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# The Determinants of Campaign Spending in Mayoral Elections

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## Abstract

We examine why levels of campaign spending vary across U.S. mayoral elections. Although there has been debate about the extent to which spending is damaging or beneficial, few analyses have sought to understand the factors that inhibit or promote campaign spending. We focus on the impact of city-level attributes, political institutions, and contest-specific factors and find that a number of the variables we consider have important effects on campaign spending, including local government form, term length, scope of local government, an experienced candidate pool, and open seat and runoff elections. We conclude by discussing the implications of our findings for local policy makers.

## Keywords

mayoral elections, campaigns, local elections, local campaign spending

Jesse Unruh, former speaker of the California State Assembly, famously described money as the “mother’s milk of politics.” And while it has long been known that money matters in politics, the role of campaign spending is something that consistently garners attention and elicits debate. Within the context of national politics, there are frequently debates about the role of money in political campaigns. The same arguments that characterize debates over campaign spending in national politics extend to local politics as well, despite the fact that local campaign activities, and local politics more generally, are often overlooked. Those who think that money plays too large of a role in elections often make the argument that money buys influence and may therefore lead to biases in representation and public policy (see Krebs 2005 for an analysis of interest group campaign contributions to mayoral candidates; see also Roscoe and Jenkins 2005; Poole and Romer 1985; Davis 1988;

Box-Steffensmeier and Grant 1999; Dow and Endersby 1994).

Those people who support limiting the role of money in elections have also pointed out that the large sums of money often needed to conduct competitive campaigns make it exceedingly difficult for qualified candidates to run for elective office. Recently, such arguments have captured the attention of local policy makers across the United States. For instance, in a 2012 article in *The Seattle Times*, Seattle City

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Council member Mike O'Brien argued that "We can strengthen our local democratic institutions by reducing the role that money plays in local elections" (2012).

Although many people have recognized the potential problems associated with campaign spending, a number of analysts have argued that the benefits associated with high levels of campaigns spending actually exceed the drawbacks. Indeed, one of the most consistent findings from the literature on campaign effects is that as campaign spending increases, so too does interest and participation in elections (Hall and Bonneau 2008, 2013; Holbrook and Weinschenk, forthcoming; Holbrook and McClurg 2005). Given the positive effect of campaign spending on citizen engagement in politics, many have argued that high levels of campaign spending should be *encouraged* during elections (see, e.g., Hall and Bonneau 2008; Coleman 2003). This idea has received some attention from local policy makers. Mayor Lee Leffingwell of Austin, Texas, for example, recently pointed out that candidates need to be able to raise and spend "enough money to effectively reach anyone outside the small group of people who regularly vote in city elections" (Bernier 2011).

In light of the debate about campaign spending, it is crucial to understand which factors foster or inhibit spending in local elections, which is our goal in this article. The question of what influences campaign spending is especially relevant to those who are interested in identifying policies or institutions that could be changed in order to reduce or increase levels of campaign spending in local elections. Local political institutions, though often quite stable over time, are humanly devised and can be altered to promote different outcomes. Although recent debates about levels of campaign spending have highlighted the mounting influence of special interests and the potential biases or exclusions that might occur if some groups are unable to keep up with the high levels of spending that are ubiquitous in politics today, it is important to note that changing local political institutions to foster lower levels of campaign spending might have a variety of

unintended consequences. For instance, if levels of campaign spending decline due to institutional changes, cities might experience lower levels of voter turnout. Interestingly, a number of scholars have shown that low levels of turnout in mayoral and city council elections actually foster biases of their own—especially in terms of representation and public policy. For example, low turnout in city elections appears to reduce the representation of Latinos and Asian Americans on city councils and in the mayor's office (Hajnal and Trounstein 2005; Hajnal 2010), skew local spending policies (Hajnal 2010), and create opportunities for organized interests to influence public policy outcomes (Anzia 2011). In short, identifying the determinants of mayoral campaign spending has important implications for many other aspects of city politics.

## Literature

The role of campaign spending in elections is one of the most important and well-studied topics in American politics. As we noted previously, many scholars have been interested in the effects of campaign spending and in the sources of campaign contributions (Gierzynski and Breaux 1991; Seabrook 2010; Krebs 1998, 2005). There is ample evidence that higher levels of campaign spending translate into higher levels of voter turnout (or lower levels of ballot roll-off) and competition and that when candidates spend more they tend to do better at the polls (although the effect of campaign spending on electoral success is much more pronounced for challengers than it is for incumbents according to Jacobson 1978, 1990, 2009; but see also Green and Kranso 1988, 1990; Abramowitz 1991; Thomas 1989; Grier 1989). There is also an interesting line of research that has tried to explain why levels of campaign spending vary across elections. In one of the earliest studies aimed at explaining differences in campaign spending across elections, Hogan and Hamm (1998) found that there is a great deal of variation in campaign spending across state legislative elections and that the variation in spending across state legislative elections can be

explained by a number of district and state-level factors. Their analysis focused on district population, the number of candidates running, electoral competition (measured by the winner's share of the two-party vote), the presence of an incumbent candidate, chamber competitiveness (measured by the percentage of seats held by the minority party prior to the election), and state legislative professionalism. They found evidence that campaign spending was higher in more populous districts, when the state legislature was more professionalized, when the chamber was more competitive, when the election was more competitive, when there were more candidates running, and in open seat contests.

Bonneau (2005) used a similar approach as Hogan and Hamm (1998) but focused on total spending in state supreme court elections. Bonneau's model indicated that total spending was higher in open-seat elections, in competitive races, when there were more seats available, and when there were longer terms in office. Interestingly, Bonneau did not find a statistically significant relationship between election type (partisan vs. nonpartisan ballot) and campaign spending. It is important to point out that in an update of Bonneau's (2005) model of state supreme court campaign spending, which used a longer series of data, Bonneau and Hall (2009) found evidence that partisan elections are actually *less expensive* than nonpartisan elections after accounting for a number of other variables. Bonneau and Hall's research also indicated that campaign spending was higher in competitive races and when longer terms on the bench were available and lower when there were more seats available and in multimember races.

In an extension of Bonneau's (2005) research on state supreme court elections, Frederick and Streb (2008) examined the causes of variation in campaign spending in state intermediate appellate court (IAC) elections. Frederick and Streb found that spending was higher in competitive elections, when there were more seats up for election, in multimember districts, and when a seat was more "valuable" (measured with salary). Consistent with Bonneau's research, Frederick and Streb found

that partisan elections did not lead to higher levels of total spending, all else being equal.

Although much of the research on the determinants of campaign spending has focused on legislative and court elections, it is important to point out that some research has been done on spending in gubernatorial elections. Bardwell (2003), for instance, found that state contribution limits do not appear to restrain overall campaign spending. A number of other programs, though, such as public financing, appear to help challengers match incumbents in terms of spending, which could be a positive development to the extent that it helps create more competitive elections (Bardwell 2003). Bardwell (2005) used a similar approach to Bardwell (2003), but included a measure of incumbent job approval in his models of candidate campaign spending. His results indicated that incumbent job approval was an important correlate of both challenger and incumbent spending levels, even after accounting for other important variables.

While there has been very little research on the determinants of campaign spending in local elections, one study by Hess and Leal (2005) examined influences on overall spending in school board elections. Rather than gathering data from campaign spending reports, Hess and Leal used data from a survey conducted in 2001 that asked school board members to report how much money (in total) they spent on their campaign in the most recent election. Of course, since the survey was only sent to school board members, it represents the total amount of money spent by *election winners* only. Hess and Leal found that school board members reported spending more money in at-large elections. There were positive relationships between the number of hours that school board members worked, district student enrollment, and campaign spending. One surprising finding was that total spending was lower in places where school board members were paid a salary (perhaps an indicator of professionalism/the appeal of holding office). Neither election type (use of a partisan ballot) nor length of school board term had statistically significant effects on the total spending reported by school board members.

## Hypotheses

The studies outlined above provide a useful baseline for developing hypotheses about what drives campaign spending in mayoral elections across the United States. Because mayoral elections take place across a wide variety of settings (e.g., differing political institutions, electoral and demographic contexts, etc.), they represent an important venue for testing explanations of variation in campaign expenditures. Our model of campaign expenditures focuses on institutional, city-level, and contest-specific characteristics that we think help structure decision making for candidates and contributors by providing incentives in some cases to invest time, energy, and money in the mayoral campaign. Simply put, in some elections, candidates in some cities, contributors, and political groups have greater incentives to invest, either because the prospects for victory are enhanced or the value of the office is greater. This framework sees candidates and contributors as strategic actors, much in the same vein as found at other levels of office (Jacobson 2012; Jacobson and Kernell 1983; Squire 1992). When either opportunity for victory, or potential payoff is great, we expect to see greater contestation for the office, as measured by the amount of money spent on the mayoral campaign. In most cases, the variables we include in our model fit into this framework rather nicely.

We begin by discussing the role of city characteristics in shaping levels of campaign spending. A number of nongovernmental city-level characteristics may be tied to spending patterns. We find Oliver's (2012) discussion of potential biases in the distribution of local government resources a useful organizing theme here. According to Oliver, in cities in which there is greater potential for uneven distribution of government goods and services, there is also a stronger incentive for groups and parties to contest local elections in order to control the allocation of resources. Although it is difficult to get a firm grasp on how to measure the potential for bias in local government, Oliver argues that measures of heterogeneity and pre-existing inequalities represent the right

conditions for group-based contestation found in biased systems. We use three such measures. First, we include the log of the city's population size, which should be connected to multiple forms of heterogeneity (Hibbing and Brandes 1983). We also use a more direct measure to represent racial diversity, based on the proportion of the city population who are white, black, Latino, or Asian American.<sup>1</sup> Hajnal and Trounstein (forthcoming, 1) recently noted that "Local elections are in no small part a competition between blacks, whites, Latinos, and Asian-Americans over the leadership of their cities," which fits very nicely with the idea advanced by Oliver (2012) about group contestation for local office. Finally, we include a local measure of the Gini index of income inequality to capture predisposition toward unequal outcomes. According to Oliver, we should expect to see more professionalized campaigns in systems with potential for bias, as a greater number of groups and parties have an interest in contesting elections. We expect all three of these variables to be positively related to spending levels in mayoral races.

We also take into account an admittedly less interesting but important statistical control, variation in the cost of living across cities. Put very simply, it should cost more to campaign (e.g., run television or radio spots, take out newspaper ads, etc.) in places where things are generally more expensive. We use a standard cost of living index (the U.S. Census Bureau's Composite Cost of Living Index), which shows that the least expensive place to live (and presumably to campaign) in our data set is Memphis, Tennessee, while the most expensive is New York City. The composite cost of living measure is particularly useful for our purposes because it provides an overall assessment of how costly it is to live in each city and, importantly, was available for all of the cities in our data set.

Part of the appeal of studying elections and campaigns in the context of cities is that local governments exhibit much more institutional variation than elections for federal office, and we expect that many of these institutional differences contribute to differences in overall spending levels. We focus first on the scope

of local government, measured by the number of local (municipal) government employees per capita. We expect that the political “value” of being mayor is far greater in cities with relatively large scope of government than in cities with a limited scope. For both politically ambitious candidates, and for political parties and other local political interests, the potential benefits of gaining or maintaining control over local government are much greater in cities in which local government has greater penetration in local affairs. Although perhaps not a perfect measure, employees per capita is a good proxy for scope of government and is also related to most alternative measures. Related to this, we also focus on the impact of local government form on campaign spending. City governments usually take one of three forms: mayor-council, council-manager, or commission. In mayor-council systems, the mayor is often full-time and paid, and has significant administrative and budgetary authority (National League of Cities 2013). In council-manager systems, the city council typically oversees administration, makes policy, and determines the budget. Cities with a council-manager system often still have an elected mayor, although the mayor in such systems tends to be a symbolic or ceremonial figure (with limited executive functions). In commission systems, voters elect commissioners to a small governing board, although in some cities the mayor is elected in a citywide contest (National League of Cities 2013). Overall, the mayor tends to be a more prominent local player in mayor-council systems than in other systems. Because mayor-council systems may enhance the appeal or “value” of office from the standpoint of candidates (e.g., more power, local prominence, policy making authority, etc.), we expect that elections held for mayor in mayor-council systems will generate higher levels of campaign spending than elections for mayor in council-manager or commission systems.

There are a number of other institutional factors that may influence spending levels by making the mayor’s office more or less appealing, or “valuable,” to potential candidates. Consider the length of the mayoral terms. In some

cities, mayoral terms are four years; in others, mayoral terms are two or three years. Overall, our expectation is that longer terms in office lead to higher levels of campaign spending in mayoral elections. Cities with four-year mayoral terms should be more appealing or valuable to candidates because they provide mayors with a longer amount of time to accomplish policy goals, as well as more time before having to stand for reelection. In addition, potential strategic candidates who are waiting for the right time to run may not be willing to wait four more years for the next opportunity. It is also possible that longer terms are a reflection of a more professionalized city government, which would presumably make the seat more valuable. For all of these reasons, cities with four-year terms may always see better-prepared candidates who have significant resources to invest in their campaigns.

Above, we pointed out that numerous previous studies (Bonneau 2005; Hess and Leal 2005; Frederick and Streb 2008) found little evidence that election type (partisan vs. nonpartisan ballot) was significantly related to spending. It is important to recall, however, that Bonneau and Hall (2009) found evidence that partisan supreme court races were actually *less* expensive than nonpartisan races after controlling for a variety of other influences on spending. Despite the mixed findings regarding partisan versus nonpartisan elections, we think that it is important to consider the potential effect of partisan elections in mayoral contests. One possibility is that the absence of an official role for parties makes it harder for candidates to raise campaign funds in nonpartisan elections, leading to less expensive campaigns overall (Bonneau 2005). In short, campaign spending may be higher in partisan elections than in nonpartisan contests. Another potential source of influence from partisan elections connects back to Oliver’s (2012) conception of biased distribution of resources (2012). In partisan systems—systems in which one “side” wins and potentially controls local government resources—there is greater potential for uneven distribution of resources in favor of groups aligned with the winning party. This raises the

stakes of the election and should encourage greater involvement—financial and otherwise—by potentially affected groups. Our empirical models below take into account the potential effect of election type by including an indicator of whether a city holds partisan or nonpartisan mayoral elections.

In addition to the effect of partisan elections on campaign spending, we are interested in how the timing of local elections might influence levels of spending. Mayoral elections across the United States are held at different times and in both odd and even-numbered years. It is interesting to think about whether mayoral elections that are held on-cycle with presidential or Congressional elections generate higher levels of overall campaign spending than off-cycle elections. One journalist recently noted that local campaign fund-raising and spending tends to increase during presidential election years (see Tubbs 2012). The idea here is that the increased salience of politics during a presidential election year might make it easier for local candidates to raise campaign funds, leading to higher overall levels of campaign spending. It is equally plausible, though, that national campaigns detract attention from local politics and make it more difficult for local candidates to raise campaign funds, perhaps leading to lower levels of overall spending in on-cycle elections.

There are a number of election-specific variables that may influence levels of campaigns spending in mayoral contests. Of course, we expect the mix of candidates to affect spending levels. Specifically, the presence or absence of an incumbent on the ballot should influence overall campaign spending (Bonneau 2005). Open-seat contests represent an opportunity for well-financed, strategic candidates. Because open-seat contests represent a better shot at victory than contests where an incumbent is on the ballot (the incumbency advantage is strong even in local elections; see Holbrook and Weinschenk 2011; Trounstine 2011), they should generate more intense contestation and greater willingness and ability to spend among candidates vying for political office. Closely related to this, we also take into account the

“quality” of the candidate pool, using two separate variables: one that measures the number of candidates who have prior elective office experience and one that counts the number of candidates with no prior elective office experience. To the extent that other variables in the model may be influencing total spending by affecting the candidate pool, including these two measures allows us to isolate the independent influence of candidate experience. Spending should be positively influenced by the number of candidates with prior elective experience and negatively influenced by the number of candidates with no prior elective experience. Finally, we also take into account whether a runoff election occurred (coded one for yes, zero for no). Just to be clear, the runoff variable does not measure whether a city *can* have runoff mayoral elections, but instead whether a runoff election *actually happened* in a given city.<sup>2</sup> In many cities, there is a runoff election between the top two vote getters if the first place winner does not win the general election with a certain percentage of the vote.<sup>3</sup> Places that have runoffs should experience higher spending than places that do not for two reasons. First, by virtue of having survived the first round of the election, candidates in the runoff are organized and financed better than those who did not survive the first round. Second, the stakes are much higher in the runoff than in the first round: whoever wins the runoff *will* be elected mayor. This should make candidates more willing to spend and contributors more willing to invest.

## Research Design

### Data

In this article, we use an original data set created specifically for the purpose of learning about campaign spending in city elections. All of the variable sources and coding procedures can be found in Supplemental Table 1. Our approach to data gathering was to restrict the sample to large U.S. cities, based on the 2006 Census estimates, and then go directly to city and county government sources to

**Table 1.** Influence of Institutions, City Attributes, and Contest-Specific Factors on Campaign Spending (GLS Random Effects Models).

Variables	Model 1	Model 2	Model 3
	b/SE	b/SE	b/SE
Partisan election	-.054 .217	-.048 .225	-.022 .220
Mayor/council	.447* .181	.494* .185	.503* .182
Term length	.532* .177	.597* .196	.534* .180
Local government employees per capita	.429* .182	.346* .183	— —
Presidential election	.014 .229	-.050 .246	-.028 .229
Midterm election	.020 .221	.173 .250	-.025 .222
November odd year	.115 .169	.007 .184	.162 .169
City population (logged)	-.067 .134	-.051 .140	-.076 .136
Racial diversity	.735 .703	.606 .718	.839 .713
Gini index	1.214 2.700	2.056 3.022	4.783* 2.273
Cost of living	.007 .005	.010* .005	.009* .005
Number of inexperienced candidates	.012 .045	-.003 .050	.006 .046
Number of experienced candidates	.262* .060	.248* .067	.262* .060
Runoff election	.584* .141	.538* .157	.601* .142
Open seat	.532* .096	.537* .109	.527* .096
Constant	-.770 2.307	-2.179 2.361	-4.414* 1.746
$R^2$ Within/Between/Overall	.32/.32/.33	.31/.37/.37	.32/.30/.31
$\rho$	.57	.48	.58
N	341	265	341

Note: Estimates in model 1 use imputed values for the forty-nine missing cases on the local government employment variable, while the missing values are excluded in model 2.

\* $p < .05$  (one-tailed).

identify when elections occurred and gather as much data as possible for current and past elections. Data gathering began several years ago, and all of the elections in the sample used in our model are from the 165 largest U.S. cities. In total, we have data from 341 elections occurring in 132 cities from 1996 to 2012.

### Dependent Variable

To measure the level of campaign spending in mayoral elections, we summed the amount of campaign money spent by all of the candidates in each election.<sup>4</sup> Just to be clear, our unit of analysis in this article is an election and not a candidate. In this way, our approach is similar

to that used by Bonneau (2005), Bonneau and Hall (2009), and Frederick and Streb (2008). A number of previous studies (see, e.g., Hogan 1999; Bardwell 2005) have used candidates as the unit of analysis, and future researchers should consider conducting such an analysis within the context of mayoral or city council elections, especially if they are interested in learning about the impact of candidate attributes on spending. Both election-level and candidate-level analyses are needed in order to get a comprehensive understanding of campaign spending.

We adjusted these spending data to account for inflation (in 1980–1982 dollars) and population. To account for population, we divided total spending by the citizen voting age population (CVAP), which we collected from various years of the U.S. Census. We should point out that while some scholars (see Bardwell 2003, 2005) have used spending per voter as their dependent variable, others have used total spending as their dependent variable and included population as an independent variable (see Frederick and Streb 2008; Bonneau and Hall 2009). Our analysis focuses on spending per CVAP as the dependent variable, but we report the results where total spending is used as the dependent variable and weighted by population in Supplemental Table 4. The distribution of the dependent variable is shown in Supplemental Figure 1. In general, there is a lot of variation in levels of spending across cities; variation that we think can be explained by the set of influences described above. Because of the disproportionate influence of a few extreme cases, we use the natural log of total spending per citizen voting age resident (also shown in Supplemental Figure 1) as our dependent variable in all regression analyses below.

## Does Spending Matter?

Before delving into the analysis of the determinants of levels of campaign spending, it is useful to briefly examine the consequences of spending. As we pointed out above, it is anticipated that campaign spending plays an important role in driving turnout, especially in low-information

elections (Francia and Herrnsen 2004; Hogan forthcoming). The correlation between total campaign spending and voter turnout in mayoral elections is a respectable .34 (Pearson's  $r$ ), which is statistically significant at  $p < .05$  (a graph showing the relationship is available in Supplemental Figure 2). In short, there is evidence that campaign spending in mayoral elections does matter to outcomes of interest, which makes it even more important to understand the determinants of campaign spending at the local level.

## Results

We begin the analysis in Table 1, which contains three models. Because our measure of size of government (the log of municipal employees per capita) had a fair amount of missing data, we imputed values for those cities for which we did not have data (15 percent of the cases).<sup>5</sup> It is important to note that the results presented in Table 1 are robust across a number of different model specifications (additional specifications shown in Supplementary Tables 2 and Table 3). Table 1 includes models both with (model 1) and without (model 2) the imputed values. The third model allows us to examine whether there is mediation at work among the variables included in our model (discussed in detail below). Because our data are pooled—that is to say we have data for 132 cities, most of which have multiple elections in the data set—we use a Generalized Least Squares (GLS) random effects model that allows us to estimate the fit of the model both within and across cities. Based on the results of the analysis, it is clear that campaign spending across cities varies systematically and is not simply a function of differences in the cost of living or the size of the city. Instead, there are several institutional arrangements and election-specific conditions that drive the level of spending, while other city-level characteristics have little effect.<sup>6</sup> Taking the institutional factors first, we see that the most important factors are those that could make some offices more attractive than others. Specifically, cities in which the scope of municipal government is relatively great, cities with a

**Table 2.** A Comparison of Campaign Spending in Open Seat and Incumbent Contests (GLS Random Effects Model).

Variables	<i>b</i>	SE	z-score
Partisan election	.037	.233	.16
Partisan election × open seat	−.279	.269	−1.04
Mayor/council	.571	.194	2.94*
Mayor/council × open seat	−.399	.206	−1.94*
Local government employees	.552	.194	2.84*
Local government employees × open seat	−.262	.197	−1.33
Term length	.498	.185	2.69*
Term length × open seat	.127	.175	.73
Presidential election	.073	.299	.24
Presidential election × open seat	−.269	.408	−.66
Midterm election	.189	.259	.73
Midterm election × open seat	−.429	.319	−1.35
November odd year	.244	.192	1.28
November odd year × open seat	−.325	.236	−1.38
City population (logged)	−.061	.146	−.42
City population (logged) × open seat	−.072	.148	−.49
Racial diversity	.653	.767	.85
Racial diversity × open seat	.528	.818	.65
Gini index	−.186	2.913	−.06
Gini index × open seat	3.921	2.848	1.38
Cost of living	.006	.005	1.32
Cost of living × open seat	.002	.005	.47
Inexperienced candidates	.101	.072	1.40
Inexperienced candidates × open seat	−.146	.091	−1.61
Experienced candidates	.360	.089	4.05*
Experienced candidates × open seat	−.194	.115	−1.68
Runoff election	.422	.229	1.84
Runoff election × open seat	.061	.307	.20
Open seat	−1.536	2.344	−.66
Constant	.222	2.491	.09
$R^2$ Within/Between/Overall	.37/.34/.36		
Rho	.58		
N	341		

Note: \* $p < .05$  (two-tailed).

mayor-council form of government, and those with longer mayoral terms tend to have higher levels of spending than other cities. The relative effects of the independent variables are not easily gleaned from the unstandardized regression coefficients, so we summarize those effects graphically in Supplementary Figure 3 for interested readers. According to the model results, the most substantial effect comes from the size of local government, measured with local government employees per capita: campaign spending per capita is \$3.90 higher in cities with large city governments than in those

with relatively small city governments. Other institutional variables also play an important role: per capita spending in cities with the mayor-council form of government is approximately \$1.57 higher than in other cities; and spending in cities with a four-year mayoral term is approximately \$2.61 higher than in cities with a two-year term. These are substantial differences and reflect the importance of these institutional arrangements. At the same time, ballot type (partisan vs. nonpartisan) and election timing have no discernible influence on spending levels.

Interestingly, city-level characteristics have very little effect on campaign spending levels. The effect of cost of living is marginally non-significant in the imputed model (model 1) in Table 1 but has a significant effect in the model without imputations (model 2). Although we should accept this with caution, the net effect of cost of living is a fairly substantial \$2.15. This is not particularly interesting theoretically, but it is a very important statistical control, as cost of living is moderately correlated with a number of other independent variables. Somewhat to our surprise, none of the variables that we use to measure potential for bias are statistically significant. This would seem to refute the idea that in homogeneous cities, or cities with low levels of inequality, there are fewer cleavages along which power and resources can be divided, or at least that this doesn't matter to campaign spending. This result surprises us since we think the theory underlying these variables is quite strong. One possibility is that the effect of these variables is masked by the inclusion of related variables that mediate their impact. In fact, this is the case for the Gini index, which has a strong positive correlation with the number of municipal employees per capita ( $r = .60, p < .05$ ). When local government employment per capita is dropped from the model (results shown in model 3), the Gini Index becomes statistically significant ( $b = 4.78, z\text{-score} = 2.10$ ), though neither population size nor diversity grow in strength. We explore mediation further by using a Sobel-Goodman test for mediation effects, which allows us to examine the extent to which a mediator (scope of city government) carries the influence of an independent variable (Gini inequality index) to the dependent variable. The Sobel-Goodman test indicates that 74.63 percent of the effect of the inequality index on spending is mediated by the scope of city government measure.<sup>7</sup> In short, there is evidence that the Gini index has an effect on spending, albeit an indirect effect.

There is also evidence in support of the importance of the contest-specific variables; in particular, the experience of the candidate pool, runoff elections, and open-seat contests generate more spending per capita, which is

consistent with our expectations. It is important to note that spending per capita is not a function the total number of candidates in the contest, but of the number candidates with political experience. In fact, there is no discernible connection between the number of inexperienced candidates and spending levels. Of course, we suspect this is because inexperienced candidates are generally not as well funded, and frequently spending little-to-no money. On the other hand, there is a very strong connection between the number of *experienced* candidates and per capita spending in the contest. In a contest with several experienced candidates, the expected level spending is approximately \$2.94 higher than in a contest with no experienced candidates. Also, open-seat contests generate approximately \$2.09 more in per capita spending than incumbent contests, and the net effect of runoff elections is approximately \$2.63.

The analysis presented above provides clear evidence that a number of city-level factors, political institutions, and contest-specific variables are related to campaign spending levels. One interesting finding from previous literature on campaign spending is that the effects of spending are very different in incumbent and open-seat races (Holbrook and Weinschenk forthcoming; Hogan forthcoming; Hogan 2000). While Table 1 indicated that levels of spending are significantly higher in open-seat contests than incumbent contests, it is important to consider whether the same factors affect spending levels across open seat and incumbent contests. Given that open-seat mayoral elections represent a better shot at victory than incumbent contests (Holbrook and Weinschenk 2011), it may be the case that the variables we examined above related to strategic opportunities and group contestation (e.g., partisan elections, inequality, etc.) are more strongly tied to spending levels in open seat contests than in incumbent contests.

In Table 2, we include interactions between election type (open seat vs. incumbent contest) and each of the independent variables. Open seat contests are coded as one and contests where there is an incumbent on the ballot are

coded as zero. The inclusion of these interaction variables allows us to test whether the effects of city-level factors, political institutions, and contest-specific variables are different in open seat and incumbent contests. Overall, there are very few differences across open seat and incumbent contests. In fact, only one of the interactions is statistically significant at the  $p < .05$  level. The effect of local government form on campaign spending is significantly different in open-seat contests than in incumbent contests ( $p < .05$ ). While it is important to recall that the election type variable (open seat) had an important *additive* effect on spending, as we showed in Table 1, there is little evidence of interactive effects when it comes to election type. In short, the determinants of spending “work” in similar ways across open seat and incumbent contests.

## Discussion

The influence of campaign spending in U.S. elections is a topic that has received (and continues to receive) a great deal of attention from the media, ordinary citizens, and policy makers. Much of the commentary (and debate) on campaign spending focuses on national and state level elections, with little attention devoted to campaign spending in local elections. Even at the local level, there are clearly different perspectives on how damaging or beneficial campaign spending is during elections. Indeed, a number of policy makers across the United States have voiced concerns about high levels of campaign spending in city council and mayoral contests. At the same time, some local officials have tried to develop ways of increasing local campaign spending, in part because higher levels of campaign spending stimulate citizen engagement in local electoral politics. In light of this debate, we think it is important to try to learn about what factors promote or limit campaign spending in elections.

In this article, we found that a number of the variables that we considered had important effects on campaign spending. It is worth noting that a number of the factors that we considered are humanly devised institutions and could

be changed to promote different patterns of campaign spending. For instance, longer mayoral terms tend to lead to higher levels of campaign spending and could be reduced in order to diminish local campaign spending. In addition, our analysis indicated that cities with a mayor-council form of government experience higher levels of mayoral campaign spending than their counterparts. Changing to another form of government is something that could be done to promote different spending patterns. Although there has been a great deal of concern about the negative impact of partisan elections, it is important to recall that our analysis indicated that partisan mayoral elections were no more expensive than nonpartisan elections. Moving from partisan elections to nonpartisan elections for the purpose of reducing the role of money in politics, then, is unlikely to be effective.

Despite the above observations about changing policies or institutions to alter spending patterns, it is important to point out, especially to those who think that campaign spending has reached excessive levels in local elections, that changing local political institutions to foster lower levels of campaign spending might have unintended consequences. If levels of campaign spending decline due to institutional changes, cities might experience lower levels of voter turnout (since campaign spending has an important impact on local turnout). Given how low local turnout is across the United States on average (turnout in our data set was 25.8 percent on average), this may not be a desirable outcome, especially since low turnout rates are associated with biases in political representation (Hajnal and Trounstein 2005) and public policy (Anzia 2011). The potential ills of high campaign spending in local elections need to be balanced against gains that are realized by trying to reduce the role of campaign money in local electoral politics. There are clear trade-offs for policy makers to consider.

Given the results presented previously and the implications of those results, this study points to a number of important avenues for future research. First, our model of campaign spending could be examined in the context of

other local elections, such as city council races. Such a study would enhance our ability to compare findings across different types of elections. In addition, future scholars should consider devoting time to the collection of data regarding local campaign spending regulations and programs. There is very little empirical evidence on the effects of campaign spending reforms in local elections.<sup>8</sup> Such an investigation could focus on the direct effects of campaign reforms on spending or on the effects of such reforms on outcomes like voter turnout.

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### Notes

1. We use a standard diversity formula:  $D = 1 - (\text{proportion white}^2 + \text{proportion black}^2 + \text{proportion Latino}^2 + \text{proportion Asian}^2)$ . We should note that population is correlated with city racial diversity at Pearson's  $r = .32$  ( $p < .05$ ), indicating that it is related to another measure of diversity, but the correlation is not so high as to indicate that both measures are capturing the same thing.
2. We should point out that although there may be some concern that it is only nonpartisan cities that hold runoff (exceptions like New York City notwithstanding), only about 20 percent of the nonpartisan contests in our sample actually held runoffs, so including runoffs in the model is not overly concerning from the standpoint of collinearity.
3. In our data set, if a city had a general election that led to a runoff, we only include the runoff election, since that was the election that selected the mayor.
4. Because very few cities and city clerks separate campaign spending reports to identify primary spending, general election spending, and runoff spending (most simply report the final spending total for each candidate on campaign finance reports), we were forced to use overall spending totals rather than separate totals for the different components of mayoral elections. It would be particularly useful to get spending totals for each election phase (primary total, general total, and runoff total), and this was our original intent when we started data collection. However, because of the nature of campaign finance reporting in most cities, we were not able to obtain as detailed spending totals as we would have liked. We acknowledge this data limitation, but we think the value of learning about campaign spending in local elections outweighs this limitation.
5. We imputed the missing data using STATA's imputation technique, and modeled local government employment as a function of the size of the citizen voting age population, the number of at large city council seats, the closing date for voter registration, per capita income, poverty rate, percentage of population on food stamps, and the local cost of living.
6. In addition to examining the effect of the variables listed above, we examined the influence of term limits on campaign spending. Basham (2001) has noted that campaign spending should be lower in places with term limits. We were able to identify information on term limits for 83 percent of the cities in our data set. We tested the effects of term limits on spending by using a dummy variable to indicate whether a city has term limits or not. The coefficient was negatively signed, indicating that cities with term limits have lower levels of spending, but the effect was not statistically significant at conventional levels. Because of the decreased sample size and lack of a statistically significant effect, we opt not to include the term limits dummy in regression analyses. All variables that were statistically significant in Table 1 remained statistically significant when the term limits variable was added to the model.
7. We use the Sobel-Goodman mediation test in STATA.
8. As a first cut at this question, we did examine the influence of the use of city public funding programs (yes or no) on campaign spending levels. The coefficient was not statistically significant when included in Table 1. All variables that were

statistically significant in Table 1 remained statistically significant when the public funding variable was added to the model. Additional work needs to be put into developing measures of city level campaign finance policies and regulations, such as city-level contribution limits. Such data would likely need to be personally collected from city clerks, since there is not an existing database on local campaign finance regulations that contains information on a large sample of cities.

### Supplemental Material

The online appendices are available at <http://slg.sagepub.com/>.

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