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Money and State Legislative Elections: The Conditional Impact of Political Context

Nicholas R. Seabrook¹

Abstract
This study builds on existing literature demonstrating the conditional effects of contextual and conversion factors on the relationship between money and votes in state legislative elections. A conditional theory of the impact of spending in state legislative campaigns is developed, emphasizing that the effectiveness of expenditures should vary according to the number of “up for grabs” voters in a district, candidate quality, and strategic decisions about when to enter a race. Using an original data set of elections to state legislatures in nine states, the analysis provides evidence that the political and institutional context of a race has a significant impact on the effectiveness of campaign spending. Specifically, the percentage of registered independents in a district, the presence or absence of term limits on legislators, and the level of professionalism of a legislature each significantly condition the impact of money.

Keywords
state legislative elections, campaign spending, political context, registered independents, term limits, strategic behavior

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The debate over the influence of money in politics, as well as being a point of great contention for those engaged in the crafting of government policy, has also spawned a large and robust body of empirical research in political science. A wide variety of studies on legislative campaigns have consistently demonstrated that the amount of money a candidate spends has a significant and positive association with that candidate’s electoral fortunes. Furthermore, several studies of the impact of campaign expenditures at the state legislative level have uncovered evidence that the shifting contexts and electoral conditions of a race can lead to significant variation in the role of money. Unfortunately, studies of the effects of campaign spending in state legislative elections have been plagued by problems of data availability and collection, and thus, lag far behind the significant body of research that exists on the influence of money in U.S. House and U.S. Senate elections. Additional problems with assembling comparable data for multiple states with which to analyze the role of money may also bear some of the responsibility for this paucity of empirical research. This is unfortunate, as U.S. state legislatures offer a rich diversity of institutional settings within which to test a multitude of hypotheses about the varying influence of political campaigns on elections. This study represents a step toward an improved understanding of how differing electoral conditions might affect the importance of campaign expenditures compared with other determinants of state legislative election outcomes.

This study builds on the existing literature on money and state elections by identifying the factors which condition the effectiveness of campaign spending in state legislative campaigns. Specifically, the focus is on how the political context of a district may condition the impact of money. The term political context is used to refer to a variety of institutional and electoral factors that are hypothesized to affect the importance of campaign spending, including term limits, legislative professionalism, and the number of independent voters. The evidence suggests that each of these factors has the ability to significantly mitigate or enhance the impact of campaign expenditures in state legislative elections. Institutional arrangements, electoral conditions, and district-level political context therefore have implications not only for how candidates should approach their campaigns but also for strategic decisions about when to run for office and policy debates over how best to address the issue of money in politics. This study also considers alternative conceptualizations of the idea of “election outcomes,” a concept that can be framed both in terms of whether a candidate won or lost a particular election, as well as in terms of a candidate’s share of the popular vote, to test the robustness of contextual effects on the impact of expenditures across different model specifications.
A Conditional Theory of State Legislative Election Outcomes

Although we know that money matters in state legislative elections to some degree, both in state legislative primaries (Breaux & Gierzynski, 1991) and general elections (Caldeira & Patterson, 1982; Gierzynski & Breaux, 1991, 1993; Giles & Pritchard, 1985; Tucker & Weber, 1987), we are still largely in the dark about what factors may condition the impact of spending. In the single best study on the varying impact of campaign expenditures in state legislative elections, Gierzynski and Breaux (1996) uncover significant evidence of the conditional effects of a number of district-level contextual and conversion factors. However, there remains much empirical research to be done in identifying what other factors may play a similar role, and the dearth of additional inquiry in this area has left a number of unanswered questions about the role of money under different electoral conditions and institutional arrangements.

Research on U.S. Congressional elections has demonstrated that there are two main mechanisms by which the activities of political campaigns can produce changes in voting behavior. The first of these is through their effect on vote choice: A candidate’s campaign message may persuade voters to switch their vote, from their original intention to support one candidate at an earlier point in the campaign, to a situation where they actually end up casting a ballot in favor of a different candidate on election day. Studies have found that registered independents are the voters who are most likely to alter their vote choice in response to campaign stimuli (Campbell, 1987; Campbell, Converse, Miller, & Stokes, 1960; Key, 1966). These voters are presumably pure independents whose mind is not made up until late in the campaign and whom parties often target through last-minute media buys and generic advertising campaigns, even at the state legislative level (Hogan, 1997). In contrast, partisan voters are almost certain to vote along party lines in a given electoral contest, regardless of the campaign environment, leaving little opportunity for campaigns to influence their vote choice (Bartels, 2000; Miller & Shanks, 1996). However, some recent research has demonstrated that campaigns do attempt to use so-called “wedge issues” to lure voters from the opposing party, indicating that perhaps partisan defection is a more common voting behavior than previously thought (Hillygus & Shields, 2009).

The second mechanism is voter mobilization, whereby voters who did not intend to show up at the polls are mobilized to turn out to vote by their exposure to political campaigns. Here, the responses of independent and partisan voters to campaign stimuli are very different. Registered independents are
the least likely voters to be mobilized by political campaigns (Campbell, 1987), whether through exposure to campaign advertising or campaign contact in the form of canvassing and direct mail. In contrast, peripheral partisan voters, those less inclined to turn out than strong partisans with a history of frequent political participation, have been shown to be extremely susceptible to mobilization drives, especially grassroots efforts involving face-to-face contact between the voter and a campaign representative (Rosenstone & Hansen, 1993). These are most likely to be partisan voters whose party ties are weaker or who are disillusioned enough with their own party’s performance to stay at home. In fact, research has demonstrated that parties routinely target these infrequent supporters in their campaigns through registration drives and get-out-the-vote efforts (Huckfeldt & Sprague, 1992; Shea & Burton, 2001).

Existing theory would predict, therefore, that the impact of money on election outcomes at the state legislative district level should be conditioned by the number of voters in a district that are available to potentially be influenced by a candidate’s expenditures and the ability of campaigns to effectively target these voters. These include both independent voters whose vote choice may shift in response to a campaign’s message and peripheral partisan voters who may be mobilized to turn out by grassroots get-out-the-vote efforts. To the extent that these voters can be influenced by campaign expenditures, and if this influence “purchases” enough votes to affect the results of elections, then we can expect that candidates’ campaign expenditures should have a significant impact on both their vote share and their prospects of winning.

An obvious drawback to this approach is that, given the lack of comprehensive survey data at the state legislative district level, there is no way to directly measure how many votes are “up for grabs” in a given election campaign. What we can observe are the district-level characteristics that can be expected to either increase or decrease the potential pool of voters available to be influenced by campaign expenditures or which might affect the ability of campaigns to effectively target them. Not only are different districts likely to exhibit significant variation in the number of available voters, but different campaign contexts and institutional variations between districts should also produce campaigns which are more or less able to effectively target and win over these voters.

A key factor that we can expect to have an effect is the number of voters in a district who have no strong ties to either the Republican or Democratic parties, as these are the voters that we would expect to be the most likely to alter their vote choice in response to campaign stimuli. One way to
operationalize this is as the percentage of registered independents.\textsuperscript{1} We can expect that a district with a relatively large number of registered independents, compared with registered partisans, will exhibit a much stronger relationship between spending and the election outcome than a district which has relatively few registered independents. Not only do these include pure independents, whose vote choice has been shown to be significantly influenced by campaign activity, but they also include independent voters who lean toward one or the other of the political parties. Because these “independent leaners” tend to in practice behave very similarly to peripheral partisans (Keith et al., 1986), we might expect some of these voters to be mobilized by exposure to legislative campaigns, even though independents are unlikely to be directly targeted by mobilization efforts. If there are a higher percentage of independents in a district, including both pure independents and leaners, then there should also be a greater likelihood of a candidate being able to win over or mobilize enough of them through campaign expenditures to swing the election in their favor.

\textit{Hypothesis 1:} As the percentage of registered independents in a district increases, the relationship between spending and a candidate’s electoral fortunes is magnified.

However, the composition of the individual state legislative district itself, in terms of the breakdown of registered voters by party, is not the only mechanism by which the influence of campaign spending can be conditioned by context. A second, although interrelated causal mechanism involves the ability of candidates to effectively use their expenditures to actually persuade voters to vote for them. Although the number of persuadable voters in a district, as measured here by the percentage of registered independents, is expected to condition the effectiveness of electoral campaigns in and of itself, a significant portion of the variation in the influence of money in elections can also be attributed to candidate-centered factors, most notably campaign sophistication and candidate quality. All else being equal, more skillful campaigners are likely to be able to better use their scarce campaign resources to translate money into votes, either through mobilization of supporters or by persuasion of undecided voters.

There is some debate in the literature as to whether quality challenger candidates actually receive “bonus votes” vis-à-vis their less sophisticated counterparts, which might be suggestive of greater campaigning skill, or whether their improved electoral performance is simply a reflection of their ability to make strategic decisions about when to enter a race based on their
perceived electoral prospects (Born, 1986; Jacobson, 1989). More recent research has charted a middle point between these two extremes, arguing that although better quality candidates may not achieve a vote bonus, they nevertheless enjoy a fundraising advantage that helps explain their greater electoral success (Basinger & Ensley 2007).

Spending effects are therefore conditioned not only by the number of voters who are up for grabs in a given electoral campaign but also by the ability of candidates to effectively target and win over those voters, which in turn is related to candidate quality and sophistication. In state legislative elections, well-qualified challenger candidates, whose presence we might expect to magnify the impact of campaign spending because of their superior campaigning skills and organization, and thus, their greater ability to translate spending into votes, should as rational actors make a strategic decision about when to run for a seat (Meinke & Hasecke, 2003). High-quality candidates should be unlikely to challenge an incumbent who is operating from a position of electoral strength, preferring instead to wait for an open seat election where their opponent will not enjoy the many benefits of incumbency. For this reason, we can expect open seat elections to attract the more sophisticated candidates with greater campaigning skill who will make better use of their campaign resources.

**Hypothesis 2:** In open seat elections, the relationship between expenditures and a candidate’s electoral fortunes is magnified.

A similar logic applies to districts that are located in states where term limits are in effect. Although in any state it can be expected that quality candidates are more likely to make better strategic use of their campaign resources by targeting open seat races, the presence of term limits is likely to further discourage qualified challengers from taking on incumbents. So, the presence of term limits is also expected to affect strategic candidate behavior, as challenger candidates should avoid taking on a term limited incumbent who will be ineligible for reelection in a future electoral cycle, which should therefore mitigate the effectiveness of campaign expenditures in such districts. Hypotheses 2 and 3 therefore test for evidence of strategic behavior among well-qualified challenger candidates, whose decision about whether or not to enter a state legislative race is expected to be influenced by expectations about their electoral prospects.

**Hypothesis 3:** In elections where a term limited incumbent is running, the relationship between expenditures and a candidate’s electoral fortunes is mitigated.
Research has also demonstrated that more professionalized state legislatures tend to attract more career-minded and upwardly mobile legislators than less professionalized ones, and that these legislators have increased time and energy to devote to campaign activities (Carey, Niemi, & Powell, 2000). It is reasonable to expect that candidates in elections to highly professionalized state legislatures are more likely to be skilled political operatives, with a greater capacity to influence voters through their campaign activities than their counterparts from less professionalized legislative bodies. It is therefore expected that campaign expenditures by candidates to highly professionalized legislatures should be significantly more effective than expenditures by candidates to less professionalized legislatures. Hypothesis 4 tests the extent to which more sophisticated candidates are able to achieve a vote bonus due to their superior campaigning skills, in comparison to their less sophisticated counterparts. Although data on candidate quality is not yet available at the state legislative level, legislative professionalism serves as a proxy for candidate quality, as existing research has demonstrated that candidates from more professionalized state legislatures can be expected to run more effective legislative campaigns and therefore more efficiently translate money into votes (Abbe & Herrnson, 2003; Thompson, Kurtz, & Moncrief, 1996).

**Hypothesis 4:** As the level of legislative professionalism increases, the relationship between expenditures and a candidate’s electoral fortunes is magnified.

The relationship between campaign spending, candidate quality, and election outcomes is therefore somewhat complicated and involves the interaction of both district characteristics and candidate characteristics in a conditional causal framework. The logic of the causal mechanism employed in this study is therefore as follows: Candidates spend money to try to influence voter behavior, but certain voters are more persuadable than others, most notably independent voters whose intended vote choice may alter in response to campaign stimuli, and peripheral partisan voters who may be mobilized by campaign exposure. Furthermore, although campaigns influence electoral outcomes, better quality candidates with higher levels of campaign sophistication are able to more efficiently translate campaign resources into votes, thus lending themselves an advantage not enjoyed by less effective campaigners. Although both district context and candidate context exert independent conditional effects on the relationship between legislative campaigns and election outcomes, they may also exert additional effects in combination with each other. So, campaign effects may be larger where there are
more persuadable voters in a district and the candidate has the campaign sophistication to be able to more effectively win over those voters.

Modeling State Legislative Election Outcomes

In framing empirical tests for these conditional hypotheses, this study departs from the existing literature on money in state legislative elections in two significant ways. First, a dichotomous dependent variable for whether a candidate won or lost an election is used, as well as the more conventional continuous measure of a candidate’s percentage of the two-party vote. Although such a measure has been used extensively in many other studies of electoral effects, it has yet to be used in the literature on the factors which condition spending effects in state legislative elections. From a construct validity standpoint, this measure taps into the theoretical notion of whether or not money “buys” elections by determining which candidate wins. The existing measure, however, relates more to the concept of margin of victory. Although these concepts may seem virtually identical, in reality they can be very different, and this basic assumption provides the theoretical justification for the alternative operationalizations of the dependent variable in this analysis.

Conceptually, there is a significant difference between a candidate who engages in vote-maximizing behavior, as reflected in measures that tap into margin of victory, and a candidate who attempts to spend money strategically to win a close election, as reflected in measures of the probability of victory. Certainly, candidates may spend money for other reasons than to win an election, such as to discourage challengers in future elections (Hogan, 2001). How else can we explain, for example, an incumbent spending a significant amount on their campaign when they are running unopposed? The purpose of this study, however, is to evaluate the effects of spending on election outcomes, and in that context it is of greater theoretical relevance to analyze the impact of money on a candidate’s probability of victory as well as their share of the vote. Throughout the subsequent analyses the results for both approaches are presented, using the same data to test the robustness of baseline and contextual effects under these two alternate operationalizations of the dependent variable.

Second, this study uses data on the breakdown of party registration that has not previously been widely available at the state legislative district level, to develop an improved measure of district partisan strength. This arguably represents both a theoretical and methodological improvement on the conventional models employed in the literature. Whereas previous studies have generally used a proxy measure of the district partisan baseline, such as
averaging the vote in both previous and subsequent elections (Gierzynski & Breaux, 1993, 1996), such measures will often provide an unreliable approximation of the actual level of party strength, because they can fluctuate according to the myriad other influences which explain variation in election outcomes. There exists the possibility for these indirect measures to be systematically biased by factors such as gubernatorial (Hogan, 2005) and presidential coattails (Campbell, 1986), national economic conditions (Berry, Berkman, & Schneiderman, 2000; Chubb, 1988), and uncontested elections (Squire, 2000). This study therefore uses a direct measure of the percentage of registered Democratic partisans in a district.

Data

The data used are from elections to the lower and upper houses of state legislatures in 2002 for nine states: Arizona, California, Florida, Kentucky, Maryland, Nevada, New York, Oregon, and South Dakota. The selection of states was limited by the availability of both voter registration data at the state legislative district level and comprehensive data on candidate expenditures that was comparable between states. The unit of analysis is the individual state legislative district, and the sample includes 430 lower house state legislative districts and 119 upper house state legislative districts.

Dependent Variables

Two contrasting operationalizations of the dependent variable are used in the analysis. The first of these is simply the Democratic percentage of the two-party vote in the district, as has been used in several previous studies on the effects of money in state legislative elections. The second operationalization of the dependent variable is a dichotomous measure coded as 1 if the Democratic candidate was elected, 0 if they were not.

Independent Variables

Campaign expenditures are operationalized not as the absolute dollar amount or the log of expenditures, but as the ratio of Democratic to Republican candidates’ expenditures developed by Gierzynski and Breaux (1993). This measure makes greater theoretical sense than including Democratic and Republican candidates’ expenditures separately, because spending should only affect the outcome of the election to the extent that one candidate is outspending the other, and by how much. The Spending Ratio (SR) for each
district was calculated using the following formula: \( SR = \frac{\text{Democratic Expenditures} - \text{Republican Expenditures}}{\text{Democratic Expenditures} + \text{Republican Expenditures}} \). The resulting ratio ranges from a value of \(-1\), which represents a situation where all the money in a district was spent by the Republican candidate, to a value of \(1\), which represents a situation where all the money in a district was spent by the Democratic candidate. A value of \(0\) represents a situation where both the Democratic and Republican candidates in a district spent equal amounts of money. The spending ratio is hypothesized to have a positive effect on both the Democratic vote percentage and the probability of victory.

The spending ratio should only have an impact if it is able to affect a candidate’s electoral prospects above and beyond the predictive power of the partisan baseline in a given district. For this reason, Democratic Party strength is controlled for in the analysis. This is operationalized as the percentage of registered voters in a district who are Democrats, and provides the most reliable measure of how Democratic a district is in the absence of confounding electoral factors. This variable is hypothesized to have a positive effect in both models. Previous research has demonstrated that incumbency has just as significant an impact on elections at the state legislative level as it does at the congressional level (Berry et al., 2000), and so the models also control for the incumbency status of the candidates in the district. The incumbency variable is coded as \(1\) if a Democratic incumbent was running in 2002, \(0\) if no incumbent was running, and \(-1\) if a Republican incumbent was running. This variable is expected to have a positive effect.

Unlike at the federal level, where each of the 435 members of the House of Representatives are elected from single-member plurality districts, many states continue to use multimember districts in their state legislative elections, most often for the lower house of the legislature. The sample of nine states includes Arizona and South Dakota, which use exclusively multimember districts in which the top two plurality vote getters are elected, and Maryland, which uses a mixture of single-member, two-member plurality, and three-member plurality districts. In keeping with previous research on campaign expenditures at the state level, a control variable is included for the presence of multimember districts. This variable is coded as \(1\) for multimember districts and \(0\) otherwise. Though the inclusion of multimember districts somewhat complicates the coding of other independent variables, it is assumed that there will be no systematic difference in the impact of political campaigns in these districts. To justify this assumption, an interaction between multimember districts and the spending ratio is also included in the models. An additional control variable is included for the population of
each district and is interacted with the spending ratio variable to account for potential variation in campaign effects between districts of different sizes.\textsuperscript{11}

**Contextual Variables**

To test the conditional hypotheses about the ways in which the impact of spending varies by political context, a number of contextual variables are also included in the models as well as interaction terms between these contextual factors and the spending ratio. The proportion of independent voters is operationalized as the percentage of registered independents in a district. The measures of state legislative professionalism for the 2003 legislative session (the session immediately following the 2002 election) were obtained from Squire (2007). This measure is an index first developed by Squire (1992) and is widely used as an indicator of the levels of legislative professionalism in state legislatures. It incorporates data on the salaries and benefits enjoyed by legislators, the time demands of service in a legislature, and the levels of staff and resources available to legislators into an additive index that weights each component equally, and yields a score that is interpretable as the percentage of professionalism in a legislature compared with that of the U.S. Congress (Squire, 2007, p. 219). Previous studies have shown legislative professionalism to be a significant determinant of campaign professionalism, lending validity to the use of this measure as a proxy for candidate quality (Abbe & Herrnson, 2003).

To test for the effects of open seat elections and term limits, dummy variables were included for districts in which a term limited incumbent was running in 2002 and for districts that were open seats in the 2002 election. The excluded category was districts where an incumbent was running in states that did not have term limits in effect for 2002.\textsuperscript{12} To fully test the conditional hypotheses, three-way interaction terms were also included in the models, calculated by multiplying the spending ratio by both the percentage of registered independents and the measures of legislative professionalism and open seat elections. Because the inclusion of uncontested districts introduces bias into the model, by skewing the results in favor of finding a positive and significant effect for the spending ratio variable, these districts are excluded from the analysis.\textsuperscript{13}

**Results**

To what extent is the impact of campaign expenditures on a candidate’s electoral prospects conditioned by the political context of the district? Table 1
presents the results of the interactions between political context and expenditures used to test the conditional hypotheses about the impact of campaign spending on the Democratic percentage of the two-party vote. Each of the statistically significant interactive effects in Table 1 is in the hypothesized direction. The table also reveals that both district partisanship and incumbency are significant determinants of the Democratic two-party vote share in a district, however the spending ratio no longer exerts a statistically significant independent effect once contextual effects are included in the model.

Perhaps the most interesting and significant finding in Table 1 is the conditional effect of independent voters. As the percentage of registered independents in a district increases, the effect of the spending ratio on a candidate’s
vote share is significantly magnified. This suggests that in districts with higher levels of independents, enough swing voters exist that can be influenced by spending to substantively affect the outcome of elections, either through conversion of pure independents or mobilization of partisan leaners. This finding comports with previous research demonstrating that independent voters are significantly more likely to change their vote choice in response to campaign stimuli than partisans, but with the added dimension that the percentage of independents in a district also conditions the effectiveness of legislative campaigns.

In a hypothetical open seat district similar to the Oregon 27th, made up almost entirely of registered partisans equally divided between Democrats and Republicans, with very few registered independents, a Democratic candidate moving from a situation of spending parity to outspending their opponent 2:1 would receive no increase in their share of the popular vote. In a similarly divided district made up of 25% registered independents and 75% equally divided partisans, this same increase in spending would yield a 5% increase in vote share. Finally, in a district equally divided between partisans and independents, similar to New York’s 10th House District, which is made up of almost 50% registered independents, a corresponding spending increase would produce a 10% increase in the candidate’s share of the popular vote. Higher numbers of independent voters in a district can therefore significantly magnify the effect that campaign spending has on a candidate’s vote share, and in districts with very low numbers of independents the impact of spending can be almost entirely mitigated.

Table 1 also includes the interactions between term limits and expenditures. The presence of a term limited incumbent in a state legislative race mitigates the positive impact of campaign expenditures, indicating that well-qualified challenger candidates make strategic decisions about when to run for office, preferring not to challenge incumbent candidates in electoral contexts where their electoral prospects would be best served by waiting for an open seat election. However, the interaction between the spending ratio and the dummy variable for open seat elections is not statistically distinguishable from the baseline category of districts with a nonterm limited incumbent, indicating that campaign spending is not more effective in open seat elections than regular incumbent elections, although it is statistically distinguishable from elections with a term limited incumbent. To illustrate, in an average district where a term limited incumbent is running, moving from spending parity to a 2:1 advantage would yield an additional 4% of the two-party vote for the challenger candidate. Conversely, if that district were an open seat, the same challenger with an identical spending advantage could expect to pick
up a substantially larger 8% of the vote. This supports the notion that candidates’ strategic behavior in term limited districts produces differences in the way that campaign expenditures are translated into votes and perhaps highlights another profitable avenue for future research into the effects of term limits in state politics.

The results also show that legislative professionalism has a significant magnifying effect on the impact of expenditures, indicating that candidates from highly professionalized legislatures exhibit the campaign sophistication that allows them to more effectively translate money into votes. In an average open seat district, a candidate from the least professional legislature in the sample (South Dakota) could expect to gain 5% of the two-party vote when moving from parity to a 2:1 spending advantage. In the most professional legislature in the sample (California), that same spending would correspond to a 10% increase in vote share. The three-way interactions between spending, the percentage of registered independents, and both open seats and legislative professionalism were not statistically significant, indicating that although the effects of campaign expenditures are conditioned independently by both the number of “up for grabs” voters in a district and the sophistication of candidates’ campaigns, there is not an additional interactive effect between the two. So, whereas independent voters are the most susceptible to campaign influence, and quality candidates are better campaigners than their less qualified counterparts, better quality candidates are no more effective at winning over independents than less effective campaigners, at least in the context of this particular model.14

Table 2 presents the results of the interactions between political context and expenditures used to test the conditional hypotheses about the impact of campaign spending on the probability of a Democratic victory. The results in Table 2 indicate that many of the same factors that affect a candidate’s vote share also affect their probability of victory. Both incumbency and the district partisan baseline are once again significant determinants of the likelihood of the Democratic candidate winning the election. Interestingly, once all the control variables and interactions are included, the spending ratio no longer exerts a statistically significant effect. This indicates that although campaign spending does exert significant contextual effects, when each of the control variables are equal to zero it is no longer a significant determinant of the probability of Democratic victory, although such a situation is not substantively meaningful in this particular model. As in Table 1, the percentage of independents significantly magnifies the impact of expenditures on state legislative election outcomes. Also in keeping with Table 1, legislative professionalism exerts a statistically significant conditional effect on the relationship between
Theoretical expectation that the effectiveness of expenditures would be conditioned independently both by the percentage of registered independent voters in a district and the ability of candidates to effectively target those voters was supported by the empirical tests, the expectation that the presence of both a large population of persuadable voters and increased campaign sophistication would further magnify the relationship was not borne out in the data.

The relationship between the percentage of registered independents in a district and the impact of spending is illustrated graphically in Figure 1, which compares the effects of spending in two hypothetical districts with

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**Table 2. Conditional Effects of Political Context on the Relationship Between Spending and Democratic Candidate’s Probability of Victory**

<table>
<thead>
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<th>$\beta$</th>
<th>$SE$</th>
<th>$p$ Value</th>
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<td>Incumbency</td>
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<td>.000</td>
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<td>Term limited incumbent</td>
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<td>0.909</td>
<td>.699</td>
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<td>.056</td>
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<td>.656</td>
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<tr>
<td>Spending $\times$ term limits</td>
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<td>.141</td>
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<td>Spending $\times$ professionalism</td>
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<td>Percentage correctly predicted</td>
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<td>Number of cases</td>
<td>549</td>
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Note: $SE =$ standard error. $p$ Values are estimated using logistic regression with standard errors clustered on state. Dependent variable is the Democratic candidate’s probability of winning the election.

*p < .10, one-tailed. **p < .05, one-tailed. ***p < .01, one-tailed.
differing levels of registered independents, one with the variable set at one standard deviation below the mean (20% registered independents in the district) and the other set at one standard deviation above the mean (28%). As the figure demonstrates, spending has a greater effect on the probability of a Democratic victory in districts with a greater percentage of registered independents, suggesting that candidates are able to effectively target their campaign messages at such voters in order to increase their chances of electoral success. The figure also reveals that the slopes for the effect of spending for different percentages of registered independents vary most dramatically at the middle levels of spending, corresponding to the more closely contested elections. Once the level of spending by the Democratic candidate passes 50% on the figure, representing a situation where they are outspending their
Republican opponent, the confidence intervals become statistically distinguishable from each other, indicating that candidates in districts with a greater percentage of registered independents are better able to translate their spending advantage into an increased likelihood of electoral victory.

The conditional effects of legislative professionalism are illustrated in Figure 2, which compares the impact of campaign expenditures in the most professionalized state legislature in the sample (California) and the least professionalized (South Dakota). The figure demonstrates that the greatest difference in spending effectiveness for candidates in these two legislatures is found near the middle of the distribution. A Democratic candidate in California moving from a situation of being outspent 2:1 to outspending their opponent by a similar margin sees their probability of victory increase from 40%
to close to 90%, whereas a similar candidate in South Dakota with the same spending differential only increases their likelihood of victory from 25% to 50%. At higher levels of Democratic spending advantage, the lines for the two legislatures become statistically distinguishable, indicating that the candidates in the more professionalized legislature (California) are able to more effectively translate their spending advantage into a greater prospect of victory than candidates in the least professionalized legislature (South Dakota). This effect is again apparent once the spending ratio increases above 50%, indicating districts where Democratic candidates are outspending their Republican opponents.

The relationship between term limits and the impact of spending is illustrated graphically in Figure 3, which displays the effects of the spending ratio on the
probability of Democratic victory in three hypothetical districts, and reveals similar slopes for the effects of spending in an open seat, and two term limited seats where an incumbent is running, although the predicted probabilities are statistically distinguishable at certain levels of Democratic spending. The lines for term limited Democratic incumbents and term limited Republican incumbents are statistically distinguishable at all levels of spending, and the lines for term limited incumbents and open seats are distinguishable from approximately 40% to 75% for Democratic incumbents and 50% to 85% for Republican incumbents. So, it is in the more competitive districts in which incumbency makes the most difference, and there is evidence of strategic behavior, with well-qualified challenger candidates choosing not to take on term limited incumbents, thus suppressing the impact of spending in such districts, and magnifying the effects of spending in open seat elections. However, the substantive effect of term limits in incumbent–challenger races is fairly minimal, as reflected in the borderline significance level for the term limits interaction in Tables 1 and 2.

Discussion and Conclusion

This study has demonstrated that money has a significant impact not only on a candidate’s percentage of the vote in a state legislative election, but also on that candidate’s probability of winning. However, there is a great deal of district-level variation in the strength of this relationship, and much of the variation can be explained by the political context of the district, which affects the number of voters who can be influenced by campaign expenditures, the ability of campaigns to effectively target them, and strategic decisions by candidates about when to enter a state legislative race. The conditional effects of the percentage of registered independents, the professionalism of the legislature, and the presence of term limits in incumbent–challenger races are robust across model specifications, and have a substantively meaningful impact on the effectiveness of state legislative campaigns. These findings have both theoretical and normative implications for the study of campaign finance effects in state legislative elections.

Most notably, the percentage of registered independents in a district has a significant conditional effect on the relationship between campaign expenditures and electoral outcomes, a finding that may have implications for the candidates themselves, and how they choose to approach their campaigns, and which has not been previously focused on in the literature on state legislative elections. This finding suggests that candidates should pay close attention to the breakdown of party identification in their district when targeting their expenditures. Whereas in some races it may be appropriate for candidates to
undertake mobilization efforts that appeal to their base, in others it may be more prudent for them to tailor their message to appeal to the swing voters who might make the difference in the final tally. This finding is robust across model specifications, substantively large enough to potentially have a dramatic effect on the outcome of a state legislative election, and may potentially apply in other types of electoral races. Future research should attempt to more thoroughly uncover the conditional relationship between registered independents and the effectiveness of legislative campaigns, by investigating the extent to which campaigns target their expenditures differently in different electoral contexts. If candidates can be shown to spend money differently in districts with varying breakdowns of partisan and independent voters, this will lend additional weight to this finding.

The conditional effects for legislative professionalism also indicate that candidates from more professionalized legislatures are able to make more effective use of campaign spending, perhaps pointing toward greater campaign sophistication in the form of targeted mobilization or advertising campaigns on the part of such candidates. Although legislative professionalism here serves as a proxy for a greater ability on the part of candidates to effectively target their expenditures at voters who are “up for grabs” in a given electoral campaign, this relationship can be tested more directly by examining in greater detail the breakdown of spending by candidates in less professionalized legislatures such as South Dakota, as opposed to more professionalized legislatures such as California. If it can be demonstrated that differences in legislative professionalism lead candidates to target their expenditures differently, this will bolster the conclusion that such candidates receive “bonus votes” due to their greater campaign sophistication. A more direct test of this hypothesis might be framed by directly measuring candidate quality in state legislative campaigns, although such data are not presently available to researchers.

The results also show that while outspending an opponent does lend a candidate a considerable advantage in an open seat, when there is an incumbent in the race it becomes very difficult for the spending ratio to have a substantively significant effect on the outcome of the election. Challengers in such races must outspend their incumbent opponents by an extremely large margin to have any realistic chance of victory and this is in keeping with a breadth of previous research demonstrating the enormous impact of incumbency in legislative elections. The effects of term limits, although substantively small and of only borderline statistical significance, nonetheless serve to further mitigate the effectiveness of campaign spending in incumbent–challenger races, by discouraging well-qualified challengers from taking on an incumbent who will be ineligible for reelection in a subsequent electoral cycle.
Although this study answers some of the questions about the role of money in state legislative elections, there is still a great deal more empirical work to be done. Future research should try to identify what other factors, besides political and institutional context, might exert a conditional effect on the relationship between campaign expenditures and election outcomes. As more and more data on state legislative elections becomes available to researchers, they should continue to develop more nuanced and methodologically sophisticated ways of investigating this relationship. In particular, the increasing availability in certain states of data on the breakdown of campaign expenditures into different areas of campaign activity, such as media buys, mobilization drives, and other types of targeted expenditures, should provide greater leverage to further investigate the conditional relationships uncovered in this study. Improvements in data availability and comparability between states should continue to allow the literature on state legislative campaigns to close the gap on that which already exists in the analysis of Congressional elections.

Author’s Note
The author alone is responsible for all of the analyses, conclusions, and any errors present in the manuscript. A previous version of this article was presented at the Annual Meeting of the Midwest Political Science Association, Chicago, April 2008.

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Notes
1. Previous research has demonstrated that measures of the percentage of registered independents significantly overestimate the actual percentage of “pure” independents, because independent leaners in fact behave in a very similar way to weak partisans (Keith et al., 1986). In the absence of comprehensive survey data for state legislative districts, however, there is no way to separate the leaners from the pure independents, and so the percentage of registered independents remains
our best estimate of the number of swing voters in a district. Also, overestimating the number of pure independents does not present a problem for the analysis provided that the measurement error is randomly distributed across districts.

2. The collection of comprehensive data on challenger quality in state legislative elections is particularly burdensome when applied retrospectively, given that primary sources such as local newspaper coverage and published voter’s guides must be used. Though some studies have attempted to collect rudimentary challenger quality data for a small subset of state legislative elections (cf. Van Dunk, 1997), such data are not available for all states or all election years.

3. Campaign finance, voter registration, and election results data were collected online from the Secretaries of State’s offices in each individual state. Because relatively few states publish breakdowns of party registration data by state legislative districts, and the states which do tend to be those that use closed primaries, the possibility exists for selection bias in the sample. The correlation between the choice of primary and Erikson, Wright, and McIver’s (1994) measure of state policy liberalism was \( r = .3 \), suggesting that more liberal states are slightly more likely to adopt closed primaries than conservative ones. Nevertheless, across the whole sample Democrats won 53% of the districts, only slightly more than the 47% won by Republicans, so there does not appear to be any significant systematic selection bias with regard to partisan differences, which are the focus of this analysis.

4. This sample includes states from a diverse set of geographical regions and which exhibit significant variation in factors such as campaign finance regulations, competitiveness, partisanship, size, and population.

5. The models were run using several different operationalizations of the spending variable, including the raw expenditure totals, the log of expenditures, expenditures per capita, and the log of expenditures per capita. Of each of these measures the spending ratio variable was the most robust and so is used for the subsequent analyses. This approach also allows for the estimation of a single interaction coefficient between spending and each of the various contextual variables, rather than necessitating two interactions, one for spending by the Democratic candidate and another for spending by the Republican candidate. This makes the conditional effects significantly easier to interpret. Results for the different operationalizations of the spending variable are available from the author on request.

6. The candidate expenditures used to calculate the spending ratio measure include both primary and general election expenditures and exclude transfers made by candidates to other political campaigns. This is the approach used in almost all studies of the effects of campaign spending. Great care was taken to try to ensure the comparability of data across states, including confirming that expenditure totals represented the same reporting periods and types of expenditures in all states included in the analysis. Several states were excluded from the sample
because of data comparability issues. Candidates with no campaign activity were coded as spending $0 and the spending ratio was calculated accordingly.

7. This operationalization of campaign spending has the advantage of producing a bounded variable, but in so doing it also alters the underlying distribution. As a robustness check the analysis was also conducted using the simple ratio of Democratic spending to Republican spending, as well as the logged ratio. None of the substantive conclusions were significantly altered. The results from these models are available from the author on request.

8. All of the states still using multimember districts are located outside of the South. Though the use of multimember districts to dilute minority voting strength had been common in the states of the former Confederacy, this practice was outlawed by a series of court decisions and Justice Department rulings in the wake of the 1965 Voting Rights Act (Grofman & Handley, 1991).

9. Of the 549 districts in the analysis, 83 were multimember districts, representing just more than 15% of the sample. One of South Dakota’s 35 multimember districts was broken into two single-member districts for the 2002 election, one of which was uncontested and was therefore excluded from the analysis.

10. Including separate control variables for both two- and three-member plurality districts did not significantly alter the results.

11. District population data for the 2002 election were obtained from the National Conference of State Legislatures Redistricting and Elections Committee.

12. The states with term limits in effect in 2002 were Arizona, California, Florida, and South Dakota. Oregon’s term limit statute was overturned by the State Supreme Court prior to the 2002 election. Though Nevada technically had a term limit law in force for the 2002 election, their limits are some of the most lenient in the United States, and allow legislators in both houses to serve up to 12 years until they are ineligible to run for reelection (Henderson, 2008). Because these limits will not take effect until the 2010 election, their anticipated influence on the impact of campaign expenditures for 2002 is negligible. Therefore, districts in Nevada were coded as nonterm limited for the purposes of this analysis. Including these districts in the term limit contextual variables did not produce any significant change in their interaction coefficients.

13. Excluding uncontested districts significantly reduces the available N in the study. Of the 867 total districts in the nine states in the analysis, 318 were uncontested in 2002, representing 37% of the total sample. This is in keeping with the national average from 1988 to 1996 of slightly more than two thirds of state legislative seats being contested (Squire, 2000).

14. A difference of $F$ test for nested models reveals that while the inclusion of the two-way interaction variables does add significant explanatory power to the model, the model is not significantly improved by the addition of the three-way
interactions. Further research is clearly needed to more fully investigate the ways in which the impact of spending might be conditioned by the interaction of multiple contextual factors.

References


**Bio**

Nicholas R. Seabrook is a doctoral candidate in the Department of Political Science at the University at Buffalo, SUNY. His research studies political geography, voting & public opinion, and election law, with a particular focus on how institutions and social context condition behavior.