relative to previous work, the methods in Gerber’s (1999) study do not control for the endogeneity of interest group campaigning, namely that groups spend strategically, depending on the expected outcome of the ballot measure election.

In contrast to Gerber (1999), Broder (2000) claims that money is important for the passage and defeat of initiatives. In his descriptive study he makes the case that money is important for whether initiatives pass or fail, and argues that interest groups who spend significantly more will win (Broder 2000, p. 221). In addition to this journalistic account, some scholarly work shows evidence that interest group contributions have an impact on the outcome of ballot measure elections (Smith 1998, Schrag 1998, Ellis 2002).

Gerber (1999), Broder (2000) and other recent studies (e.g., Garrett and Gerber 2001) agree that the side favoring the status quo has an advantage over the side opposing it. For example, Donovan et al. (1998, p.92) conclude that when special interests want initiatives passed, “money spent by proponents in this arena is largely wasted.” Older initiative studies also find that advertising to defeat an initiative is more effective than advertising to support passage (Lee 1978, Shockley 1980, Lowenstein 1982, Magleby 1984, Owens and Wade 1986, Zisk 1987), although recent experience from six anti-tax measures challenges this finding (Smith 2004).

The ineffectiveness of supporting money is puzzling. Why would the supporting side spend money when it is ineffective and sometimes even reduces voter support (Matsusaka 2000)?

The negative finding of interest group influence is even more surprising given that there is

2Similarly, Broder (2000, p.221) argues that “It is undoubtedly the case, for all the reasons they [referring to practitioners in the field] cited, that the negative side has the easier time in almost any initiative campaign.”
evidence that interest group formation is enhanced in states with direct democracy (Boehmke 2002, Smith and Tolbert 2004). This consideration raises the issue of whether previous studies have accounted for all of the relevant factors that determine ballot measure spending and election outcomes, and that campaign spending may be endogenous.

Endogeneity of spending arises because campaigning may be driven in part by the likely probability of success. For example, a group sponsoring a measure that is in danger of failing may spend a lot, while a group sponsoring a measure that is sure to win may spend very little. A simple regression would show a negative relation between spending in favor and likelihood of success. The estimation technique applied in this study controls and corrects for the fact that some ballot measures are more popular than others. Further, this research design accounts for the possibility that voters in some geographic regions are inherently more likely to favor certain ballot propositions than voters in other regions.

In this study, I examine the effect of television campaign advertisements in various media markets for passage or defeat of ballot propositions in California. Using a regression framework, I test the hypothesis that the marginal impacts of supporting and opposing campaign advertising are equal.

This study’s focus on media advertisements as opposed to campaign spending has several

3Boehmke (2002) finds that states with the initiative process have more diverse interest groups, with more citizen groups. Smith and Tolbert (2004) find that initiative states also tend to have more non-profit interest groups, more membership/citizen groups, and more business interests.

advantages over an analysis of total campaign spending. First, the same amount of spending may result in a different number of advertisements, depending on the price television stations charge for a television spot. Hence, the focus on media advertisements more accurately measures voters’ exposure to ballot measure advertising than does total spending. Further, it makes the air-time to which voters are exposed comparable across media markets. Second, media advertising does not include lawyer and consultant management fees, whose purpose is not to influence voters. In particular, the supporting side incurs costs of drafting the ballot proposition and seeking legal advice even before signatures are collected to place the measure on the ballot. Further, total spending as opposed to media advertising also includes the cost of using paid signature gathers and this expense is now well over $1 million (Donovan, Bowler and Tolbert 1998, Lupia and Matsusaka 2004). Thus, total spending may not be a particularly good measure for campaign activities directed at influencing voters’ opinions. Television advertising, used in this study, is thus a more accurate measure of voters’ exposure to ballot measure campaigns.

Finally, detailed information on television advertising in several media markets for a number of ballot measures allows for a research design that controls for the endogeneity of campaigning. This methodology allows for controlling for initiative and voter-specific characteristics, generating unbiased estimates.

The next section of this paper describes the methods applied in this study and discusses data issues. Section III presents the results and Section IV presents conclusions.

\(^5\)Bowler and Donovan (1998) find that media spending has no direct impact on measures of voter opinions on ballot issues. They conclude that “our analysis provides very little support for the idea that variation in media market expenditure had a direct impact on opinions” (Bowler and Donovan 1998, p.159), and that “well-financed interests are typically unable to ‘buy’ public policy via the initiative process” (Bowler and Donovan 1998, p.163).
II. Empirical Methods and Sample Design

A. Model

The empirical model tests the effect of television advertisements that favor and oppose passage of propositions on various outcome measures. Television markets encompass one or several counties and these counties constitute the unit of analysis. The model is written as

\[ Y_{ij} = \beta_1 A_{Fi} + \beta_2 A_{Oi} + \gamma X_{ij} + \alpha_i + \mu_j + \varepsilon_{ij} \]  

where \( Y_{ij} \) is the outcome for ballot measure \( i \) in county \( j \), \( A_{Fi} \) is the number of advertisements in favor of passage of the ballot proposition, \( A_{Oi} \) is the advertising opposed to passage, and \( X_{ij} \) is a vector of county characteristics. The hypothesis is that the estimated sign on \( \beta_1 \) is positive and the estimated sign on \( \beta_2 \) is negative. I use three outcome measures to test this hypothesis. Following Gerber (1999), the dependent variable is either the difference between the number of votes favoring and opposing ballot proposition passage, or an indicator of whether the ballot proposition passed. A third outcome measure is the vote share favoring passage. Since some counties are several times the size of other counties, I will use weighted least squares to correct for heteroskedasticity when the dependent variable is either the vote share or the indicator for whether a ballot proposition passed (Greene 2002). The weight is the size of the population voting on the ballot proposition. I will also adjust the standard errors for clustering at the county level (Wooldridge 2001).

B. Endogenous Advertising

The point estimates on campaign advertising are biased when factors in the error term \( \varepsilon_{ij} \) are correlated with campaign spending. This is the case when unobserved or omitted variables are correlated with election outcomes and campaign advertising. Suppose the likelihood of
success is not fully accounted for in the regression model. Then, if a sponsoring group campaigns heavily when a ballot measure is in danger of failing, but does not spend many resources when defeat is certain, ordinary least squares estimation underestimates the effect of campaigning. In this study, I control for the overall popularity of a ballot proposition through an indicator variable \((\alpha_i)\) for each ballot measure. This indicator controls for the degree of popularity across all counties.\(^6\) Since popularity of measures and advertising also differs across counties, I further include an indicator variable for each county \((\mu_i)\).

This fixed effects approach (Mundlak 1963) solves the endogeneity issue when all counties have the same willingness to support each measure. If some counties are more likely to favor passage of some proposition than others, some bias remains.\(^7\) Interacting county and indicator effects would allow for a different response in each county for each measure, but introducing these interaction terms is impossible because the model would contain insufficient degrees of freedom. One way of allowing county responses to differ from one group of propositions to another is to categorize ballot propositions into conservative and liberal, and to estimate separate regressions for both categories.\(^8\)

I implement the latter approach by including one set of county indicators for ballot propositions favored by conservative groups, and another set of county indicators for ballot

\(^6\)Proposition indicators explicitly control for the uncertainty voters have with respect to each ballot measure. Voters may lean toward casting a ballot for the status quo, especially when they are uncertain about the effects of initiatives (Bowler and Donovan 1998).

\(^7\)Ballot measure indicators allow the response of counties to differ from proposition to proposition, but assume that each county has the same response to a particular ballot measure.

\(^8\)This approach does not fully solve the problem if, for example, some “conservative” counties are more likely to support some conservative measures than others.
propositions favored by liberal groups. The classification of propositions is based on endorsements by the Los Angeles Times. Although the LA Times is an independent newspaper, there is evidence that it tends to favor the liberal view on issues (Groseclose and Milyo 2003). Ballot measures supported by the LA Times tend to be supported by liberal groups and issues opposed tend to be supported by conservative groups. I will examine whether the regression results from this specification are similar to the specification described in equation (1).

Given that I use these county indicators, I cannot include county population, income, education and other socioeconomic variables from the 2000 Census in the regression, because the county fixed effects are perfectly collinear with socioeconomic variables that do not change within the county over the time period examined in this paper (2000-2004).

However, before reporting results from the fixed effects regressions, I will present estimates without fixed effects, using partisanship and socioeconomic characteristics as explanatory variables. Scholarly work has documented that partisanship is the most important predictor of individual voting on initiatives and referendums (Hero and Tolbert 1996, Branton 2003, Smith and Tolbert 2001, Bowler and Donovan 1998, Branton 2003, Bower, Nicholson and Segura 2006), as well as aggregate voting (Tolbert and Hero 1996, Smith and Tolbert 2001). The partisanship measure employed in this paper is the percent registered Republicans in a county in each election.

Among the socioeconomic variables I include are annual countywide unemployment rates as a measure of the economic conditions in a county (Smith and Tolbert 2001, Tolbert and Hero 1996). Further, as in Hero and Tolbert (1996), Tolbert and Hero (1996), and Smith and Tolbert
(2001), I include one index measuring racial diversity, and one index measuring ethnic diversity.\textsuperscript{9} I also include education, median income, a measure of age, namely percent of the population above 65, and urbanization as determinants of voting decisions. All of the socioeconomic variables except the unemployment rate are from the 2000 Census, and thus do not vary over the examined time period. They therefore cannot be included in the fixed effects regressions because they non-time varying county characteristics are perfectly co-linear with fixed effects. The source for county-level unemployment data is the California Employment Development Department.

Since partisanship varies from election to election, I also include this variable in the \(X_0\) vector in the fixed effects specification of equation (1). If campaign advertising is a function of changing partisanship within counties, omitting this variable may result in biased coefficients.

An alternative to the fixed effects approach, proposed to address the endogeneity of campaigning, is removal of the bias though instrumental variable estimation. This method produces unbiased coefficients if the instruments are uncorrelated with the error in equation (1), but are correlated with campaign advertising. As a robustness check for the fixed effects approach, I will estimate the model using instrumental variables. Instruments chosen are the number of measures on the ballot, number of undecided voters, and the price of advertising per voter. Price of advertising and number of measures on the ballot are predicted to be negatively

\textsuperscript{9}As in Hero and Tolbert (1996), Tolbert and Hero (1996), and Smith and Tolbert (2001), the racial index is computed as the sum of the squared percentages of Asians, Hispanics, blacks, and whites in a county. The ethnic index is computed by adding the squared percentages of those who self-report in the 2000 Census that their ethnic origin is German, Greek, Hungarian, Irish, Italian, Polish, Portuguese, or Russian. For an analysis of racial and socioeconomic determinants of being on the winning side of ballot propositions, see Hajnal, Gerber and Louch (2002).
correlated with campaign spending. Number of voters undecided is predicted to have a positive effect on spending, because advertisers have an incentive to spend more in areas where voters are undecided. The price of advertising is obtained from SQAD, and the number of undecided voters is obtained from the California Field Poll.

C. Sample Description

For the proposed research design it is most promising to analyze ballot propositions in California, where television advertising occurs for several ballot propositions within the same television market. A television market is defined by the boundaries of the Nielsen Designated Market Area (DMA). The California television markets included are: Fresno-Visalia, Los Angeles, Sacramento-Stockton-Modesto, San Diego, and San Francisco-Oakland-San Jose. According to equation (1), the unit of observation is a county, and I am including counties that lie completely within one of these DMAs. The Fresno-Visalia DMA has six counties, Los Angeles has five counties, Sacramento-Stockton-Modesto has fourteen counties, San Diego has one county, and San Francisco-Oakland-San Jose has ten counties.

Included in the sample of ballot measures are those for or against which at least one television advertisement was aired in one of the California markets. From March 2000 to March

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10Because the Campaign Media Analysis Group, the source of the advertising data employed in this study, collects advertising data for only the largest 100 of the 210 U.S. media markets, no television advertising information is available for small television markets such as Chico-Redding, Eureka, Bakersfield, Palm Springs, and Santa Barbara.

11Since the San Diego DMA has only one county, it does not help identify the point estimates as the proposition indicators absorb all variation.

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2004 a total of 46 propositions appeared on California ballots.\textsuperscript{12, 13} This study includes only those ballot propositions where one can clearly link a television ad to a specific ballot proposition. Ads that favored or opposed the passage of several ballot propositions and the corresponding ballot propositions were excluded.\textsuperscript{14} This leads to the elimination of six ballot propositions. The California governor recall in the fall of 2003 was also excluded because the recall was more like a candidate election than a vote on a proposition that can lead to a change in legislation.\textsuperscript{15}

Data on vote returns at the county level come from the California Secretary of State (http://www.ss.ca.gov/elections) and data on advertising come from the Campaign Media Analysis Group, which collects data on political advertising in the major television markets. The data cover ballot proposition advertising in California from the primary in 2000 to the primary in 2004.

The election results from the counties analyzed count for roughly 80 percent of the

\textsuperscript{12}This number does not include the recall election and counts Propositions 57 and 58 only once because for these ballot propositions all spending was either to defeat both or to support both ballot propositions. The effect of not attributing this spending to each of the ballot propositions is to lower the computed overall campaign spending number.

\textsuperscript{13}Given that the research design employs proposition fixed effects, ballot measures with no TV ads are excluded because for those propositions there is no “within-proposition” variation of advertising, and thus advertising is perfectly colinear with propositions fixed effects. Thus, estimation results would be identical to those reported in the tables if those propositions were included.

\textsuperscript{14}This sample selection is consistent with Gerber’s (1999, p.109) approach, who also drops several measures because some committees campaigned for or against more than one measure.

\textsuperscript{15}Recall is part of direct democracy and the recall was a special election triggered by petition signatures. However, since the recall was a competition of candidates for the governor’s office, it resembles more a candidate election where voters vote on a policy bundle, than a ballot contest where voters typically vote on one dimension.
overall votes cast in California (Appendix A3). The margins of victory in this sample are very similar to the margins of victory in the state. The data selection criteria mentioned previously result in 18 ballot propositions with television advertising expenditures in this time period. These propositions account for 70 percent of total ballot proposition spending. Nine of these ballot propositions passed and nine were defeated. The supporting interest group outspent the opposing group on all nine ballot measures that passed, and the opposing side outspent the supporting side on three of the measures that were defeated.

Table A1 in the appendix describes total and average campaign spending as well as advertising on California ballot measures from March 2000 to March 2004. The data show that close to half a billion dollars was spent in this period advocating either passage or defeat of 46 ballot propositions.16 Twenty-seven of these ballot propositions passed. Examining the sample of ballot propositions where at least some spending is reported, average spending per ballot proposition was $14 million.17 Spending by the supporting groups outweighed spending by the opposing groups. Parallel to the spending numbers, the number of TV spots supporting passage outweighed the number of spots opposing passage.

Table A2 of the appendix describes the means and standard deviations of the main variables used in this study. The average vote share in favor of passage was 45.4 percentage points, and in 35 percent of the county-proposition observations a majority voted in favor of

16I am considering Propositions 57 and 58 as one ballot proposition, as the same amount of campaign spending is reported for both ballot propositions. Proposition 57 addressed the issuance of a bond but it was written into this ballot proposition that the bond would only be issued if voters also approved Proposition 58, a balanced budget requirement.

17No spending is reported in some cases when legislators put measures on the ballot.
D. Television Advertising and Total Campaign Expenditures

An alternative to television advertising as a measure of interest group activity is the use of total campaign expenditure. Unfortunately, this measure is not available at the county level, so it is impossible to attribute a certain amount of spending to mobilizing and informing voters in a county. However, regional data are important to introduce indicators for voter preferences and ballot propositions, which will allow identification of a causal effect of campaigning on ballot proposition outcomes.

Waters (2002) estimates that paid advertisements, which include TV, radio and mass mailings, constitute about 55 percent of total campaign expenses in a typical ballot campaign. Price (1988) notes that electronic media spending is often the largest single campaign expense. In California, interest group filings show that for the ballot measures analyzed in this study, campaigns that engaged in television advertising expended 38 percent of their total budget on this type of advertising (California Secretary of State, http://dbsearch.ss.ca.gov).

If advertising costs are the same for each voter, one could use total advertising expenditure, as long as the fixed costs of running a campaign, such as lawyer fees, are equal across ballot proposition campaigns. This then would require one to obtain advertising spending by television markets in order to control for endogeneity of voter preferences and ballot proposition characteristics. However, the cost of reaching a voter differs by the advertising market, and thus spending does not map directly on to the advertising air-time to which voters are exposed.

In the third quarter of 2000, the cost per point measure, an estimate of the advertising
I also estimated regressions (not reported) with statewide supporting and opposing spending as explanatory variables, with the unit of analysis being a ballot proposition. Those regression results are similar to those in Gerber (1999) and show that supporting spending is ineffective, and opposition spending has the anticipated negative effect on votes. I also estimated the regressions using the difference between supporting and opposing votes, or an indicator for whether a measure received a majority in a county. The results from this specification are similar to those reported in Table 1.

III. Results

Before estimating the fixed effects specification in equation (1), I estimate pooled OLS regressions, using partisanship and socioeconomic county characteristics as explanatory variables. The first two columns report the result for the linear and log specifications when pooling all ballot measures.

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19 I also estimated the regressions using the difference between supporting and opposing votes, or an indicator for whether a measure received a majority in a county. The results from this specification are similar to those reported in Table 1.
To test whether the variables have a different effect on voter support for a ballot measure depending on whether a measure is viewed as conservative or liberal, I distinguish between ballot propositions opposed and favored by the *LA Times.* Of the eighteen ballot propositions analyzed in this paper, the *LA Times* endorsed the opposing side seven times and the supporting side eleven times. Columns three and four of Table 1 are based on the subsample of ballot measures supported by the *LA Times,* and columns five and six are based on the subsample of ballot measures opposed by the *LA Times.*

The point estimates on supporting and opposing advertisements have the anticipated signs and are statistically significant in all but one of the specifications in Table 1. As in previous work, the point estimates on opposing advertising are significantly larger in absolute value than those on supporting advertisements. This finding may be due to the endogeneity of advertising, which is an issue that I will address in the next tables. Among the control variables, partisanship is statistically significant for five of the six point estimates. The percent registered Republican has a negative and statistically significant effect both on the percent of voters favoring passage in the full sample and in the sample of measures supported by the *LA Times.* The effect of the partisanship variable is positive and statistically significant in the subsample of ballot measures opposed by the *LA Times.* These findings show that Republican registered voters oppose passage of liberal measures and support passage of conservative measures.

Among the other variables, higher unemployment and urbanization rates tend to increase the likelihood that voters favor passage of overall ballot measures, and this finding is driven by

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the positive effect of these variables on liberal measures. College education and the percent above age 65 increase the percent of voters favoring ballot measures supported by the LA Times.

Table 2A presents these results when controlling for the endogeneity of advertising via both county and proposition fixed effects. In the first two columns the dependent variable is the percent of individuals supporting passage; in the next two columns the dependent variable is the difference in votes supporting and opposing passage; and in the last two columns the dependent variable is a binary indicator measuring whether the ballot proposition received a majority of votes in the county.

All campaign spending point estimates have the anticipated sign and, with one exception, the estimated coefficients are statistically significant. Overall, there is strong support for the hypothesis that advertising has an effect on ballot proposition outcomes. In one specification, the marginal impact of opposing advertising is significantly larger than the impact of supporting advertising (using the five percent level as a criterion). In all other specifications, supporting advertising is at least as productive as opposing advertising.

The partisanship variable in Table 2A has a negative sign in all specifications and four of the point estimates are statistically significant. Since the partisanship coefficients are identified by changes over time within a county, it suggests that as counties become more conservative,

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21To test the robustness of the findings to other aggregate measures of political preferences, I substituted the partisanship measure for a measure of county level ideology in the regression (not reported). This measure was obtained for each election from the Field Poll, and constructed as in Erikson, Wright, and McIver (1993) and Percival, Johnson and Neiman (2004). The point estimates on campaign advertising were very similar to those reported in Table 2 when the ideology measure was used instead of the percent Republican registered.
they are more likely to oppose ballot measures. 22

The point estimates on advertising in Table 2A, column 1 imply that an additional 100 supporting advertisements increase the vote share by 1.1 percentage points and a one standard deviation increase raises the vote share by 4.4 percentage points. A corresponding increase in opposing advertising lowers the vote share by 0.6 percentage points and 2.2 percentage points respectively. Conditional on non-zero (i.e., positive) advertising amounts, the mean for supporting advertisements in a county is 578 advertisements, and for opposing advertisements 489. Thus, the point estimates imply that the supporting side must increase advertising by 18 percent relative to the mean in order to obtain a 1.1 percentage point increase in the percent of voters favoring passage, and that the opposing side must increase its advertising by 20 percent to obtain a 0.6 percentage point increase in voter support.

The log estimates, which allow for diminishing returns to advertising, also reveal that campaign spending is effective in affecting vote shares. The estimates (Table 2A, column 2) imply that a one standard deviation increase in log advertising leads to a nine percentage point increase in voters favoring passage, and that a one standard deviation decrease in opposing advertising leads to a three percentage point decrease in support for the ballot measure. Further, the point estimates on log advertising in Table 2A, column 2, imply that supporting advertising was able to secure a majority in 37 percent of all counties where advertising occurred, and that opposing advertising secured defeat in one percent of all counties where advertising occurred.

22Besides partisanship, only the data on unemployment vary over time and across counties. When including the unemployment rate in the fixed effects regression the point estimates on this variable were not statistically significant, and the point estimates on campaign spending were very similar to those reported in the tables.
To test for the sensitivity of the results to alternative specifications, I performed several robustness checks. One concern may be that the results are driven by colinearity between the two advertising variables, which have a correlation coefficient of 0.26. To examine this possibility, I estimated the regression using three alternative specifications. One specification excludes supporting advertising; in this regression, advertising opposed has the hypothesized negative and statistically significant coefficient. In another specification, I exclude opposition advertising, and advertising in favor has the hypothesized positive and statistically significant coefficient. Finally, I constructed a new variable defined as the difference between supporting and opposing advertising and substituted this variable for the supporting and opposing advertising variables. In this regression, the point estimate on the difference in advertising also has the anticipated positive sign and is statistically significant.

Table 2B presents regression results when allowing for separate county fixed effects depending whether a ballot measure was supported or opposed by the LA Times. Thus, the regression includes one set of county indicators for ballot propositions supported by the LA Times, and another set for those opposed by the LA Times. This specification allows voters’ preferences for or against the ballot measure to differ across these two ballot proposition types. The new regression results show that the previous results are robust with respect to this new specification. For example, 100 advertisements increase the vote share by 0.74 percentage points.

To test for the sensitivity of the results to alternative specifications, I performed several robustness checks. One concern may be that the results are driven by colinearity between the two advertising variables, which have a correlation coefficient of 0.26. To examine this possibility, I estimated the regression using three alternative specifications. One specification excludes supporting advertising; in this regression, advertising opposed has the hypothesized negative and statistically significant coefficient. In another specification, I exclude opposition advertising, and advertising in favor has the hypothesized positive and statistically significant coefficient. Finally, I constructed a new variable defined as the difference between supporting and opposing advertising and substituted this variable for the supporting and opposing advertising variables. In this regression, the point estimate on the difference in advertising also has the anticipated positive sign and is statistically significant.

Television advertising is aired in 10, 15, 20, 30, and 60 second spots. Seventy-seven percent of all ads are aired in 30 second spots and 22 percent of the ads are aired in 15 second spots. Twenty and 60 second spots comprise less than one percent of all ads. The results in Table 2 are similar to results from a regression where I substitute the length of advertising for the number of advertisements.
for the favoring side and 0.52 percentage points for the opposing side (Table 2B, column 1). Both point estimates are statistically significant at the one percent level. The productivity differential between supporting and opposing advertising is narrower in Table 2B than in the corresponding regressions in Table 2A. In five of the six specifications, supporting and opposing advertising have equal marginal effects, using the five percent significance level. In the sixth specification, the difference is statistically significant at the 5.4 percent level. These results suggest that the supporting and opposing advertising are not significantly different from each other with respect to their ability to influence ballot measures. As one would expect from the inclusion of county indicators by ballot proposition type, relative to Table 2A the R-square increases in all specifications.

The previous estimates are based on counties that lie wholly within one television market. There are, however, counties that lie only partially in a television market. For example, only approximately one third of Kern and Riverside counties lie within the Los Angeles DMA. If some individuals in these counties cannot watch these advertisements because they are not part of the Los Angeles DMA, then one predicts that in these counties the marginal impact of advertising should be smaller than the marginal impact in those counties that lie completely within the DMA boundaries. For the regression equation (1), this hypothesis implies that counties that lie only partially in a DMA have a lower responsiveness to advertisements than those which are located fully within a DMA. Support for this hypothesis enhances the confidence in the previous results.

25The remainder of these counties lies in DMAs for which the Campaign Media Analysis Group obtains no advertising data because CMAG obtains these data only for the largest DMAs.
Table 3 presents the results for various specifications that have the vote share as the dependent variable. Results for the other two dependent variables are similar to those reported here and can be obtained from the author upon request. In each specification in Table 3, the impact of advertising on voting behavior is smaller in counties that lie only partially in a DMA. For example, Table 3, column 1 suggests that 100 additional supporting advertisements lead to a 1.13 percentage point increase in votes from counties that are fully within a DMA and a 0.41 percentage point increase in votes from counties that lie only partially in a DMA. Opposition advertising leads to a 0.63 percentage point decrease in the percent of votes supporting the ballot measure if the county lies completely within a DMA, and to a 0.09 percentage point decrease if the county lies partially within a DMA.

One concern regarding the endogeneity of advertising is that there may be heavy advertising in those counties where there is initially low support for the positions of advertisers. Without explicitly accounting for the initial support levels, the regressions may be subject to an omitted variable bias. The previous regressions addressed this by including county and proposition fixed effects. An alternative way to address the omitted variable concern is to explicitly include a measure of initial support in the regression equation. Including such a measure also allows for testing the hypothesis that political advertisements change citizens’ voting intentions relative to an initial baseline.

The California Field Poll asks respondents whether respondents intend to vote yes or no on ballot measures. This question is asked for most ballot measures analyzed in this paper. Using these responses, I constructed a measure of voting intention, which is defined as the percent of respondents in a California county favoring passage of the measure. To obtain this
measure, I only used Field Polls prior to the beginning of television advertising in support of or opposition to ballot measures.

Table 4 reports results from these regressions. The dependent variable is the share of voters supporting passage. Since the voting intentions variable is a summary measure of a county’s preference to support or oppose the measure, I excluded county fixed effects.\textsuperscript{26} The number of observations is lower than in previous regressions because the Field Poll does not obtain voter opinion for each ballot measure. The point estimate on voting intentions is positive and statistically significant, indicating that the higher the initial support for a measure, the higher the support at the polls. All but one of the advertising coefficients are statistically significant at the five percent level when controlling for voting intentions prior to the airing of advertising. The magnitudes of the coefficients are similar to those in the previous tables. The results lend support to the hypothesis that both supporting and opposing ballot measure advertising alter voting decisions.

As a final robustness check, I estimate the model that explains the percent of voters favoring passage using instrumental variable estimation, applying the instruments discussed in Section II B. In the first (unreported) stages for supporting and opposing advertising, the instruments price of advertising and number of measures on the ballot have the predicted negative and statistically significant effects on the amount of advertising. The sign on the number of undecided voters is positive and statistically significant in one of the first stages. The set of instruments meet the typical criteria for valid instruments. In the second stage, the

\footnote{\textsuperscript{26}When county fixed effects are included, they are jointly statistically insignificant.}
coefficient on log positive advertising is 10.7 and on log negative advertising -9.8. Both point estimates are statistically significant and the hypothesis that both coefficients have equal magnitude cannot be rejected. In the linear specification, the point estimate on positive advertising is 1.80 and on negative advertising -3.1. In this specification, both point estimates are statistically significant at the one percent level. Therefore, the results from the robustness test are broadly consistent with the findings from the fixed effects model.

IV. Conclusion

Previous work on ballot measures has argued that money is ineffective in passing initiatives and that campaign expenditures have little influence in determining outcomes. These studies have found that when campaigning has an impact, it is in defeating initiatives. Contrary to previous work in this research area, this paper documents that interest groups on both sides can influence policy outcomes in the direct legislation process.

This study addresses the endogeneity of advertising by suggesting a research design that allows for controlling of voter preferences and initiative particulars. This research design leads to different conclusions with respect to the effectiveness of advertising than those reached in the previous literature because both opposing and supporting campaigning have a statistically significant impact on voting outcomes. Further, the results do not support the claim that opposition advertising is much more effective than supporting advertising. Instead, this study

\[ \text{27 As in the other regressions in this paper, the variables are weighted by number of voters in the county and the standard errors are clustered by county. County characteristics included are conservative ideology, median income, percent college educated, and percent whites. All characteristics are interacted with whether the LA Times endorsed or opposed a proposition. Since one of the instruments (number of undecided voters) is not available for all counties, the regressions are based on 480 observations.} \]
shows that in several specifications the supporting side’s campaigning has a larger marginal
impact than that of the opposing side. For example, one set of estimates suggests that an
additional 100 supporting advertisements increase the percent of votes in favor by 1.1 percentage
points and a corresponding change for opposition advertising lowers this percentage by 0.6
percentage points. In 2000, the average cost of a TV spot purchased by a supporter or opponent
of a California ballot measure was estimated at $1,550 (Wisconsin Advertising Project). This
implies that an expenditure of roughly $155,000 can purchase between a 1.1 percentage point
increase when spent by supporters, and 0.6 percentage point decrease in support when spent by
opponents. However, the influence of interest groups is mitigated because these groups compete.
Although money spent on campaigning is important to outcomes, resources spent to support and
oppose at least partially offset each other. Competition among interest groups restricts the
influence of an individual group.

The evidence that interest groups’ resources can influence ballot measures does not imply
that campaign advertising serves no useful role in making collective decisions. The welfare
implications of these findings depend crucially on the functions of campaign advertising. If
ballot measure advertising primarily informs voters, as suggested by some (Lupia 1994, Bowler
and Donovan 1998), then advertising may increase voter welfare. Future research may want to
examine why supporting interests in California have outspent opposing advertising in recent
years, and to examine other states to study whether interest group pressure is equally likely to
overturn the status quo as the findings in this paper indicate.
References


# Table 1

## Initiative Advertising: Ordinary Least Square Estimates

<table>
<thead>
<tr>
<th>Specification</th>
<th>All initiatives</th>
<th>Initiatives supported by LA Times</th>
<th>Initiatives opposed by LA Times</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>linear</td>
<td>log</td>
<td>linear</td>
</tr>
<tr>
<td>Supporting Advertisements</td>
<td>0.806*** (0.183)</td>
<td>3.641*** (0.665)</td>
<td>-0.043 (0.161)</td>
</tr>
<tr>
<td>Opposing Advertisements</td>
<td>-1.666*** (0.172)</td>
<td>-8.078*** (0.736)</td>
<td>-4.148*** (0.159)</td>
</tr>
<tr>
<td>Percent registered Republican</td>
<td>-0.078 (0.065)</td>
<td>-0.115** (0.046)</td>
<td>-0.661*** (0.093)</td>
</tr>
<tr>
<td>Median income</td>
<td>-1.570 (2.277)</td>
<td>-0.353 (2.168)</td>
<td>2.262 (3.993)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>0.446*** (0.152)</td>
<td>0.596*** (0.152)</td>
<td>0.866*** (0.259)</td>
</tr>
<tr>
<td>College educated</td>
<td>0.093 (0.061)</td>
<td>0.073* (0.057)</td>
<td>0.296*** (0.100)</td>
</tr>
<tr>
<td>Race index</td>
<td>-0.478 (5.582)</td>
<td>1.855 (4.823)</td>
<td>15.69 (10.09)</td>
</tr>
<tr>
<td>Ethnic index</td>
<td>-16.81 (93.75)</td>
<td>6.770 (88.64)</td>
<td>-286.5 (205.0)</td>
</tr>
<tr>
<td>Percent above 65 years</td>
<td>0.200 (0.153)</td>
<td>0.181 (0.161)</td>
<td>0.723* (0.394)</td>
</tr>
<tr>
<td>Percent urban</td>
<td>0.066*** (0.024)</td>
<td>0.080*** (0.024)</td>
<td>0.162*** (0.062)</td>
</tr>
<tr>
<td>Constant</td>
<td>51.87** (22.93)</td>
<td>37.31* (21.81)</td>
<td>4.497 (43.46)</td>
</tr>
<tr>
<td>p-value for equal marginal effect</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>R-square</td>
<td>0.35</td>
<td>0.42</td>
<td>0.78</td>
</tr>
</tbody>
</table>

Note: Standard errors in parentheses. N=648 in the full sample, N=252 in columns 3 and 4, and N=396 in columns 5 and 5. The reported point estimates are unstandardized. All standard errors clustered by county. Applying a two-tailed test, *indicates statistical significance at the ten percent level, ** at the five percent level, and *** at the one percent level. Regressions in columns are weighted with the number of voters in a county.
Table 2A  
Effect of Initiative Advertising

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Percent voters supporting</th>
<th>Voters supporting - Voters opposing</th>
<th>Passed = 1, 0 otherwise</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Advertising specification</td>
<td></td>
<td>linear</td>
<td>log</td>
</tr>
<tr>
<td>Supporting Advertisements</td>
<td>1.095***</td>
<td>10.34***</td>
<td>0.923**</td>
</tr>
<tr>
<td>(0.388)</td>
<td>(2.144)</td>
<td>(0.431)</td>
<td>(3.525)</td>
</tr>
<tr>
<td>Opposing Advertisements</td>
<td>-0.616***</td>
<td>-3.364***</td>
<td>-2.015**</td>
</tr>
<tr>
<td>(0.229)</td>
<td>(1.253)</td>
<td>(0.994)</td>
<td>(3.268)</td>
</tr>
<tr>
<td>Percent registered Republican</td>
<td>-0.678**</td>
<td>-0.467*</td>
<td>0.224</td>
</tr>
<tr>
<td>(0.322)</td>
<td>(0.262)</td>
<td>(0.184)</td>
<td>(0.235)</td>
</tr>
<tr>
<td>Proposition fixed effects</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>County fixed effects</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>p-value for equal marginal effect</td>
<td>0.078</td>
<td>0.004</td>
<td>0.074</td>
</tr>
<tr>
<td>R-square</td>
<td>0.82</td>
<td>0.83</td>
<td>0.26</td>
</tr>
</tbody>
</table>

Note: Standard errors in parentheses. N=648. All standard errors clustered by county. Applying a two-tailed test, *indicates statistical significance at the ten percent level, ** at the five percent level, and *** at the one percent level. The reported point estimates are unstandardized. The p-value for equal marginal effects refers to the null hypothesis that the supporting and opposing spending have an equal marginal effect. Regressions in columns 1, 2, 5, and 6 are weighted with the number of voters in a county.
### Table 2B
Effect of Initiative Advertising
County Effects by Initiative Type

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Percent voters supporting</th>
<th>Voters supporting</th>
<th>Passed = 1, 0 otherwise</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Advertising specification</td>
<td>linear</td>
<td>log</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Supporting Advertisements</td>
<td>linear</td>
<td>0.743**</td>
<td>7.863***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.316)</td>
<td>(1.890)</td>
</tr>
<tr>
<td>Opposing Advertisements</td>
<td>linear</td>
<td>-0.521***</td>
<td>-3.916**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.196)</td>
<td>(1.531)</td>
</tr>
<tr>
<td>Percent registered Republican</td>
<td>linear</td>
<td>-0.529**</td>
<td>-0.366**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.256)</td>
<td>(0.186)</td>
</tr>
<tr>
<td>Proposition fixed effects</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>County fixed effects * LA Times Endorsement</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>p-value for equal marginal effect</td>
<td>0.328</td>
<td>0.071</td>
<td>0.054</td>
</tr>
<tr>
<td>R-square</td>
<td>0.88</td>
<td>0.89</td>
<td>0.34</td>
</tr>
</tbody>
</table>

Note: Standard errors in parentheses. N=623. All standard errors clustered by county. Applying a two-tailed test, *indicates statistical significance at the ten percent level, ** at the five percent level, and *** at the one percent level. The reported point estimates are unstandardized. The p-value for equal marginal effects refers to the null hypothesis that the supporting and opposing spending have an equal marginal effect. Regressions in columns 1, 2, 5, and 6 are weighted with the number of voters in a county.
Table 3
Effect of Initiative Advertising on Percent of Voters Supporting:
Only a Part of a County is Receiving Television Advertisements

<table>
<thead>
<tr>
<th></th>
<th>linear</th>
<th>log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supporting Advertisements</td>
<td>1.131***</td>
<td>10.67***</td>
</tr>
<tr>
<td></td>
<td>(0.403)</td>
<td>(2.294)</td>
</tr>
<tr>
<td>Supporting Advertisements*</td>
<td>-0.726***</td>
<td>-2.763***</td>
</tr>
<tr>
<td>County with limited advertising</td>
<td>(0.187)</td>
<td>(0.627)</td>
</tr>
<tr>
<td>Opposing Advertisements</td>
<td>-0.627***</td>
<td>-3.435**</td>
</tr>
<tr>
<td></td>
<td>(0.228)</td>
<td>(1.273)</td>
</tr>
<tr>
<td>Opposing Advertisements*</td>
<td>0.540**</td>
<td>1.998*</td>
</tr>
<tr>
<td>County with limited advertising</td>
<td>(0.223)</td>
<td>(1.158)</td>
</tr>
<tr>
<td>Percent registered Republican</td>
<td>-0.680**</td>
<td>-0.476</td>
</tr>
<tr>
<td></td>
<td>(0.297)</td>
<td>(0.240)</td>
</tr>
<tr>
<td>p-value for equal marginal effect</td>
<td>0.080</td>
<td>0.005</td>
</tr>
<tr>
<td>R-square</td>
<td>0.82</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Note: N=695. All standard errors clustered by county. Applying a two-tailed test, *indicates statistical significance at the ten percent level, ** at the five percent level, and *** at the one percent level. The means (standard deviation) of the dependent variable is 45.6 (13.1), of advertising favoring, expressed in hundreds of ads, 4.45 (4.06) and of advertising opposing 1.92 (3.62). The reported point estimates are unstandardized. The p-value for equal marginal effects refers to the null hypothesis that the supporting and opposing spending have an equal marginal effect. Regressions are weighted with the number of voters in a county.
Table 4
Effect of Initiative Advertising on Percent Voters Supporting:
Controlling for Voting Intentions Prior to Television Advertising

<table>
<thead>
<tr>
<th></th>
<th>linear</th>
<th>log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supporting Advertisements</td>
<td>1.069 *** (0.317)</td>
<td>7.919 *** (1.383)</td>
</tr>
<tr>
<td>Opposing Advertisements</td>
<td>-0.662 *** (0.233)</td>
<td>-3.798 *** (1.381)</td>
</tr>
<tr>
<td>Vote intentions to favor passage prior to advertising</td>
<td>0.113 *** (0.019)</td>
<td>0.104 *** (0.018)</td>
</tr>
<tr>
<td>Proposition fixed effects</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>p-value for equal marginal effect</td>
<td>0.02</td>
<td>0.001</td>
</tr>
<tr>
<td>R-square</td>
<td>0.82</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Note: N=480. The mean (standard deviation) of the vote intention variable is 51.9 (31.3). All standard errors clustered by county. Applying a two-tailed test, * indicates statistical significance at the ten percent level, ** at the five percent level, and *** at the one percent level. The reported point estimates are unstandardized. The p-value for equal marginal effects refers to the null hypothesis that the supporting and opposing spending have an equal marginal effect. Regressions are weighted with the number of voters in a county.
Appendix
Table A1
State-wide campaign expenditure and television advertising
Means and Standard deviations

<table>
<thead>
<tr>
<th></th>
<th>Total Spending support /$1,000</th>
<th>Total Spending oppose /$1000</th>
<th>Spending support /$1000 Mean (Std. Dev.)</th>
<th>Spending oppose /$1000 Mean (Std. Dev.)</th>
<th>TV spots support</th>
<th>TV spots oppose</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>All initiatives</td>
<td>343,701</td>
<td>149,056</td>
<td>9,821 ** (12381)</td>
<td>4,259 ** (8986)</td>
<td></td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>March 2000-March 2004*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiatives in</td>
<td>263,829</td>
<td>81,785</td>
<td>14,657 (15283)</td>
<td>4,544 (8492)</td>
<td>2,292 (1962)</td>
<td>989 (1864)</td>
<td>18</td>
</tr>
<tr>
<td>the sample</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 2000-March 2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Total expenditure data are from [http://dbsearch.ss.ca.gov/](http://dbsearch.ss.ca.gov/). Spending data are in real March 2004 dollars.
* Does not include recall election. Spending occurred to either support or oppose both initiatives 57 and 58. To avoid a doubling of spending, I excluded one of these propositions in the proposition count. Otherwise, there would have been 47 propositions.
** Means and standard deviations calculated based on 35 initiatives that had either supporting or opposing spending.
Table A2
Means and Standard Deviations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Units of Measurement</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote share in favor</td>
<td>Percent</td>
<td>45.3</td>
<td>13.2</td>
<td>17.5</td>
<td>81.2</td>
</tr>
<tr>
<td>Votes supporting</td>
<td>in 10,000</td>
<td>-1.23</td>
<td>10.2</td>
<td>-119.2</td>
<td>61.2</td>
</tr>
<tr>
<td>- Votes opposing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passed=1, 0 otherwise</td>
<td>Percent/100</td>
<td>0.34</td>
<td>0.47</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Advertising in favor (#)</td>
<td>in 100 units</td>
<td>4.38</td>
<td>4.01</td>
<td>0</td>
<td>14.7</td>
</tr>
<tr>
<td>Advertising opposed (#)</td>
<td>in 100 units</td>
<td>1.90</td>
<td>3.59</td>
<td>0</td>
<td>20.3</td>
</tr>
<tr>
<td>Percent registered Republican</td>
<td>Percent</td>
<td>28.22</td>
<td>7.41</td>
<td>9.67</td>
<td>43.56</td>
</tr>
<tr>
<td>Log median income</td>
<td>logarithm</td>
<td>10.69</td>
<td>0.246</td>
<td>10.29</td>
<td>11.22</td>
</tr>
<tr>
<td>Unemployment</td>
<td>Percent</td>
<td>6.85</td>
<td>2.62</td>
<td>2.80</td>
<td>14.30</td>
</tr>
<tr>
<td>College educated</td>
<td>Percent</td>
<td>22.92</td>
<td>10.56</td>
<td>10.30</td>
<td>51.30</td>
</tr>
<tr>
<td>Race index</td>
<td>Squared percentages/10,000</td>
<td>0.608</td>
<td>0.150</td>
<td>0.338</td>
<td>0.891</td>
</tr>
<tr>
<td>Ethnic index</td>
<td>Squared percentages/10,000</td>
<td>0.016</td>
<td>0.009</td>
<td>0.003</td>
<td>0.034</td>
</tr>
<tr>
<td>Percent above 65 years</td>
<td>Percent</td>
<td>12.83</td>
<td>3.462</td>
<td>7.40</td>
<td>19.50</td>
</tr>
<tr>
<td>Percent urban</td>
<td>Percent</td>
<td>71.71</td>
<td>29.97</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: N=648.
## Table A3
### Summary of Propositions

<table>
<thead>
<tr>
<th>Proposition</th>
<th>Official Title and Summary</th>
<th>Official Results</th>
<th>Results from data set</th>
</tr>
</thead>
</table>
Yes: 4,758,638 (64.5%)  
No: 2,628,451 (35.5%) | Yes: 4,008,308 (64.6%)  
No: 2,199,619 (35.4%) |
Yes: 4,618,673 (61.4%)  
No: 2,909,370 (38.6%) | Yes: 3,722,599 (59.1%)  
No: 2,574,880 (40.9%) |
Yes: 2,415,846 (34.7%)  
No: 4,541,235 (65.3%) | Yes: 2,043,970 (34.6%)  
No: 3,862,217 (65.4%) |
Yes: 3,521,327 (48.7%)  
No: 3,704,687 (51.3%) | Yes: 2,979,392 (49.1%)  
No: 3,091,394 (50.9%) |
Yes: 2,017,425 (27.8%)  
No: 5,230,734 (72.2%) | Yes: 1,660,334 (27.2%)  
No: 4,437,859 (72.8%) |
Yes: 3,101,193 (29.4%)  
No: 7,425,037 (70.6%) | Yes: 2,590,188 (29.1%)  
No: 6,319,069 (70.9%) |
Yes: 5,431,152 (53.7%)  
No: 4,756,311 (46.3%) | Yes: 4,621,252 (53.7%)  
No: 3,987,657 (46.3%) |
| Prop 40. | The california clean water, clean air, safe neighborhood parks, and coastal protection act of 2002. (March 2002). | Passed  
Yes: 2,776,345 (56.8%)  
No: 2,108,512 (43.2%) | Yes: 2,382,514 (58.3%)  
No: 1,702,029 (41.7%) |
Yes: 2,481,027 (51.5%)  
No: 2,332,512 (48.5%) | Yes: 2,094,126 (52.4%)  
No: 1,903,957 (47.6%) |
<table>
<thead>
<tr>
<th>Proposition</th>
<th>Description</th>
<th>Outcome</th>
<th>Yes:</th>
<th>No:</th>
<th>Yes:</th>
<th>No:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prop 42</td>
<td>Transportation congestion improvement act. Allocation of existing motor vehicle fuel sales and use tax revenues for transportation purposes only. Legislative constitutional amendment. (March 2002).</td>
<td>Passed</td>
<td>3,355,553 (69.1%)</td>
<td>1,503,727 (30.9%)</td>
<td>2,786,896 (68.9%)</td>
<td>1,256,028 (31.1%)</td>
</tr>
<tr>
<td>Prop 45</td>
<td>Legislative term limits. Local voter petitions. (March 2002).</td>
<td>Fail</td>
<td>2,049,348 (42.4%)</td>
<td>2,790,153 (57.6%)</td>
<td>1,736,725 (43.2%)</td>
<td>2,286,490 (56.8%)</td>
</tr>
<tr>
<td>Prop 49</td>
<td>Before and after school programs. State grants. (November 2002).</td>
<td>Pass</td>
<td>3,946,448 (56.6%)</td>
<td>6,023,433 (43.4%)</td>
<td>3,411,558 (57.3%)</td>
<td>2,547,838 (42.7%)</td>
</tr>
<tr>
<td>Prop 50</td>
<td>Water quality, supply and safe drinking water projects. Coastal wetlands purchase and protection. Bonds. (November 2002).</td>
<td>Pass</td>
<td>3,808,594 (55.3%)</td>
<td>3,076,333 (44.7%)</td>
<td>3,322,730 (56.6%)</td>
<td>2,550,946 (43.4%)</td>
</tr>
<tr>
<td>Prop 52</td>
<td>Election day voter registration. Voter fraud penalties. (November 2002).</td>
<td>Fail</td>
<td>2,808,240 (40.6%)</td>
<td>4,108,362 (59.4%)</td>
<td>2,440,162 (41.3%)</td>
<td>3,473,554 (58.7%)</td>
</tr>
<tr>
<td>Prop 53</td>
<td>Funds dedicated for state and local infrastructure. A.c.a. 11. (October 2003).</td>
<td>Fail</td>
<td>3,018,819 (36.2%)</td>
<td>5,314,753 (63.8%)</td>
<td>2,551,850 (36.4%)</td>
<td>4,463,731 (63.6%)</td>
</tr>
<tr>
<td>Prop 54</td>
<td>Classification by race, ethnicity, color, or national origin. Initiative. (October 2003).</td>
<td>Fail</td>
<td>3,141,951 (36.2%)</td>
<td>5,538,270 (63.8%)</td>
<td>2,575,809 (35.2%)</td>
<td>4,745,831 (64.8%)</td>
</tr>
<tr>
<td>Prop 55</td>
<td>Kindergarten-university public education facilities bond act of 2004. (March 2004).</td>
<td>Pass</td>
<td>3,239,706 (50.9%)</td>
<td>3,130,921 (49.1%)</td>
<td>2,733,119 (51.4%)</td>
<td>2,581,966 (48.6%)</td>
</tr>
<tr>
<td>Prop 56</td>
<td>State budget, related taxes, and reserve. Voting requirements. Penalties. Initiative. (March 2004).</td>
<td>Fail</td>
<td>2,185,868 (34.3%)</td>
<td>4,183,188 (65.7%)</td>
<td>1,829,046 (34.4%)</td>
<td>3,487,290 (65.6%)</td>
</tr>
</tbody>
</table>

Source for proposition description: [http://lalaw.lib.ca.us/ballot.html](http://lalaw.lib.ca.us/ballot.html)