

Contents lists available at [ScienceDirect](#)

Electoral Studies

journal homepage: www.elsevier.com/locate/electstud

Money, candidates, and mayoral elections

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ARTICLE INFO

Article history:

Received 7 December 2012

Received in revised form 24 January 2014

Accepted 10 February 2014

Available online 5 March 2014

Keywords:

Mayoral elections

Electoral politics

Campaign expenditures

Local elections

Incumbency

ABSTRACT

In this paper, we extend a well-trod line of research from congressional and state-level elections—the electoral impact of campaign expenditures and candidate characteristics—to a relatively understudied context, urban mayoral elections. Using a sample of large U.S. cities, we provide evidence that mayoral elections are very similar to elections at other levels of office: there is a tremendous incumbency advantage, one that is overcome only with great effort; campaign spending is closely tied to incumbent vote share but it is challenger rather than incumbent spending that seems to drive outcomes; and challengers are hopelessly outspent. In addition, we find that the effect of local economic conditions on incumbent success is mediated by challenger spending and that incumbent candidates fare better in racially diverse settings.

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1. Introduction

Much has been made of the idea that the fifty states serve as laboratories of democracy ([Morehouse and Jewell, 2004](#)). While scholars of state politics have (rightly) argued that the variation in political, institutional and demographic contexts across the fifty states provides an important opportunity for scholars to learn about politics more generally, it seems self-evident that the case is just as strong when considering the opportunities presented by the thousands of local units of government. Despite this, we know very little about how well theories and models of political outcomes explain local politics ([Marschall, 2010](#); [Trounstine, 2009](#); [Marschall et al., 2011](#)). Not only does this create gaps in our knowledge of local politics; it also means that broader theories and models largely are left untested in this fertile and diverse context. In this paper, we extend a well-trod line of research from congressional and state-level elections—the electoral impact of campaign

expenditures and candidate characteristics—to a relatively understudied context, urban mayoral elections.

One need look no farther than the impact of candidates and campaign expenditures on elections at virtually all levels of office for evidence of important campaign effects. With the exception of presidential elections, where the major-party candidates are fairly familiar to the electorate and, until recently, spend roughly equal amounts of money, differences in candidate experience and campaign expenditures have played a determinative role in shaping both election outcomes and voter turnout. Beginning with the early work of [Jacobson \(1980\)](#) on the role of money in elections, and continuing with [Jacobson and Kernell's \(1983\)](#) integration of the concepts of strategic candidates and the importance of candidate experience, we have learned a lot about the importance of money and candidates in sub-presidential elections.

The literature on congressional campaigns² points to a huge information advantage for most incumbents, one that

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² See [Jacobson \(2009\)](#) for an overview of research on congressional elections, and [Currinder and Green \(2010\)](#) for a concise review of the literature on campaign spending and election outcomes.

can only be partially offset by experienced, well-funded challengers. And in open-seat contests the political experience of the candidates and the amount of money they raise are driving forces in the election. Similar effects are found in state-legislative (Van Dunk, 1997; Abbe and Herrnson, 2003; Carey et al., 2000; Gierzynski and Breaux, 1996; Hogan, 2001, 2004), gubernatorial (King, 2001; Partin, 2002; Squire, 1992), city council (Gierzynski et al., 1998; Krebs, 1998; Leiske, 1989), and initiative (Bowler et al., 1992; Hadwiger, 1992) elections. Research at these different levels of office has also contributed to a better understanding of how campaigns act to mobilize and inform voters (Hogan, 1999; Jackson, 1997, 2002; Nicholson, 2003; Niven, 2001; Partin, 2001; Patterson and Caldeira, 1983).

In this paper, we turn our attention to the impact of candidates and expenditures in mayoral elections, focusing on incumbent elections occurring in a sample of relatively large U.S. cities. Hundreds of mayoral elections, including dozens of elections in large cities, occur every year. For instance, the U.S. Conference of Mayors lists 195 elections held in November alone in 2010 in cities with populations greater than 35,000, and 45 elections in cities with populations greater than 100,000. In 2009 the same source listed over 600 mayoral elections for the entire year, 90 of which took place in cities with populations greater than 100,000. Despite their pervasiveness, we know very little about the determinants of mayoral election outcomes, and almost nothing about the impact of campaign expenditures and candidate characteristics. This is unfortunate, for unlike federal and state-level elections, which all occur within fairly limited institutional and (to some extent) demographic contexts, mayoral elections take place across a wide variety of settings. Some elections are in even-numbered years, some in odd-numbered years; some occur in the fall, some in the spring, and even a few in the winter and summer months; some use a partisan ballot, some a non-partisan ballot, and some are surprisingly partisan despite the non-partisan ballot; some mayors have greater authority in a mayor-council system, and some operate in weaker council-manager systems; some elections take place in cities with very little racial diversity, and some take place in virtual melting pots. It is also the case that some mayoral elections attract high levels of voter turnout while others attract very few voters and that cities differ in their electoral regulations, including campaign spending regulations and rules. The point here is very simple: mayoral elections are all around us and provide a lot of really interesting variation in context, yet we know very little about them. Although these differences can certainly make it challenging to compare cities, by accounting for important institutional, demographic, and electoral factors across cities, it is possible to develop a general understanding of the dynamics of mayoral elections across the United States.

2. Research on local elections

The landscape of research on mayoral elections is relatively barren, save for a handful of studies. Notable among these is Kaufmann's (2004) study of mayoral elections in Los Angeles and New York City, which relied on publicly

available media surveys to test an innovative group-based theory of urban elections. Kaufmann's study represented a major advance in what we know about urban mayoral elections, but that understanding is limited due to the focus on just two cities, and it does not address the issue at hand here: candidates and campaign spending. To be sure, there have also been studies of turnout in mayoral elections (Caren, 2007), mayoral approval (Howell and McLean, 2001; Howell and Perry, 2004), campaign strategy in mayoral elections (Krebs and Holian, 2007), media coverage of mayoral campaigns (Atkeson and Krebs, 2008), and mayoral campaign fundraising dynamics (Adams, 2007; Krebs and Holian, 2005; Krebs and Pelissero, 2001); but no studies that focus explicitly on the influence of candidates and campaign spending on mayoral election outcomes across more than just a few cities.

Despite the relative dearth of research on mayoral elections, there have been a number of studies of other local elections—mostly city council races—and a few have focused on candidates and spending in those races. Oliver and Ha's (2007) survey-based analysis of city council elections in 30 suburban communities provides a unique opportunity to examine voter decision-making. While Oliver and Ha did not focus explicitly on candidate experience or spending, they did find that familiarity with candidates—something that typically coincides with candidate quality (Jacobson 2013)—influenced on how people voted. Other studies of council elections have focused more squarely on the role of candidates and expenditures. Earliest among these was Lieske's (1989) study of Cincinnati council elections, which was followed by Gierzynski et al.'s (1998) and Krebs' (1998) studies of Chicago Aldermanic races; and all three of these studies found that campaign spending had a profound impact of vote share, even after controlling for a multitude of other factors. Contrary to these studies, Fleischmann and Stein (1998) found no relationship between campaign spending and electoral success in their study of council elections in St. Louis and Atlanta. It should be noted, however, that Fleischman and Stein's model focused on the impact of spending on the probability of winning rather than on vote share.

Krebs' (1998) analysis of Chicago aldermanic races plumbs the sources of candidate success a bit more thoroughly than the other studies, and his findings are suggestive of what we expect to see in mayoral races: the success of aldermanic candidates is heavily dependent upon candidate characteristics and campaign spending; incumbents enjoy a distinct advantage over challengers, though this advantage is diminished somewhat if incumbents face experienced challengers; and in incumbent races, challenger spending has a stronger influence on vote share than incumbent spending does. For the most part, these findings mirror those found in studies of candidates and campaign spending at other levels of office (Currinder and Green, 2010).

3. Candidates and spending in mayoral elections

While the studies cited above are informative and provide more evidence to support what are becoming near

truisms regarding candidates and campaign spending, they focus on council elections and tend to be restricted to analyses of one or two cities over time. Despite the quality of this work, we are still left in the dark when it comes to mayoral elections. In this paper, we hope to shed some light on how candidates and campaign spending operate in mayoral elections by examining data from a diverse set of mayoral elections, occurring across multiple cities and over multiple years.

One of the biggest hurdles to doing research on mayoral elections, especially across multiple jurisdictions and multiple years, is that data on many of the variables of primary interest are very difficult to obtain. Even obtaining an exhaustive list of mayoral elections is very difficult. 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 identify when elections occurred and gather as much data as possible for current and past elections. The discussion in the [appendix](#) describes the data gathering process for some variables, but suffice it to say that this is a very labor-intensive process and there are missing observations on many key variables, especially for elections that occurred prior to 2005. It is especially challenging to obtain campaign and candidate information, since localities differ in their campaign reporting requirements, as well as how long they keep records. While some cities post campaign finance reports on their websites, others require that a public information request be submitted to the city clerk in order to obtain the data. Other cities will only provide the information in a hard-copy format.

Data gathering began several years ago, and all of the elections in the sample used in our full model are from the 165 largest U.S. cities, based on the 2006 Census estimates. In the end, we have data on election returns from 441 elections, held in 139 cities from 1996 to 2011. Due to data availability, most of the elections are in the 2000s: 10% from 1996 to 2001; 37% from 2002 to 2006; and 53% from 2007 to 2011. From the full dataset, we have data on 270 incumbent elections. However, because spending data are not available for many cases, our full models include 197 incumbent contests held in 117 cities. The median size of all cities for which we have election outcome data is approximately 269,188 while the median population for the subset of incumbent elections is 262,313. The population sizes (2006 estimates) range from 143,801 (Kansas City, Kansas) to 8,214,426 (New York City).

4. Expectations

The literature on incumbent success—whether at the congressional, state, or local level—points to very clear expectations. First, incumbent mayoral candidates are expected to hold a distinct advantage over their challengers, both in terms of votes and the probability of victory. Second, a key to the success of incumbent mayoral candidates is their relative advantage in campaign spending. However, it is also expected that the amount of money spent by incumbents is not as important as the amount of money

spent by challengers (Jacobson, 1990).³ Finally, experienced challengers—those with some elective office experience—represent a stronger electoral threat to incumbents than challengers without much political experience.

We consider a number of other potential explanations of incumbent success in mayoral elections, focusing mostly on the local context of the election. Just as we know very little about the influence of candidates and campaign spending in mayoral elections, we also know very little about the influence of other factors. However, evidence from national and state elections, as well as the few existing studies of local elections, leads us to several plausible considerations.

One potential influence is a local form of retrospective voting (Fiorina, 1981). Other executive officials—presidents and governors—are routinely held to account for prevailing local conditions in their respective jurisdiction. When times are good, presidents and governors reap electoral benefits, and when times are bad they suffer at the polls. There is some evidence of similar effects in local elections. Using survey data Kaufmann (2004) finds a retrospective component to vote choice in New York City and Los Angeles mayoral elections, though this effect is weaker when other considerations gain salience. Oliver and Ha's (2007) study of suburban city council elections also found that general satisfaction with government performance was closely tied to votes for incumbents, but that perceptions of local economic conditions had little influence on vote choice. Finally, Berry and Howell's (2007) study of South Carolina school board elections found that votes for incumbent candidates were a function of school district performance, especially in districts where local media paid more attention to performance issues. In this study we use a measure of economic performance—the two-year change in the local unemployment rate, centered on the national two-year change—to capture local conditions. We expect that incumbent vote share is negatively related to this measure of unemployment: incumbents will have a smaller advantage in cities whose growth in unemployment rate (relative to the national change) was relatively high, compared to

³ We should point out that numerous scholars have taken up the possible reciprocal relationship between money and votes; that the “amount of money raised by candidates depends, in part, on how well they are expected to do on election day. Campaign spending may affect the vote, but the (expected) vote affects campaign contributions, and thus spending, because potential donors give more to candidates in races that are expected to be close. They are especially sensitive to the prospects of challengers; the better a challenger's apparent chances, the more money he or she receives from all sources” (Jacobson, 1990, 335). While Green and Krasno (1988) and others have attempted to deal with this concern via TSLS (using incumbent's spending in previous election as the instrument), Jacobson (1990) outlines out a number of problems (see pages 341–342) with this approach, concluding that “The results of other TSLS models, where interpretable, merely repeat the ordinary least squares findings, implying that simultaneity bias is small and that the OLS model is adequate after all” (1990, 341). See Jacobson (2006) for a more recent assessment on expenditures and causality. We should note that we view this study as an important first step in learning about campaign expenditures, since this is the first large-scale data collection effort on mayoral campaign dynamics. We encourage replications in other contexts and the use of other approaches, like those used by Jacobson (2006), to study the effects of spending and candidate attributes in local elections.

incumbents from cities with smaller increases (or even decreases) in unemployment.

We also take into account the diversity of the local population. [Hibbing and Brandes' \(1983\)](#) work on Senate elections suggested that one explanation for a somewhat smaller incumbency advantage for U.S. Senators, relative to members of the House, was that larger jurisdictions encompassed more diverse, harder-to-represent interests. This perspective argues a negative relationship between population diversity and incumbent success. At the same time, however, others ([Ensley et al., 2010](#); [Krasno, 1994](#); [Lascher, 2005](#)) have argued that diverse interests should represent an even bigger obstacle for challengers, who may have a difficult time shaping those interests into a winning coalition. At the local level, [Oliver and Ha \(2007\)](#) found that challengers in suburban city council races drew greater support in smaller communities but also found that they benefitted from high levels of racial diversity in the local population. At the same time, [Lascher \(2005\)](#) found that population size (a proxy for diverse interests) was positively related to the success of incumbent county supervisors in California. Rather than rely just on population size as a proxy for diversity, we use a direct measure of racial diversity, based on the percent White, Black, Latino and Asian-American population.⁴ Though there are empirical studies supporting both positive and negative expectations for this relationship, we anticipate a positive relationship between diversity and incumbent success. In short, if diverse interests are difficult to represent, then it should be even harder for challengers than for incumbents to put together winning coalitions, especially since those diverse interests have already elected the incumbent candidates.⁵

⁴ We use a standard diversity formula: $D = 1 - (\text{proportion White}^2 + \text{proportion Black}^2 + \text{proportion Latino}^2 + \text{proportion Asian}^2)$.

⁵ In a 2013 article, [Trounstone](#) argued that low turnout environments should be better for incumbents. Indeed, [Trounstone \(2013, p. 170\)](#) notes that "[Hansford and Gomez \(2010\)](#) provided evidence that this is the case in presidential elections; higher turnout decreases vote shares for incumbent candidates." The logic is that "as turnout increases, the electorate contains a higher proportion of unreliable and unpredictable voters. If these voters are less likely to have a connection to the incumbent, then high turnout will negatively affect the likelihood that incumbents will both run for and win reelection to office" ([Trounstone, 2013, p. 170](#)). The expectation in the context of mayoral elections, then, is that higher turnout should correspond to mayoral incumbents doing worse. Including turnout as a predictor of incumbent vote share in our models generally confirms the expectation that higher turnout corresponds to lower incumbent vote share. The turnout coefficient is statistically significant at $p < .05$ in 4 of the 6 models included in [Table 2](#) (it is always negatively signed). This finding fits nicely with [Hansford and Gomez's \(2010\)](#) work but also with [Trounstone's \(2013\)](#) finding that when more voters turnout, fewer incumbents (at the city council level) win re-election (p. 178). We should note that [Hansford and Gomez](#) use an instrumental variable for turnout (based on a measure of local rainfall). Since turnout is not the central focus of our analysis (and because we did not collect local rainfall data), we simply report the results using turnout (model shown in the [Online Appendix, Table 1B](#)) as a predictor of incumbent performance. We leave the development of an instrumental variable for mayoral turnout (and data collection) to future research. The results of the models including turnout can be found in the [Online Appendix](#). The performance of the other variables in the model is similar in terms of direction, magnitude, and statistical significance. We thank an anonymous reviewer for the suggestion to investigate the effect of turnout.

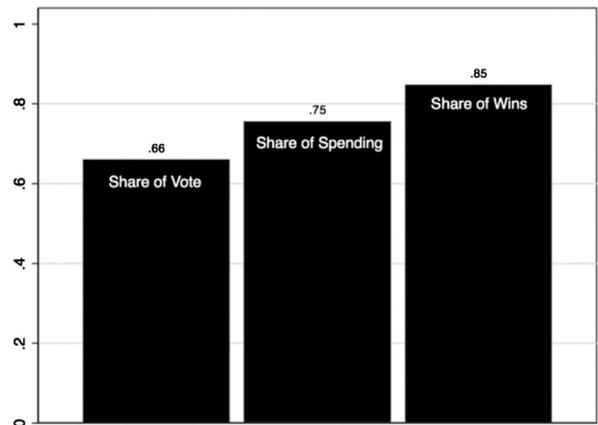


Fig. 1. The incumbency advantage in mayoral elections.

We also control for three important institutional factors: runoff elections, ballot type, and form of government. Runoff elections are likely to signal vulnerable incumbents who have been pushed to a runoff and are likely facing stiffer competition than incumbents who are not in runoffs. This may be reflected in candidate experience or fundraising capacity; if so, then we expect that the impact of the runoff election will be diminished when these factors are added to the model. A dummy variable for using a partisan ballot is also included in the model, with the expectation that partisan elections provide an important alternative cue to incumbency and may weaken the incumbency advantage. A dichotomous indicator for mayor-council systems, as opposed to council-manager and commission systems is also included. The expectation here is that mayors in mayor-council systems are much more prominent local players and have more perks of office than their counterparts in weaker mayor systems, and this should translate into great incumbent security. Finally, we control for the total number of candidates in the race since expected vote share should decrease as the vote is split among more candidates.⁶

5. Evidence

We begin with some descriptive data and simple bivariate plots that illustrate the extent of the incumbency advantage and how incumbent success in mayoral elections is shaped by candidates and spending. [Fig. 1](#) provides evidence of a substantial advantage: incumbents garner almost two-thirds of the vote; spend about three-fourths of money spent in the contest; and win 85% of the time. To be sure, these data point to a distinct advantage for mayoral incumbents, but it is important to put that advantage in context. For instance, the chances of winning, though high, are somewhat lower than in U.S. House elections, where recent reelection rates have averaged more than 90%, and

⁶ 9% of incumbent contests are runoff elections, 17% use partisan ballots, 44% are from mayor-council systems, and the average number of candidates (if more than one) is 2.65.

Table 1

Prevalence and characteristics of non-incumbent candidates in U.S. mayoral contests.

	Open seats	Incumbent races
Proportion of candidates per contest with experience	.60	.40
Proportion of contests with at least one experienced candidate	.95	.54
Proportion of vote		
Inexperienced candidates	.27	.22
Experienced candidates	.44	.34
Proportion of spending		
Inexperienced candidates	.23	.14
Experienced candidates	.46	.27

the share of the vote runs somewhat behind that typically won by House incumbents (Jacobson, 2009).

If previous research serves as a good guide to understanding this advantage, we should see the indicators provided above linked to patterns of challenger experience and candidate spending. We turn first to descriptive data on candidate experience, with the expectation that experienced non-incumbent candidates are most likely to emerge in open-seat contests, when the odds of winning are greater, and least likely in incumbent races, where the deck is stacked against them. Evidence supporting this expectation is presented in the top row of Table 1, which shows that across all open seat contests, roughly 60% of all candidates have held some elective office prior to the election, and a full 95% of all contests had at least one experienced candidate. Whereas in incumbent contests (right column) roughly 40% of all challengers had some prior elective office experience and 54% of all incumbents faced at least one experienced challenger. There are two things to note about this pattern. First, it is not surprising and no doubt reflects the strategic calculus that open seats represent the best shot at victory. Second, though the differences between open-seat and incumbent races is not surprising, the proportion of experienced challengers in incumbent races is appreciably higher than in House races, where typically about 19% of incumbents face an experienced challenger (Jacobson, 2009, 43).

Theoretically, experienced candidates should fare better at the polls than their inexperienced counter-parts, in part because they should be in a better position to raise campaign funds. In the bottom half of Table 1 we examine the simple relationship between non-incumbent candidate experience and vote share and expenditures in both open-seat and incumbent contests. Turning first to vote share we see evidence of important benefits from candidate experience. In open-seat contests, experienced candidates win about seventeen percentage points more of the vote than inexperienced candidates. One thing to keep in mind when viewing this figure is that many of the open-seat mayoral contests have more than two candidates, so it is possible that some of the experienced candidates faced other experienced candidates, and it is also possible to win with less than a majority of the vote. To the extent that this is the case, it tends to underestimate the impact of experience. On the right side of Table 1 we see the difference between

experienced and inexperienced candidates is a bit smaller in incumbent contests, though the overall level of vote share is much lower for both experienced and inexperienced challengers. We see a similar pattern in campaign expenditures. Again, experienced non-incumbents spend a higher share of all campaign expenditures than inexperienced candidates in open seat contests, spending about twice as much, and that difference is of roughly the same magnitude in incumbent contests. Of course, in incumbent contests, even experienced challengers are at a distinct disadvantage relative to the level of incumbent spending.

6. Spending and votes

For the remainder of this paper we look more directly on the combined impact of spending and candidate experience, restricting most of our focus to the impact of campaign spending on vote share in incumbent races, with special attention paid to the differential effects of incumbent and challenger spending. First, we expect that the incumbent share of the vote will increase as the incumbent share of campaign spending increases. At some level this reflects what might be considered a “naïve” view because it does not take into account the differential effects of incumbent and challenger spending. This brings us to the second expectation: that the amount of money spent by challenging candidates is a stronger predictor of incumbent vote share than the amount spent by incumbent candidates. We anticipate this differential impact for mostly the same reasons that they have been observed in congressional elections (Currinder and Green, 2010; Jacobson, 2009, 2013). By virtue of having been elected by the same constituency before, and perhaps due to perks of office, incumbents start with a distinct vote advantage and will naturally experience diminishing returns to additional spending, if for no other reason than due to significant ceiling constraints. In addition, very little is generally known about challengers, so it should be relatively easier for them to increase visibility and vote share with additional campaign spending. In effect, most challengers probably start at an unnaturally large disadvantage, and

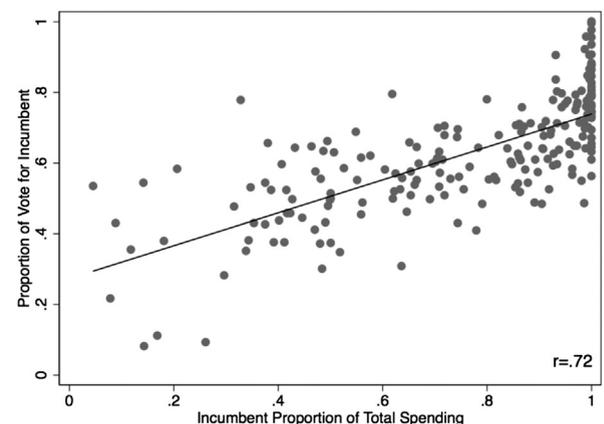


Fig. 2. Incumbent share of spending and votes in mayoral elections.

any significant expenditure on their part should help reduce that disadvantage.

Turning first the relationship between incumbent share of spending and incumbent share of the vote (Fig. 2) we see, as expected, a strong, positive relationship. As the incumbent share of total spending increases, there is a concomitant increase in their share of the vote ($r = .72$). Also of note is the fact that most incumbents spent well more than half of all expenditures. While this overall expenditure advantage was known from Fig. 1, when combined with the relationship of spending to votes in this figure it goes a long way toward explaining incumbent success in mayoral elections.

But this figure is also a bit deceptive, as one might interpret the pattern as saying that as incumbents spend more money, they generate more votes. In fact, while spending a greater proportion of all expenditures *could* result from spending a lot of money, it could also be a function of challengers spending very little money. At the same time, spending a relatively small share of total expenditures *could* reflect spending relatively little money, but it could also reflect the presence of a well-funded challenger. In fact, the data show that incumbent share of overall spending has very little to do with incumbent spending levels and a lot to do with challenger spending levels. In a simple bivariate analysis, the correlation between incumbent proportion of spending and incumbent spending per capita is .12, whereas the correlation between challenger spending per capita and incumbent spending proportion is $-.65$.

A direct implication of this pattern is that the apparent connection between incumbent proportion of spending and electoral fortunes portrayed in Fig. 2 is masking a more complicated pattern anticipated by research at other levels of office: that it is challenger spending that drives outcomes in incumbent contests. This hypothesis is explored in greater detail in Fig. 3.⁷ The top panel of the figure shows what can best be described as a very weak, negative, and counter-intuitive pattern. Simply put, there is no evidence here that the amount of money spent by incumbent mayoral candidates has much to do with how they fare on Election Day. This finding is in keeping with volumes of earlier research that has shown either modest, null, or slightly negative effects from incumbent spending (Currinder and Green, 2010). The relationship between challenger spending and incumbent votes (bottom panel) could not be more different. Here we see a strong, negative pattern, suggesting that incumbent electoral fortunes are strongly and negatively affected by challenger spending. Again, this finding is in keeping with previous research.

⁷ Here we express both incumbent and challenger expenditures as the natural log of expenditures per citizen voting age resident. Taking the logged values was necessary due to a few very extreme levels of expenditures, usually by incumbents. The citizen voting age population should give us something very close to the voting eligible population (McDonald and Popkin, 2001), though without accounting for ineligible felons. However, it should be noted that the results shown here change very little when substituting either total population or voting age population.

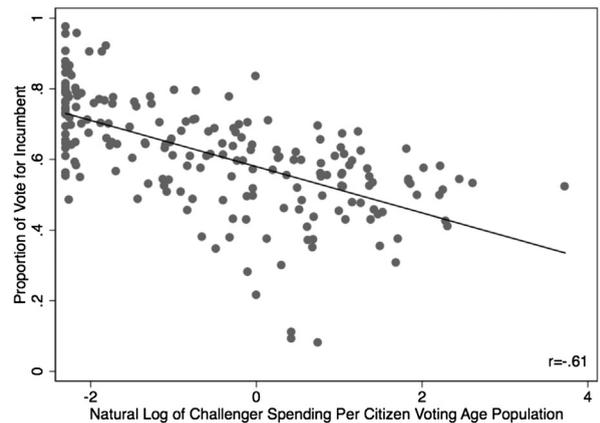
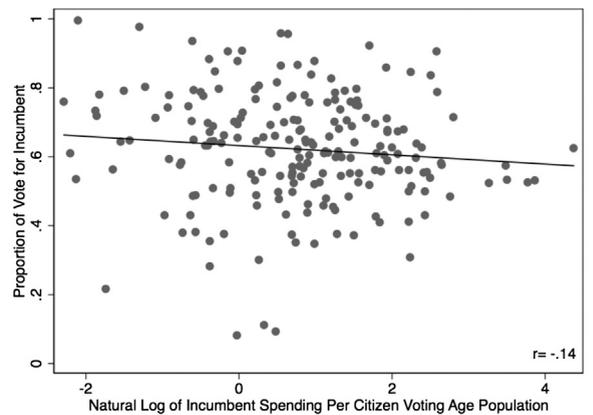


Fig. 3. Differential effects of incumbent and challenger spending in mayoral elections.

Of course, this simple bivariate picture could also be misleading; first, due to naturally diminishing returns, as discussed above, but also because one of the motivations for incumbents to spend more money is that they need to spend more, perhaps because of local conditions and/or

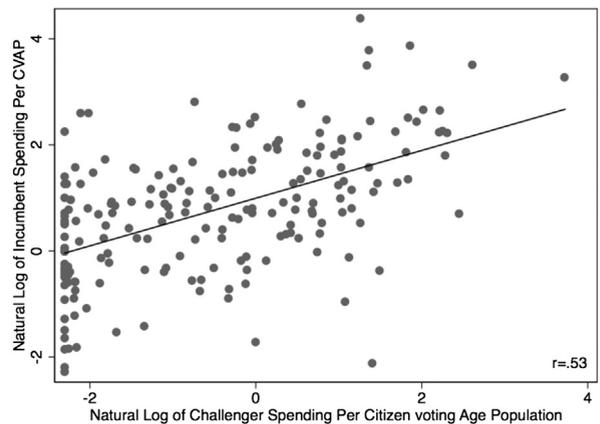


Fig. 4. Incumbent spending as function of challenger spending in mayoral elections.

challenger characteristics suggest greater electoral vulnerability (Jacobson, 2009, 2013). And, of course, these same conditions may also make it easier for challengers to raise money. One simple test of this idea is to look at the relationship between incumbent spending and challenger spending (Fig. 4). Here we see at least part of the explanation for the null relationship for incumbent spending: incumbents who spend the most are typically much better financed candidates and may be spending as a result of that tougher challenge. At the same time, it is worth noting that incumbent spending per capita is only modestly related to our measure of challenger experience ($r = .17$) and bears no significant relationship to our measure of local conditions, change in the local unemployment rate ($r = .06$).

7. A multivariate model

To get a more reliable sense of the impact of candidates and spending in incumbent races, we incorporate the variables used thus far into a multivariate model that includes a number of important control variables listed earlier: local unemployment, racial diversity, runoff election, ballot type, form of government, and the number of candidates in the contest. The results of the model, which is estimated using OLS regression, are presented in Table 2.⁸ A couple of things bear pointing out before getting into the details of the findings. First, because some number of these races involve more than two candidates, the candidate experience and spending variables are measured as characteristic of the incumbent's main challenger. What this means is that if the incumbent won the race, then challenger experience and spending is taken from the next closest finisher; and if the incumbent didn't win, challenger experience and spending are taken from the challenger who won the race. Second, because we have multiple elections from some cities, the results presented in Table 2 rely on robust standard errors clustered on city.

⁸ We also compared the models in Table 2 to models that focus on different controlled categories. The point of doing this is to see whether the predictors of candidate performance operate in similar ways across different kinds of settings. Because many of the variables in our model are candidate attributes, we decided to focus comparing the results across 3 city/election level variables: local government form (mayor-council/council-manager), ballot type (partisan/non-partisan), and election type (runoff/non-runoff election). By modeling incumbent vote share in different types of settings, we are able to see how the results shown in Table 2 compare to results from more narrow electoral settings. The Online Appendix contains the different model specifications. Overall, the results shown in this series of models are very similar to the results in Table 2. In comparing the model results, we were most interested in seeing how the spending variables performed across the different types of elections, given that our paper primarily focuses on the impact of candidate spending variables. Comfortingly, the spending variables in all the models in the Online Appendix perform very similarly to the spending variables in Table 2. The patterns of statistical significance for the spending variables are the same across all of the models in the online appendix and the models in Table 2. In addition, the sizes of the coefficients are very similar when comparing the results in the online appendix to the results shown in Table 2. We thank an anonymous review for the suggestion to investigate the robustness of our results across different settings.

Table 2 presents multiple models with various combinations of candidate experience and spending variables.⁹ Model 1 provides something of a baseline for judging the importance of campaign variables as it includes only those variables measuring the local context. Three of the baseline variables stand out as being particularly relevant to mayoral elections: unemployment, diversity, and runoff election¹⁰: there is a clear negative effect from local unemployment increasing more than the national rate; cities with higher levels of racial diversity are safer for incumbent candidates, and runoff elections usually signal trouble for incumbents.¹¹ We find it particularly interesting that elevated unemployment rates are most strongly related to incumbent votes in models that do not include spending controls and not at all significant in Models 4 & 6, which control for challenger spending. This is similar to the types of effects found in congressional elections, where economic indicators are more relevant in models that do not include controls for challenger characteristics (Jacobson, 2009). In other words, what appears to be evidence of retrospective voting might well be evidence of strategic decisions by challengers and contributors. Further evidence of the clarifying effect of controlling for challenger characteristics can be found in the runoff coefficients, which are strongest in the absence of variables measuring challenger experience and expenditures, and not at all significant in the models that include challenger spending. Again, this would suggest that the runoff slope is signaling a stronger challenger, who has pushed the incumbent to the runoff.¹² Of all the local contextual variables, racial diversity¹³ is most consistently related to incumbent vote share, indicating that incumbents benefit from diverse populations, though it does

⁹ Although we use incumbent vote share as the dependent throughout this paper, we did investigate what happens to the results when incumbent vote share relative to the closest challenger is used as the dependent variable. The results of the models are shown in Table 1G of the Online Appendix. The results are very similar to those presented in Table 2. All of the spending variables perform just as expected (for example: incumbents win by smaller margins when they face quality challengers and incumbents win by smaller margins as challenger spending increases). The patterns of statistical significance for all of the spending variables included in Table 2 are identical in Table 1G. In short, the results presented in Table 2 are robust to the use of a different operationalization of the dependent variable.

¹⁰ We should note that we only include in our analysis the final election that decided the mayor. For example, if there was a general election and then a runoff, only the runoff election is included in our dataset, since that was the election where the mayor was ultimately selected.

¹¹ One might wonder what the results in Table 2 look like if runoff elections are excluded from the analysis. In short, the results are remarkably similar. The sizes of the coefficients are very similar across the models and the patterns of statistical significance are identical. The results from the models with runoff elections removed are presented in the Online Appendix (Table 1A).

¹² Using the Sobel–Goodman test for mediation in Model 6 shows that challenger spending mediates approximately 70% of the effect of unemployment. The Sobel–Goodman test also indicated that spending mediates about 40% of the effect of runoffs, although we should note that this should be interpreted with caution, given the possible connections between challenger spending, runoffs, and candidate performance.

¹³ We should note here that when population size (logged) is used as an additional measure of diversity, it has no effect on vote share. All other variables remain statistically significant when population is added to the model alongside diversity.

Table 2
Models of mayoral election outcomes (b/s.e.).

	(1)	(2)	(3)	(4)	(5)	(6)
Experienced challenger		-.102 .017*			-.054 .014*	-.049 .013*
Incumbent proportion of spending			.428 .038*		.370 .039*	
Log of incumbent spending per CVAP				.038 .008*		.036 .008*
Log of challenger spending per CVAP				-.081 .008*		-.074 .008*
Local unemployment	-.016 .007*	-.016 .007*	-.006 .005	-.002 .005	-.009 .005*	-.004 .005
Racial diversity	.163 .082*	.199 .071*	.054 .075	.128 .058*	.113 .059*	.129 .055*
Runoff	-.12 .028*	-.078 .03*	-.071 .031*	-.04 .034	-.057 .029*	-.034 .033
Partisan ballot	-.01 .03	-.011 .025	-.019 .024	-.007 .022	-.015 .021	-.005 .02
Mayor-council government	-.011 .02	.002 .019	.001 .017	.02 .018	.009 .016	.02 .018
Number of candidates	-.056 .017*	-.048 .015*	-.033 .01*	-.048 .014*	-.03 .01*	-.045 .013*
Constant	.706 .062*	.697 .054*	.370 .049*	.603 .045*	.393 .047*	.621 .044*
N	236	225	204	197	197	197
Adjusted R ²	.15	.262	.556	.538	.579	.556
RMSE	.146	.132	.107	.106	.102	.104

Note: Estimated with robust standard errors clustered by city.

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

lose significance in Model 3, which includes the incumbent share of total spending.

Moving on to a more detailed discussion of the direct effect of the challenger experience and campaign spending variables, we find several things that comport with our expectations. First, experienced challengers cost incumbent candidates votes, though this effect does not just represent the direct effect of experience, but also the connection between experience and campaign spending. In Model 2, which does not control for campaign spending, the presence of an experienced challenger costs incumbent candidates about ten points. However, in Models 5 & 6, which also control for campaign spending, that effect is cut down to about five points, indicating that a significant share of the impact of experience is the fundraising potential that comes with that experience. It is important to appreciate, however, that even in the presence of controls for spending, candidate experience has a significant effect on vote share.

The spending variables are tested both with and without controlling for challenger experience in Models 3–6. One thing that bears mentioning is that while the effect of challenger experience diminished appreciably when spending variables were added to the model, the spending variables themselves are barely affected by the addition of the challenger experience variable. Models 3 & 5 test the effect of incumbent proportion of total spending and in both cases there is a strong and positive

relationship, confirming that the bivariate pattern found in Fig. 2 withstand the influence of other potentially relevant variables. However, as we discussed earlier, while this variable has a strong statistical impact on votes, it is masking a somewhat more interesting and nuanced spending influence—the distinct effects of incumbent and challenger spending. Models 4 and 6 replace incumbent share of spending with separate variables for per capita

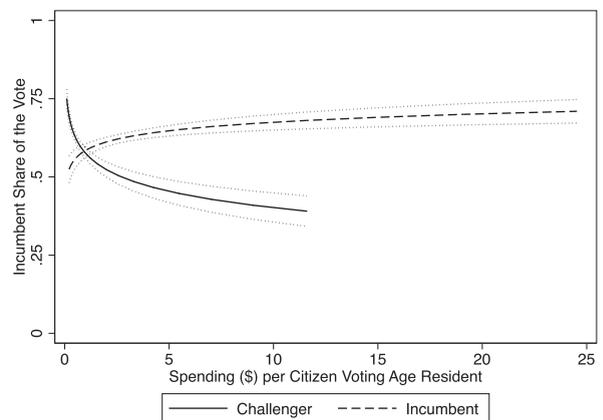


Fig. 5. Predicted incumbent vote share for different levels of challenger and incumbent spending.

incumbent and challenger spending. As anticipated by the earlier bivariate results, challenger spending is more strongly related to incumbent vote share than incumbent spending is. However, in contrast to the bivariate patterns in Fig. 3, there is a positive and significant effect from incumbent spending. These relationships are represented in Fig. 5, which plots the predicted incumbent vote share against both incumbent and challenger spending (in 1980–82 dollars) per citizen voting age resident.¹⁴ Several things are apparent from this figure. First, there are diminishing returns from spending, and those returns diminish at a much faster rate for incumbents than for challengers. While incumbents improve their position somewhat by increasing spending, they are not much better off with high levels of spending than with relatively modest levels. Second, the overall effects across the spending ranges are much stronger for challengers than for incumbents: the change in predicted vote share for incumbents from the lowest to highest values in Fig. 5 is .19 (.52–.71), whereas the change across the range in challenger spending is $-.36$ (.75–.39).

The biggest problem for challengers is not that their spending doesn't have a strong enough impact, but that they just don't raise nearly as much money as incumbents do. This is shown in the truncation of the challenger spending prediction line at a much lower level than the truncation of the incumbent spending line, which ends at the 95th percentile of spending. Indeed, the average level of spending for incumbents' main challengers is just \$.59 dollars per capita, compared to \$2.1 per capita for incumbents. To get a better sense of how unusual but important it is for challengers to match incumbent spending, consider that challengers outspent incumbents in just 34 of the 197 cases in the full models analyzed in Table 1, but challengers went on to win in 19 of those 34 cases. In contrast, challengers won only 15 of the 163 elections in which they were outspent by incumbents.

8. Conclusion

Despite decades of research into the determinants of election outcomes at the national and state level, we know very little about how well theories and models of political outcomes explain local politics (Marschall, 2010; Trounstine, 2009). Absent a few studies of a few election outcomes in a few cities, we really know very little about the ways local elections are similar to or different from elections at other levels of office. In this paper, we extended a well-trod line of research from congressional and state-level elections—the electoral impact of campaign expenditures and candidate characteristics—to a relatively understudied context, urban mayoral elections. While the findings point to many ways in which mayoral elections offer opportunities for election scholars, they also point to the persistence of patterns from other levels of office.

In many ways, mayoral elections are a lot like other elections: there is a tremendous incumbency advantage, one that is overcome only with great effort; campaign spending is closely tied to incumbent vote share but it is challenger rather than incumbent spending that seems to drive outcomes; and challengers are hopelessly outspent. This paper also uncovered patterns of what might be strategic behavior by candidates, similar to behavior that has been observed at other levels of office: experienced non-incumbent candidates are much more likely to emerge in open seat than in incumbent contests, and although those who do emerge in incumbent contests do better than their inexperienced counterparts, they still face very long odds.

One of the benefits of studying mayoral elections is that they occur across varied and interesting contexts: some mayors are relatively powerful, while others share a lot of power with local councils and city managers; while most cities use non-partisan ballots, some use partisan ballots; some mayors represent very diverse populations, while others represent homogeneous populations; some mayors ran in runoff elections, while others did not; and some mayors face reelection at times of relative local prosperity, while others do so at times of economic turmoil. We found that some of these contextual factors are relevant to election outcomes, while other were not. It is particularly interesting to note that two of the factors—runoff elections and local unemployment—were significantly related to vote in the base model but became non-significant when spending variables were introduced. We took this to mean that the effects of unemployment and runoff elections were mediated by spending, in particular the ability of challengers to raise and spend more money in times of economic distress and when vulnerable incumbents are pushed to a runoff. In addition to unemployment and runoff elections, our model shows that incumbents fare better in racially diverse settings than in homogeneous settings. We tend to agree with existing research that suggests that the problems diverse populations pose for assembling winning electoral coalitions should be even more acute for challengers than for incumbents, who have already managed to do so at least once.

Overall, the findings from the paper have provided a great deal of insight into the dynamics of urban mayoral elections, a topic that has received very little attention to date. Although a number of scholars have called for more research on local elections (Trounstine, 2009; Marschall et al., 2011), local elections research still lags behind research at higher levels of government. In large part, this stems from the difficulty of gathering local data, which is resource intensive but, as our analysis illustrates, has the potential to pay great dividends in terms of furthering our understanding of local politics. While this paper represents an attempt to exploit local elections in the United States as a venue for testing general theories about electoral politics, we encourage further efforts in this area. Future research should work to replicate our models in other samples and in other contexts, both of which would help increase the generalizability of these findings. Scholars have only just scratched the surface in learning about local elections and about how local electoral politics compares to politics at other levels of government.

¹⁴ In this figure we plotted the predicted values for spending outcomes that range from the lowest spending values to the values at the 95th percentile of spending. Other variables in the model are set at their mean levels.

Appendix

Since there is currently no large-scale dataset on urban mayoral elections and candidates, we compiled the data for this paper from a variety of sources. Data on election results were collected primarily from city and county websites. Although many cities and counties maintain election results over time, in the cases where we could not find election data from local governments, we used news stories that reported the election results. Data on candidate characteristics were much less centrally located. To identify key candidate characteristics like incumbency status, race, and experience, we used local news stories, media reports, and local government websites. Since many candidates who challenge incumbent mayors come from the city council, city council websites were particularly useful. Many city council websites contain photographs of current council members along with biographies identifying previous accomplishments, past electoral experience, and occupation. When local government websites did not identify the characteristics of interest, we performed Internet searches about the candidates. Typically, our searches included the candidate's name, "mayoral candidate," and the name of the city of interest.

Beyond election results and candidate characteristics, we also gathered data on the amount of money spent by each candidate in a given mayoral election. Much of these data came from city and county elections websites. As one might imagine, there is quite a bit of variation among local governments when it comes to campaign finance reporting and document accessibility. Some cities and counties provide online access to campaign finance reports for all mayoral candidates dating back as far as 10 years, while others provide no online information on mayoral campaign finance. In addition, in some states cities are not required to keep track of local campaign finances—this information is submitted to and stored by state governments. When they were accessible online (from either the city, county, or state), we extracted candidate expenditures from the campaign finance reports provided. In cases when we could not locate campaign finance reports online, we searched local and national news stories to identify campaign spending. Here, we searched for the candidate's name, terms such as "campaign finance," "campaign spending," or "campaign expenditures," and the name of the city of interest. In high profile races, it was often possible to locate new stories that revealed how much each candidate spent. If neither of these options provided us with the data we needed, we contacted the city clerk or the elections official in the city of interest. Often, local officials were able to provide us with electronic or hard copies of the campaign finance reports. It is worth noting that in some cities record retention laws exist (most are between 4 and 7 years), which means that historical data on campaign spending are not always available.

Appendix A. Supplementary material

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.electstud.2014.02.002>.

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