

Evidence of a Local Incumbency Advantage

Incumbents are highly likely to win reelection at all levels of government, but scholars continue to debate the extent to which serving in office has a causal effect on winning. For city council elections it is unclear whether or not we should predict a causal effect at all. City councilors may not regularly seek reelection, and any apparent advantage could be entirely attributable to preexisting qualities rather than incumbency. This article uses a regression discontinuity design to provide evidence that city council incumbents are more likely to run and win their next elections because they served a term in office.

Despite a tremendous amount of research showing that incumbents are very likely to win reelection at all levels of government, estimating the causal effect of serving in office has proven difficult. Scholars studying congressional elections have made progress on this front by locating quasi-experimental circumstances that allow researchers to disaggregate the advantages earned through incumbency from confounding factors like the party's advantage in the electorate, strategic entry, and candidate quality (e.g., Ansolabehere and Snyder 2004; Lee 2008; Monroe and Engstrom 2006). However, largely as a result of data limitations, we lack similar evidence of an incumbency advantage at the local level that avoids the pitfalls inherent in causal inference. In city council elections, it is unclear whether or not we should predict a causal effect at all. City councilors may not regularly seek reelection, and any apparent incumbency advantage may be entirely attributable to preexisting qualities rather than incumbency. I use a regression discontinuity design to provide evidence that city council incumbents are, in fact, more likely to run and win their next elections because they served a term in office.

If an incumbency advantage exists at the local level, the sources are likely to be similar to those at higher levels of government. A number of scholars have provided evidence that city councilors behave in ways that suggest that they are reelection seeking (Clingermyer

and Feiock 1993; Prewitt 1970; Trounstine 2008). Thus, we can expect council members will strive to meet the demands of their constituents and seek resources that will increase their chances of political success in the long run. Incumbents likely benefit from greater name recognition, more sophisticated campaigns, and better access to funds and endorsements that aid them in their reelection pursuits. It is also likely that voters reward governing experience (and casework) in local elections in the same way that they do at higher levels. As a result, serving a term in office may increase the probability of election. Of course, it is also possible that no incumbency advantage exists at the local level. In an environment where political visibility and pay tend to be relatively low, where competition is frequently limited, and where policy-making authority often weak, we might expect few incumbents to seek reelection. Furthermore, we might expect those who do choose to run to have advantages going into the race that are unrelated to incumbency.

Although we know that local incumbents tend to win reelection at high rates (Krebs 1998), we still do not know whether or not the effect is causal. It is difficult to discriminate between these possibilities because of the endogenous nature of the relationships. We should expect that the strongest candidates will also benefit from the best resources in office and future campaigns. So while it may appear that representatives earn their advantage while in office, the results might be nonetheless driven by preexisting qualities. Work by Lee (2001, 2008) uses a regression discontinuity design to provide evidence of an incumbency effect that rules out the effect of preexisting qualities at the congressional level. I modify Lee's design, making it applicable to the range of cases in which partisan labels do not provide a meaningful unit of analysis (e.g., local elections, primary elections, multimember elections). This allows me to show that an incumbency advantage exists for local legislators and to estimate the effect of incumbency on running, winning reelection, and candidate vote share.

In the remainder of the article, I offer a brief overview of the relevant literature, describe regression discontinuity designs in detail, and present results from an analysis of city council elections in four cities over a 70-year period. My results offer evidence of a large causal incumbency advantage in city council elections.

Literature on Incumbency Advantage

It is feasible that incumbency operates differently in city politics than in congressional or even state politics. For instance, elected

officials might not benefit from any incumbency advantage at all. In many cities, municipal legislators have less power than either the appointed city manager or the mayor. The benefits of serving in office can be minimal and professional legislators are a less common occurrence than at other levels of government (the modal city council position is part-time). For highly motivated individuals, election to the city council may be just a stepping stone to higher office. As a result, we might see few city councilors seek reelection at all.

Even if local incumbents seek and win reelection at high rates, it may be reasonable to assume that most of the advantage is actually a selection effect; that incumbents are *ex ante* higher quality politicians than challengers (Jacobson and Kernell 1981). This effect could be stronger at the local level than at other levels of government for two reasons. First, there may be differences in the attractiveness of the office (e.g., Berry, Berkman, and Schneiderman 2000). If few people desire to serve on city councils and many low-quality candidates are attracted to the race, then perhaps most people who win local elections represent Zaller's (1998) "prize fighters"—the best available candidates who "tend to win and retain their strength in subsequent contests" (Erikson and Wright 2001, 78). Secondly, the returns to experience at the local level could be relatively minimal. In contrast to the congressional arena, it is possible that time served as an elected official is not seen as a particularly advantageous quality in city council candidates. Perhaps responding to constituent requests at the local level requires little expertise. If this is the case, then there may be no causal link between incumbency and reelection; office holders and challengers might simply be incomparable types of candidates. Existing literature on city council elections largely supports this argument. We know that city council candidates are more likely to win with higher campaign expenditures (Fuchs, Adler, and Mitchell 2000; Krebs 1998; Krebs and Pelissero 2001; Lewis, Gierzynski, and Kleppner 1995; Lieske 1989), endorsements from local media, political organizations, and parties (Davidson and Fraga 1988; Gierzynski and Breaux 1993; Krebs 1998; Stein and Fleischmann 1987), and certain educational and occupational credentials such as having graduated from an Ivy League school (Lieske 1989) or possessing a law degree (Hamilton 1978). If incumbents dominate challengers on these dimensions prior to having been elected, the incumbency effect will appear large even if officials receive no benefit from serving in office.

On the other hand, city legislators may become stronger candidates after having won their first election (as is the case at higher levels

of government), indicating a causal effect of incumbency. Voters might value incumbents' governing experience and/or decisions they make with regard to policy and service provision, thereby advantaging incumbents at the polls (Cain, Ferejohn, and Fiorina 1987; Cox and Morgenstern 1993; Fenno 1978; Fiorina 1989; Herrera and Yawn 1999). Particularly if the candidate pool is thin, an incumbent with a strong record of service is likely to prevent the emergence of quality challengers, further enhancing the probability of victory (Butler 2009; Carson, Engstrom, and Roberts 2007; Cox and Katz 1996, 2002; Gordon, Huber, and Landa 2007; Stone, Maisel, and Maestas 2004). Additionally, local incumbents are likely to benefit from much lower levels of information regarding their performance or their opponents' platforms (Trounstone 2008). If voters use incumbency as a heuristic for quality, then the local incumbency advantage could be quite large. While some cities (particularly older cities in the Northeast and Midwest) have strong party organizations, in many city elections parties play a less important role. Carson, Ferejohn, and Fiorina (2007) provide evidence that strong parties tended to increase competition in nineteenth-century Congressional elections. This could indicate that today's largely nonpartisan local elections should witness a powerful incumbency advantage. Indeed scholars have shown that prior office holding experience and name recognition are correlated with local electoral success (Krebs 1998; Lieske 1989; Merritt 1977). Thus, we have good reasons to expect that an incumbency advantage independent of selection may exist at the local level.

Applying a RDD to the Study of Incumbency

Scholars employ a number of different methods for studying the incumbency advantage in state and federal contests, most of which pose problems for identifying a causal effect at the local level. Some measures, like estimations of the party's vote share in open versus incumbent-defended seats (e.g., Gelman and King 1990) or the sophomore surge (e.g., Ansolabehere et al. 2007), do a poor job of accounting for selection effects. Others, like the approach used by Cox and Katz (1996, 2002) and Carson, Engstrom, and Roberts (2007) which explicitly model party and candidate quality advantages, are unusable in many city council races because most local elections (~75%) are nonpartisan (and many others are dominated by a single party). This makes it nearly impossible to track or compare coalitional performance over time. Recent work by Lee (2008), which uses the structure of elections to approximate an experimental setting, provides two

advantages to the study of local incumbency. First, by employing a regression discontinuity design it offers even stronger causal evidence of an incumbency effect independent of selection. Second, it can be modified to apply to settings in which partisan labels do not meaningfully distinguish between competitors.

A regression discontinuity design (RDD) uses cutoff scores along a continuous dimension to assign individuals to different pretest categories which are then used to determine the effect of being placed in the category on some outcome of interest. Scholars have shown that under certain conditions this design can offer causal inferences equivalent to the assignment of individuals into treatment and control groups in a randomized experiment (Hahn, Todd, and Van der Klaauw 2001; Lee 2008; Porter 2003). As an example, imagine that kindergarteners who score above a particular threshold on an IQ test (say 150) are placed into a gifted education track for elementary school. A researcher wants to know the effect of the gifted track on future achievement outcomes. When the children are in fifth grade she compares standardized test scores for the children in the gifted track with those not in the track. If the researcher finds that children in the gifted track have higher test scores than those who were not in the track she might conclude that the special program had a causal effect on achievement. But the obvious alternative explanation is that the same factors that led the children to be placed in the gifted track in the first place (e.g., higher IQ) also produce higher achievement levels. There may be no causal effect of the program.

To disentangle these potential explanations, the researcher might invoke a RDD. To use a RDD, the researcher would compare the achievement outcomes of students whose IQ narrowly placed them in the gifted track (IQ between 150 and 152) with those whose IQ narrowly denied them entry (IQ between 147 and 149). The students whose IQs fall between 147 and 149 act as the control group and the students whose IQs fall between 150 and 152 represent the treatment group. If the researcher finds a difference in mean achievement outcomes between these two groups, she has support for her hypothesis that the gifted learning-track effect is causal.

In using this design, the researcher is assuming that the individuals marginally below the threshold identify the true counterfactual for those marginally above it. In other words, the mean achievement outcome of the kids whose IQs are between 147 and 149 represents what the mean achievement outcome *would be* for the kids whose IQs are between 150 and 152 if the gifted learning track didn't exist. The

problem is that there is (frequently) no way to empirically assess the plausibility of this statement, and furthermore, it leaves no room for IQ to actually affect achievement outcomes.

However, Lee (2008) formally shows that as long as there is some element of randomness to the score on the continuous dimension at the threshold (e.g., children do not have precise control over their IQ score), then the gap in outcomes really will represent the causal effect of the treatment even if the score that determines treatment (e.g., IQ) plays a role in determining the outcome of interest (fifth-grade achievement). One useful implication of his result is that *all* pretreatment characteristics should have the same distribution on either side of the threshold (just like they would in a randomized experiment). For instance, the group of students just above the threshold should have the same proportion of boys as the group just below the threshold. Perhaps more importantly, measures of ability (like kindergarten test scores) of the students on either side of the threshold should be statistically similar prior to placement in the gifted track. By analyzing the degree to which pretreatment characteristics reveal any discontinuity at the threshold, the researcher can determine whether or not the RDD is valid.

Applying a RDD to the study of incumbency at the local level is straightforward. It is well known that incumbents have higher reelection rates than nonincumbents, but the cause of this difference could be attributed entirely to the preexisting quality of the candidates. The factors that led the incumbent to win the first election are also likely to advantage the candidate in future elections. Using a regression discontinuity design allows us to sort out the causal effect of incumbency from the effect of candidate quality.

In this analysis, the continuous dimension used to place individuals into control and treatment groups is the vote margin in election t and the threshold determining treatment is zero. Candidates with a positive vote margin win the election and candidates with a negative vote margin lose (winning election t , and serving a term in office is the treatment). The treatment is a deterministic function of the candidate's vote margin. Winning/serving occurs if and only if the vote margin is greater than zero, just like the children were placed in the gifted track if and only if their IQ was 150 or higher. The future outcome of interest is performance in the next election (election $t + 1$). I want to know the effect of winning election t (e.g., incumbency) on the probability of running and winning election $t + 1$. To do so, I compare the average outcomes in election $t + 1$ for the candidates who barely won election t with the outcomes for the candidates who barely lost election t . By

considering the decision to run as part of the effect of incumbency, I estimate reelection and vote margins for winners and losers of close races. I use a vote margin of $\pm 5\%$ to represent close races (similar to Lee 2008). As was the case with the gifted children, the candidates who barely lose must represent what would have happened to the candidates who barely win if they hadn't won. This means that candidates must not have the ability to sort precisely around the winning threshold.

In other words, the validity of the RDD rests on the fact that conditional on the individual candidate's choices and characteristics, the density of the vote margin is continuous at the threshold. One way this condition could be met is if vote margin is composed of both systematic components that are within the candidates' control (e.g., candidate attributes/actions) and an exogenous random component with a continuous density (e.g., weather, see Hansford and Gomez 2010). However, if candidates are able to produce a precise, predetermined vote margin it is unlikely that this variable would be continuous at the threshold because we'd expect candidates in danger of losing a close race to produce just enough votes to put them above the threshold. But as long as localized randomization can be expected to occur at a vote margin of zero, in very close elections there will be no meaningful difference in the quality of the winning and losing candidates because the assignment of winning status is essentially random. If this assignment is validated by showing no meaningful preexisting differences between the treatment and control groups (bare winners and bare losers of election t), then we can attribute any differences in outcomes (performance in election $t + 1$) to the treatment. In the incumbency setting this means that at the time of the first election bare winners and bare losers should be statistically identical on all pretreatment characteristics, particularly those like political experience that are likely to affect winning in election t and $t + 1$.

If candidates who barely win elections are similar to candidates who barely lose elections with respect to quality, when it comes time for the next election the only difference between them should be the potential advantages they accrued while in office. Alternatively, if the incumbency advantage is really a selection effect only vote margin should affect outcomes in the next election, not the candidates' winner/loser status. If we find incumbency status to have an effect on the probability of running and of winning in the next election and if we can show that bare winners are not significantly more qualified than bare losers, then we have support for a causal incumbency effect.

To provide evidence of an incumbency effect that is not wholly attributable to selection, I analyze data that I collected on city council elections between 1915 and 1985 in Austin, Dallas, San Antonio, and San Jose.¹ Obviously these four cities are not a representative sample of U.S. cities and were chosen on the basis of available election returns for a considerable time span. They are all classic “reform” cities that had city manager charters, nonpartisan, at-large city council elections for most of the time series, and they are all located in the Southwest. However, these cities do encapsulate significant diversity. Their populations range from 21,500 to 1.3 million. Between 3.7 and 38% of their populations are people of color and the percentage of renters ranges between 36 and 65%. All four cities grew tremendously over the course of the twentieth century, generating a variety of different political environments. An additional benefit of these cities is that they provide a “hard test” of a local incumbency advantage. During this time period a great deal of power in city government resided with the appointed, professional city manager, potentially making reelection seeking a less attractive or achievable endeavor.² If we find incumbency matters in such a setting, we can be confident that a local incumbency advantage exists. Nonetheless, the conclusions in this article may be limited by this sample.

The structure of local council elections poses a number of econometric challenges in estimating incumbency effects. First, in all four cities a candidate could be elected outright in the general election if he/she won enough votes. But when the threshold was not met, candidates are forced into run-off elections. The observations I use to calculate vote share and vote margin represent the candidates’ final election whether it was the general or the run-off.³

Second, as explained above, because these city council elections are nonpartisan, I am unable to estimate the effect at the unit (party) level as Lee (2008) and others have done. Rather, my unit of analysis is the candidate in a municipal election (whereas Lee’s is the congressional district). This is both a benefit and a limitation. On the positive side, it means that the estimation of the incumbency advantage is at the level of the candidate instead of at the level of the party. This is a better conceptual fit for the way the term is used in the literature. However, the lack of partisan labels poses a measurement problem when estimating the effect of winning election t on winning election $t + 1$ (although there is no problem estimating the effect on *running* in election $t + 1$), because not all candidates from election t choose to run in election $t + 1$. As a result, we are unable to estimate

the vote share or probability of winning for candidates who choose not to run.

We wouldn't worry about candidate drop-out if the decision to run were unrelated to the outcome we are interested in measuring (probability of victory in election $t + 1$). If this were the case, we could continue to assume that there were no systematic differences between the treatment and control groups, and we could convincingly measure the effect of victory in election t on victory in election $t + 1$. But it is highly likely that the reasons candidates choose not to run are correlated with their probability of winning election $t + 1$, thus producing biased estimates of the effect of winning election t .⁴ For example, we might overstate the effect of incumbency on the probability of victory if incumbents who are likely to lose strategically retire. Alternatively, we might understate the effect of incumbency if the most popular candidates systematically leave to pursue elected offices at higher levels of government. Because we do not know all of the factors that contribute to the decision to run, it is not possible to estimate the reduced form effect of incumbency on winning election $t + 1$ *conditional on running*.

In essence, the estimated effect of winning election t on the probability of victory in election $t + 1$ includes two components—the candidate's decision to run and the effect of incumbency on winning. So, the measure of winning in election $t + 1$ must combine information on whether or not the candidate decided to run and how well he or she performed in election $t + 1$ (McConnell, Stuart, and Devaney 2008). This is easy to do by coding candidates who choose not to run as zeroes. Thus, *Winning* election $t + 1$ equals one if the candidate wins the next election and equals zero if the candidate either did not run or if he or she ran and lost. The measure of *Vote Share* uses the same structure. This variable is equal to the candidate's vote share if he or she ran and equal to zero if she did not run. This strategy implies that a candidate's decision to run represents part of the incumbency advantage, making the estimation of the effect of incumbency on the joint outcome of running and winning meaningful.

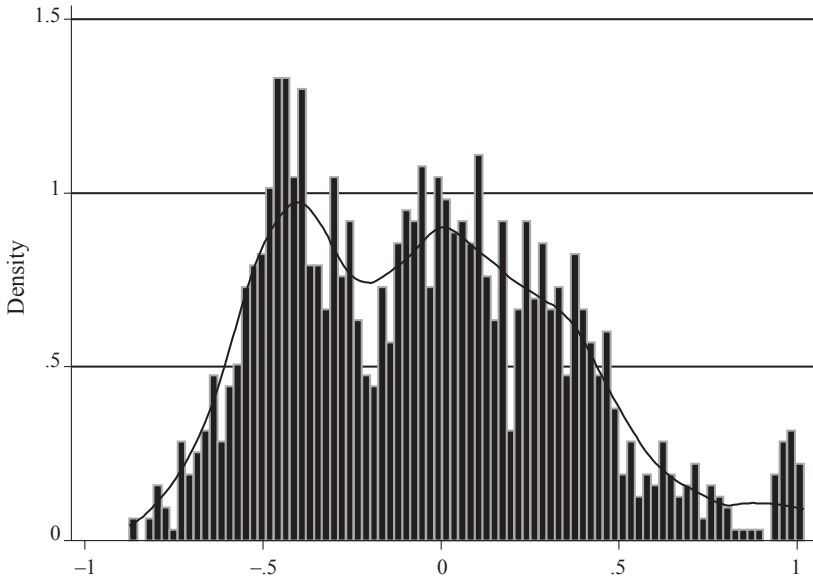
I analyze three related dependent variables. First, I determine the effect of incumbency on candidates' probability of *Running* in election $t + 1$.⁵ This is a dummy variable coded 1 if the candidate ran and 0 if she did not. Next, I determine the effect on candidates' probability of both running and *Winning* in election $t + 1$. This is also a dummy variable (a subset of running) coded 1 if the candidate ran and won, and coded 0 otherwise. Finally, I determine the effect

of incumbency on the candidate's *Vote Share* in the next election. This is a continuous variable and is set equal to 0 if the candidate did not run in election $t + 1$.⁶ To make the coding of all of the variables clear, Table A1 shows a sample of nine elections from San Jose for the years 1918–30.

My models include only three independent variables: the candidate's *Victory Status* in election t , the candidate's *Vote Margin* in election t , and the interaction between these two variables. Victory status measures the advantages accrued from holding office while vote margin roughly captures relative candidate quality (e.g., factors within the candidates' control as well as an exogenous, random component). Victory status is coded 1 if the candidate wins the election and coded 0 if he/she loses. Vote margin is a continuous variable calculated for each candidate depending on victory status. For winners, it is the candidate's percentage of the vote minus the percentage of the vote won by the losing candidate with the highest total. For losers, it is the opposite; the candidate's percentage of the vote minus the percentage of the vote won by the winning candidate with the lowest percentage. This measure allows me to compare estimates in multicandidate races to those with only two candidates. Summary statistics for all variables are shown in Appendix Table A3. As explained above, for the RDD to work vote margin must have a continuous density at the threshold of 0. Figure 1 reveals that this appears to be the case in these data. The figure presents a histogram of vote margin overlaid with a kernel-density plot.⁷ It reveals no discontinuity at 0.

Table 1 presents the results of my RD analysis. In the top panel of the table, I analyze the effect of incumbency for council candidates whose vote margin is $\pm 5\%$. In the bottom panel, I show the results for the entire sample of candidates using a third-order polynomial in vote margin interacted with victory status (as recommended by Porter 2003). The quasi-experimental design of the study should rule out alternative explanations for the incumbency advantage, but I conduct a number of additional tests to be certain that this is the case. Since the demographics and economies of these cities changed a great deal over the course of the twentieth century, I add decade fixed effects to account for the possibility that reelection is driven by changes over time rather than serving a term in office. I also add city fixed effects, indicators noting whether the election was a general with no run-off, and whether or not the election was citywide (at-large). These results are shown in Appendix Table A2.⁸ Finally, I analyze the data for elections prior to 1950 separately from post-1950 elections.⁹ The

FIGURE 1
Vote Margin Histogram with Kernel Density Estimate



substantive conclusions do not change with these alternative specifications, so only the first- and third-order regression results with no controls are presented below in Table 1.

The results are clear—the effect of winning in election t has a positive and significant effect on the probability of running, winning, and vote share in election $t + 1$. The graphical representation of these results, shown in Figures 2, 3, and 4, makes these effects especially clear.

The dots in these figures represent the unconditional (actual) mean of running or winning in election $t + 1$ for intervals of vote margin which are 0.02 wide. Losers are represented by points to the left of zero and winners are represented by points to the right. The lines represent predicted values from the polynomial regressions presented in the bottom panel of Table 1. The jump in predicted probability of running and winning and in vote share in election $t + 1$ for candidates who won versus those who lost election t represents the estimated effect of incumbency. At the threshold (vote margin set to 0), winning election t increases the probability of running in the next election by an estimated 39 percentage points and the combined

TABLE 1
Incumbent Advantage in City Council Elections, 1915–85

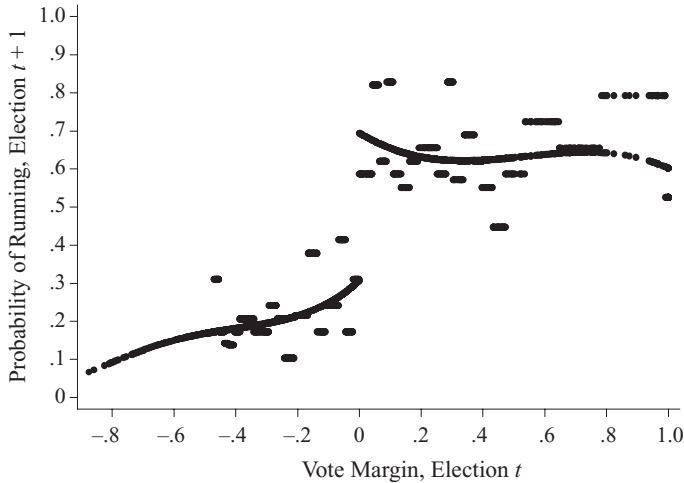
<i>Candidates Margin < .05</i>						
	Probability of Running Election $t + 1$		Probability of Running and Winning Election $t + 1$		Vote Share Election $t + 1$	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Victory, Election t	1.194*	0.716	2.361**	1.013	0.218**	0.095
Margin, Election t	8.636	17.774	-17.902	22.361	0.551	1.828
Margin* Victory	5.486	22.745	7.160	22.390	-0.109	2.551
Constant	-0.891**	0.530	-2.137**	0.767	0.144**	0.057
N	148		148		148	
Pseudo R ² /R ²	0.139		0.102		0.167	

<i>All Candidates</i>						
	Probability of Running Election $t + 1$		Probability of Running and Winning Election $t + 1$		Vote Share Election $t + 1$	
	Coefficient	SE	Coefficient	SE	Coefficient	SE
Victory, Election t	1.631**	0.378	1.619**	0.501	0.221**	0.053
Margin, Election t	3.631	3.473	4.314	5.350	0.426	0.284
Margin* Victory	-5.875	4.473	-4.771	5.785	-0.290	0.520
Margin ² , Election t	7.229	10.684	-2.711	16.604	0.535	0.768
Margin ² * Victory	-2.385	12.496	5.380	17.702	-0.456	1.343
Margin ³ , Election t	6.239	9.061	-7.175	13.459	0.230	0.587
Margin ³ * Victory	-9.245	10.205	5.285	14.201	0.363	0.100
Constant	-0.813**	0.291	-1.665**	0.392	0.149**	0.029
N	1445		1445		1445	
Pseudo R ² /R ²	0.158		0.258		0.299	

Note: Probability of running and winning analyses are logit regressions; vote share analysis is an OLS regression; Robust standard errors clustered by election. The regression discontinuity design suggests that if the incumbency effect were attributable solely to selection then we ought to see no substantive or significant effect on “victory”. The interaction effect “margin*victory” is included to allow the vote margin to affect winners and losers differently.

* $p < .10$; ** $p < .05$.

FIGURE 2
Probability of Running, Election $t + 1$

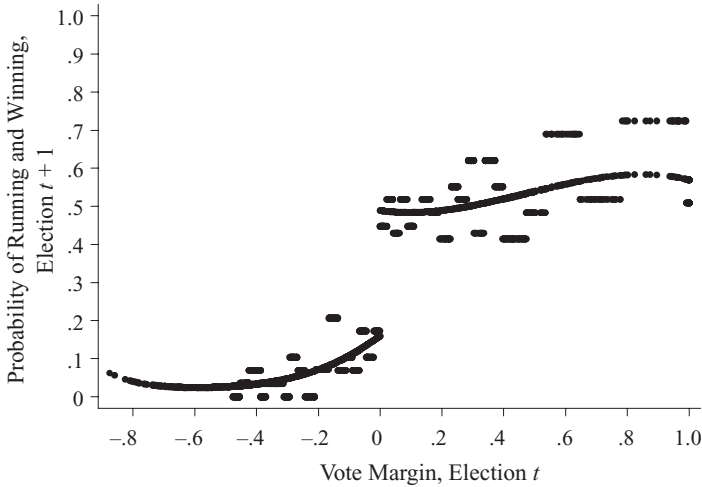


Note: Dots represent mean values for intervals of vote margin which are .02 wide. Losers are represented by points to the left of zero and winners by points to the right. Lines represent predicted values from regressing outcome of interest on a 3d order polynomial in the vote margin over entire sample (regressions shown in Table 2).

probability of running and winning by about 32 points. Incumbency increases expected total vote share in the next election by about 22 percentage points. The effect of vote share conditional on running is approximately 10 percentage points. This estimate is supported by an analysis of the sophomore surge; the increase in an incumbent's vote share in her first reelection (the difference between the vote share in election $t + 1$ and election t for 1st term incumbents) after controlling for the number of candidates per seat. I find that incumbent councilors increase their vote share by about 10 percentage points in the next election. Incumbents are also very likely to win reelection. Council incumbents have an 82% probability of winning compared to a 32% probability for nonincumbent candidates.

We would expect to see such a large difference in reelection probabilities if winners are significantly better candidates than losers and elections are an adequate mechanism for selecting the highest quality candidate. That is, in order to have confidence that the incumbency advantage is not purely a selection effect it must be the case that the bare winners and bare losers of election t are similar (at time t) on

FIGURE 3
Probability of Running and Winning, Election $t + 1$

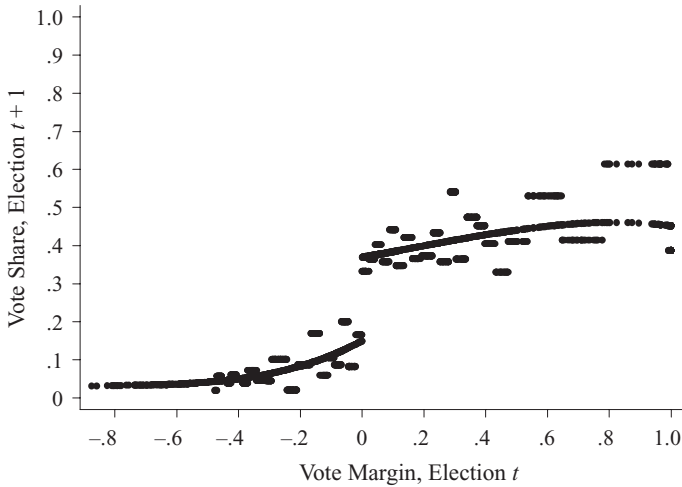


Note: Dots represent mean values for intervals of vote margin which are .02 wide. Losers are represented by points to the left of zero and winners by points to the right. Lines represent predicted values from regressing outcome of interest on a 3d order polynomial in the vote margin over entire sample (regressions shown in Table 2).

all pretreatment characteristics, especially those that might influence the outcome of election t and election $t + 1$, like candidate quality. If the RDD is to be believed these characteristics should reveal no discontinuity at the threshold.

The most straightforward way to verify the validity of the RDD is to evaluate the average characteristics of individuals on either side of the threshold. Table 2 compares winners and losers on the three measures analyzed in Table 1 representing the incumbency advantage followed by two measures of candidate quality as a validity test. It would be best if I had measures of all of the relevant indicators of candidate quality such as campaign funds/skill, endorsements, and candidate credentials. These data are not available. Instead I compare winners and losers on two available measures of quality: *Campaign Experience* (the number of previous elections the candidate entered as of election t) and *Governing Experience* (number of previous terms the candidate served of election t). Fortunately, analyses of Congressional candidates have determined that detailed measures of quality tend to perform no better than

FIGURE 4
Vote Share, Election $t + 1$



Note: Dots represent mean values for intervals of vote margin which are .02 wide. Losers are represented by points to the left of zero and winners by points to the right. Lines represent predicted values from regressing outcome of interest on a 3d order polynomial in the vote margin over entire sample (regressions shown in Table 2).

rough indicators like prior office holding experience (e.g., Jacobson 2004).

The first two columns of Table 2 show the data for all of the candidates in the data set, and the next two columns show the results for losers and winners whose vote margin fell between $-/+50\%$. The final two columns compare the bare losers and bare winners (vote margin between $-/+5\%$). The top three rows reveal persistent significant differences between the proportion of bare winners and bare losers who run and win reelection, while the bottom two rows show that these differences cannot be explained by differences in initial quality.

The data in the first two columns of the bottom rows reveal that on average winners of city council elections are significantly more experienced than losers. This is evidence that campaign and governing experience are plausible indicators of candidate quality; as of election t winners had much more experience than losers. A small amount of the difference between winners and losers disappears when looking at candidates whose vote margins were $+/- 50\%$ and *all* of the difference

TABLE 2
Incumbency Advantage and Validity Test, City Council Elections,
1915–85

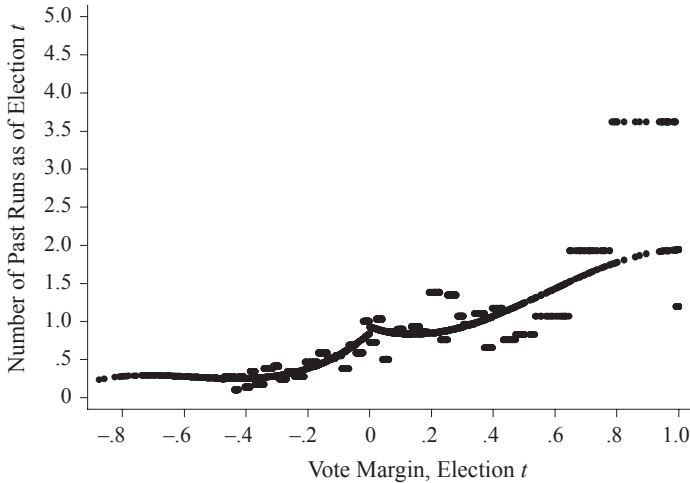
	All		Margin < .5		Margin < .05	
	Losers	Winners	Losers	Winners	Losers	Winners
Incumbency Advantage						
Proportion Running Election $t + 1$	0.198	0.637	0.211	0.639	0.247	0.667
Standard Error	0.014	0.019	0.016	0.021	0.051	0.055
Standard Deviation	0.399	0.481	0.408	0.481	0.434	0.475
Proportion Running and Winning Election $t + 1$	0.059	0.514	0.065	0.496	0.164	0.480
Standard Error	0.008	0.019	0.010	0.022	0.044	0.058
Standard Deviation	0.235	0.500	0.247	0.500	0.373	0.503
Vote Share Election $t + 1$	0.069	0.414	0.076	0.402	0.129	0.375
Standard Error	0.006	0.014	0.007	0.015	0.028	0.036
Standard Deviation	0.164	0.356	0.172	0.348	0.236	0.312
Validity Test						
Campaign Experience Election t	0.367	1.118	0.389	0.918	0.822	0.813
Standard Error	0.031	0.060	0.037	0.061	0.205	0.160
Standard Deviation	0.876	1.538	0.919	1.375	1.751	1.382
Governing Experience Election t	0.208	0.962	0.237	0.769	0.671	0.653
Standard Error	0.027	0.056	0.032	0.057	0.203	0.143
Standard Deviation	0.765	1.436	0.811	1.278	1.732	1.236
N	782	663	630	510	73	75

goes away when looking at candidates whose vote margins were $\pm 5\%$. The last two columns demonstrate that there are no significant differences in quality between bare winners and bare losers of city council elections.

These patterns can be seen visually in Figures 5 and 6 where there is no discontinuity in the average quality of candidates on either side of the winning threshold. Because bare winners are the opponents of bare losers this also means that bare winners and bare losers face similarly experienced candidates in election t .

Adding these measures of quality to the models presented in Table 1 does not change the effect of incumbency on running and winning the next election (results shown in appendix Table A2). Thus, we can be confident that the RDD is picking up real incumbency effects. Winning a close race makes a candidate much more likely to run and win again.

FIGURE 5
City Councilors Past Campaign Experience as of Election t



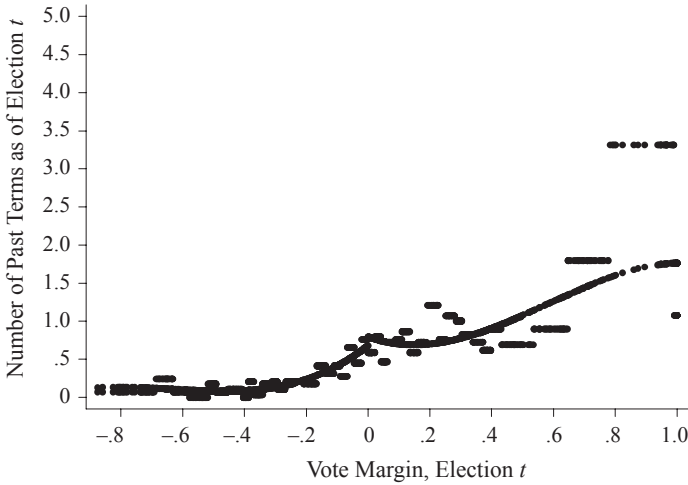
Note: Dots represent mean values for intervals of vote margin which are .02 wide. Losers are represented by points to the left of zero and winners by points to the right. Lines represent predicted values from regressing outcome of interest on a 3d order polynomial in the vote margin over entire sample.

Conclusion

Our understanding of municipal electoral patterns has lagged behind our knowledge of state and national contests. This is unfortunate given that collectively, local officials comprise the vast majority of the legislators who represent us. There are reasons to think that local elections may work differently than national level contests. The positions may be less desirable, may have higher turnover and less professionalism, and elections are likely to be lower information and lower turnout affairs. It is unclear whether or not we should predict a local incumbency advantage, and existing methods of studying incumbency are not usable in many city settings. The evidence provided here indicates that city council incumbents are, in fact, more likely to run and win in their next elections because they served a term in office. This is good news for scholars of elections. The fact that incumbency offers similar benefits at the local level opens up a new realm for testing theories about the factors that contribute to the advantage.

I have shown that incumbents are about 39 percentage points more likely to run and about 32 points more likely to run and win.

FIGURE 6
City Councilors Past Governing Experience as of Election t



Note: Dots represent mean values for intervals of vote margin which are .02 wide. Losers are represented by points to the left of zero and winners by points to the right. Lines represent predicted values from regressing outcome of interest on a 3d order polynomial in the vote margin over entire sample.

These results are interesting when compared to Lee's (2001) estimates for congressional candidates. He reports that incumbency increases the probability of running by 45 percentage points and the probability of running and winning by about 43 points. So compared to congressional representatives, local incumbents are somewhat less likely to both run and win. This could be evidence that city councilors are generally less interested in serving as career politicians, but additional research is needed to explain the differences. Nonetheless, in both settings, incumbency appears to have a strong causal effect on reelection.

However, this is not to say that we have no support for selection—rather that selection is not the only factor that makes incumbents likely to win reelection. It must certainly be true that some candidates who win elections *are* prize fighters; the best candidates among the pool of available candidates. We would expect these high-quality candidates to run in and win subsequent elections even if they gain no advantage from serving in office. On the other hand, it is likely to also be the case (particularly at the local level), that some candidates who run have no chance at winning any election. So what is the effect

of incumbency for candidates more generally? Lee (2008) suggests that the treatment effect in a RDD should be considered a weighted treatment effect for the entire population where the weights are the probability that an individual draws a score (e.g., vote margin) near the threshold (0 in this case). For a candidate who has no chance at all of barely winning or barely losing election t either because she is such an amazing candidate or such a terrible candidate, there may be no incumbency effect at all. But among candidates who are very likely to barely win or lose, incumbency should produce the effect revealed by this analysis. The probability of drawing a margin close to the threshold in a given election can vary for any individual candidate (even Richard J. Daley had close elections) and so the treatment effect may not be constant even for a particular person. Thus what we can say is that for candidates likely to draw a vote margin close to zero (approximately 10% of candidates in my data), incumbency offers real advantages.

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APPENDIX

TABLE A1
Sample Data from San Jose, California, 1918–30

Year	Candidate	Election	Vote Share, Election	Vote Margin, t Election	Won, t Election	Run, Election	Win, Election	Vote Share, Election	Term Length
						$t + 1$	$t + 1$	$t + 1$	
1918	Carstena	1	0.101	-0.538	0	0	0	0.000	6
1918	McLaurin	1	0.259	-0.380	0	0	0	0.000	6
1918	Smith	1	0.535	-0.103	0	0	0	0.000	6
1918	Arnerich	1	0.639	0.103	1	1	0	0.426	6
1918	Williams	1	0.707	0.172	1	0	0	0.000	6
1918	Jayet	1	0.759	0.224	1	0	0	0.000	6
1920	Bressani	2	0.089	-0.510	0	0	0	0.000	6
1920	Stopplesworth	2	0.575	-0.024	0	1	0	0.487	6
1920	Denegri	2	0.599	0.024	1	1	1	0.516	6
1920	Brooks	2	0.737	0.163	1	1	1	0.592	6
1920	Long	3	0.484	-0.033	0	0	0	0.000	4
1920	Bigger	3	0.516	0.033	1	1	1	0.574	4
1922	Deselms	4	0.479	-0.014	0	0	0	0.000	6
1922	Stopplesworth	4	0.487	-0.006	0	0	0	0.000	6
1922	Gray	4	0.493	0.006	1	0	0	0.158	6
1922	Irons	4	0.541	0.054	1	1	0	0.457	6
1924	Bennett	5	0.572	0.170	1	0	0	0.000	6
1924	Doerr	5	0.611	0.209	1	1	1	0.616	6
1924	Arnerich	5	0.426	-0.148	0	0	0	0.000	6
1924	Bigger	5	0.574	0.148	1	0	0	0.000	6
1926	Benson	6	0.484	-0.031	0	0	0	0.000	6
1926	Denegri	6	0.516	0.031	1	0	0	0.000	6
1926	Brooks	6	0.592	0.376	1	1	1	0.531	6
1928	Nash	7	0.480	-0.040	0	1	1	0.681	2
1928	Meyer	7	0.520	0.040	1	1	1	0.680	2
1928	Irons	8	0.457	-0.070	0	0	0	0.000	6
1928	Biebrach	8	0.527	0.070	1	1	1	0.655	6
1928	Bishop	8	0.668	0.211	1	1	1	0.710	6
1930	Fellom	9	0.440	-0.176	0	0	0	0.000	6
1930	Harding	9	0.542	-0.074	0	0	0	0.000	6
1930	Doerr	9	0.616	0.074	1	1	1	0.672	6
1930	Meyer	9	0.680	0.138	1	1	0	0.644	6
1930	Nash	9	0.681	0.139	1	0	0	0.000	6

TABLE A2
Incumbent Advantage in City Council Elections 1915–85,
including Controls and Fixed Effects

<i>Candidates Margin < .05</i>						
Variable	Probability of Running Election $t + 1$		Probability of Running and Winning Election $t + 1$		Vote Share Election $t + 1$	
	Coefficient	St Err	Coefficient	St Err	Coefficient	St Err
Victory, Election t	1.396†	0.907	2.525**	1.152	0.167**	0.011
Margin, Election t	-0.254	19.759	-21.277	23.923	0.401	0.427
Margin * Victory	27.993	25.617	15.824	22.286	1.133**	0.471
Prior Runs	-0.333*	0.192	-0.177	0.186	0.001	0.002
At Large	-1.423*	0.859	-0.981†	0.749	-0.014	0.012
No Run-off	-0.049	0.465	0.581	0.506	-0.017**	0.007
Constant	-0.812	0.898	-2.342**	0.993	0.148**	0.011
N	148		148		148	
Pseudo R ² /R ²	0.233		0.189		0.913	
<i>All Candidates</i>						
Variable	Probability of Running Election $t + 1$		Probability of Running and Winning Election $t + 1$		Vote Share Election $t + 1$	
	Coefficient	St Err	Coefficient	St Err	Coefficient	St Err
Victory, Election t	1.627**	0.392	1.639**	0.529	0.216**	0.008
Margin, Election t	4.985†	3.622	5.274	5.556	0.380**	0.061
Margin * Victory	-6.122†	4.744	-3.595	6.193	-0.245**	0.106
Margin ² , Election t	12.391	11.195	1.009	17.407	0.420**	0.161
Margin ² * Victory	-11.709	13.211	-4.969	18.784	-0.214	0.271
Margin ³ , Election t	11.925	9.701	-2.656	14.473	0.120	0.124
Margin ³ * Victory	-11.707	10.764	5.436	15.323	-0.385*	0.209
Prior Runs	-0.031	0.053	-0.131**	0.061	0.005**	0.002
At Large	-0.698**	0.248	-0.999**	0.281	-0.006	0.005
No Run-off	0.139	0.196	0.347†	0.216	-0.012**	0.004
Constant	-0.755**	0.353	-1.514**	0.457	0.148	0.008
N	1445		1445		1445	
Pseudo R ² /R ²	0.191		0.300		0.931	

Note: Probability of running and winning analyses are logit regressions; vote-share analysis is an OLS regression; Robust standard errors clustered by election; city and decade fixed effects are included but not presented.

† $p < .10$, one-tailed; * $p < .10$; ** $p < .05$.

TABLE A3
Summary Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
<i>Candidates /Margin/ < .05</i>					
Run Election $t + 1$	148	0.459460	0.500046	0	1
Run and Win Election $t + 1$	148	0.324324	0.469711	0	1
Vote-Share Election $t + 1$	148	0.253335	0.118191	0.082877	0.402418
Victory, Election t	148	0.506757	0.501652	0	1
Margin, Election t	148	0.001111	0.032451	-0.05486	0.054857
Margin ² , Election t	148	0.001047	0.000971	3.79E-07	0.003009
Margin ³ , Election t	148	2.50E-06	6.82E-05	-0.00017	0.000165
Prior Runs	148	0.817568	1.569424	0	10
Prior Terms	148	0.662162	1.496272	0	10
At Large	148	0.851351	0.356950	0	1
General, No Run-off	148	0.358108	0.481072	0	1
<i>All Candidates</i>					
Run Election $t + 1$	1445	0.399308	0.489926	0	1
Run and Win Election $t + 1$	1445	0.267820	0.442977	0	1
Vote-Share Election $t + 1$	1445	0.227596	0.181223	0.014873	0.613988
Victory, Election t	1445	0.458824	0.498474	0	1
Margin, Election t	1445	-0.014920	0.428356	-0.8748	1
Margin ² , Election t	1445	0.183584	0.237186	3.79E-07	1
Margin ³ , Election t	1445	0.034270	0.254343	-0.66945	1
Prior Runs	1445	0.711419	1.280760	0	10
Prior Terms	1445	0.554325	1.184791	0	10
At Large	1445	0.832526	0.373528	0	1
General, No Run-off	1445	0.753633	0.431044	0	1

NOTES

The author would like to thank Chris Achen, Chuck Cameron, Amy Lerman, Nathan Monroe, Steve Nicholson, Alex Whalley and the participants of the UCM Assistant Professors Reading Group for extremely helpful advice.

1. For nearly the entire time period these cities did not directly elect a mayor who was not a member of the city council. As a result I do not have enough observations to separately analyze mayoral elections. The dates for which I have data are as follows: Austin 1919–85, Dallas 1921–85, San Antonio 1945–85, and San Jose 1914–85.

2. Two types of municipal government organization are common in the United States. The first, found mostly in older and larger cities is the Mayor-Council form. These cities have a mayor who formally leads the executive branch and a city council that handles legislative functions. The second type, common in smaller cities everywhere and larger cities in the South and West is the Council-Manager form. In these cities the chief executive officer of the city, the manager, is a bureaucrat appointed by

the city council. Typically, major policy decisions are made by the manager and his/her staff (although legally the council retains all legislative power). Many council manager cities prohibit councilors from issuing directives to (or in some cases even communicating with) members of the bureaucracy, providing the manager complete control over the operations of the city. Managers also typically have appointment power and often significant budget development power as well. Urban scholars tend to view council manager systems as having councils that are less politicized, less professionalized, and more focused on constituent service than policy. All four cities in the data set were governed by council-manager structures except during a handful of early years.

3. Another potential complication is the method of electing councilors. For most of the time period council candidates were elected city-wide (at-large), but in the later part of the time series San Jose, San Antonio, and Dallas adopted district elections. In Dallas, San Antonio, and Austin after 1953, elections represent contests for a single seat even when the elections were city-wide. In San Jose and in Austin prior to 1953 multiple councilors were elected at a time. In these races the top- N vote getters won, where N represented the number of seats. In alternate analyses I control for this by including a dummy variable indicating whether or not the race was citywide. The inclusion of this variable has no effect on the results and is not presented for that reason.

4. However, an analysis of candidate quality of those who choose to run versus those who choose to sit-out reveals no statistically significant difference between the bare winners and bare losers who choose to run versus not run in my data set.

5. It would be better if I could estimate these analyses without including candidates from the same race. I attempt to deal with the econometric problem in two ways. First, in all of the analyses I cluster the standard errors by election. Secondly, I repeated the specifications after randomly selecting a winner and loser from each election. The results do not change in any substantial way in either alternate specification.

6. Because most city council elections are staggered I allow losing candidates to run and win in the “next” election even if it represents a different seat on the council.

7. The binsize is set at .0225 according to the algorithm recommended by McCrary (2007). The figure excludes candidates who ran unopposed for display purposes.

8. It is interesting to note that the decade fixed effects reveal no significant or consistent pattern over time. This suggests that population growth (and the increased power that would come from running a larger city) was not the driver of the incumbency advantage in these cases. This suspicion is confirmed by adding a measure of population to the models. The coefficient on this variable is significantly negative. Thus, competition increased as cities became larger. Perhaps it was easier to build a strong electoral connection with voters in smaller communities. Adding a measure of the diversity of the population (percent non-white) had mixed effects—decreasing the vote margin, but increasing the probability of winning. None of these variables altered the main effect on winning and so are not presented.

9. Unlike the findings from Congressional elections, it appears that there is no statistically significant difference in the effect of having served a term in office prior to 1950 compared to later years. If anything the advantage appears slightly larger in the earlier period. Results are available upon request.

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