REPUTATIONAL EFFECTS IN LEGISLATIVE ELECTIONS: MEASURING THE IMPACT OF REPEAT CANDIDACY AND INTEREST GROUP ENDORSEMENTS

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ABSTRACT

This dissertation consists of three projects related to reputational effects in legislative elections. Building on the candidate emergence, repeat candidates and congressional donor literatures, these articles use novel datasets to further our understanding of repeat candidacy and the impact of interest group endorsements on candidate contributions.

The first project examines the conditions under which losing state legislative candidates will appear on the successive general election ballot. Broadly speaking, I find a good deal of support for the notion that candidates respond rationally to changes in their political environment when determining whether to run again. The second project aims to measure the impact of repeat candidacy on state legislative election outcomes. Ultimately I find a reward/penalty structure through which losing candidates for lower chamber seats that perform well in their first election have a slight advantage over first-time candidates in their repeat elections.

The final chapter of this dissertation examines the relationship between interest group endorsements and individual contributions for 2010 U.S. Senate candidates. The results of this chapter suggest that some interest group endorsements lead to increased campaign contributions, as compared to unendorsed candidates, but that others do not. This research points to a number of opportunities for future research as the relationship between endorsements and campaign resources is vastly understudied.

To Sharon, for her endless love and support.

And to my father, who left us too soon.

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CHAPTER 1

INTRODUCTION TO THE PROJECT

This dissertation consists of three projects broadly related to reputation effects in legislative elections. Building on the candidate emergence, repeat candidates and congressional donor literatures, these articles use novel datasets to further our understanding of repeat candidacy and the impact of interest group endorsements on candidate contributions.

The first project examines the conditions under which losing state legislative candidates will appear on the successive general election ballot. Building on existing literature focused on candidate emergence and repeat candidates, the study's aim is to investigate whether repeat candidates' entrance decisions are conditioned by the characteristics of their initial election and changing electoral contexts. Broadly speaking, I find a good deal of support for the notion that candidates respond rationally to changes in their political environment. Specifically, candidates are more likely to repeat when electoral conditions shift in their favor and less likely when the costs associated with running are high and when they face tougher electoral contexts. Collectively, these findings suggest that losing candidates are attuned to their political environments and respond accordingly when deciding whether to run again.

The second project aims to measure the impact of repeat candidacy on state legislative election outcomes. The analyses in this chapter consist of several descriptive comparisons of repeat and first-time candidates, as well as between the initial and successive campaigns of repeat candidates. These descriptive results indicate that repeat candidates outperform first-time candidates as challengers for lower chamber elections, but that they perform significantly worse when running for vacant seats in both chambers. Ultimately, multivariate models derived from matched samples suggests that unsuccessful lower chamber candidates who performed relatively well receive a slight advantage over first-time candidates in their repeat attempts. This advantage, however, does not apply to upper chamber candidates. Concluding remarks theorize as to the mechanisms that may be driving these differences as well as opportunities for future research.

The final chapter of this dissertation examines the relationship between interest group endorsements and individual contributions for U.S. Senate candidates in 2010. Whereas much attention is dedicated to measuring the impact of interest group endorsements on voter behavior and electoral outcomes, a relatively sparse literature suggests that interest group endorsements and campaign contributions are related. This chapter contributes to the literature by improving upon the identification scheme, adding a temporal dimension to the analysis and assessing individual endorsements as opposed to average effects across all groups. The results of this chapter suggest that some interest group endorsements lead to increased campaign contributions, as compared to unendorsed candidates, but that others do not. This research points to a number of opportunities for future research as the relationship between endorsements and campaign resources is vastly understudied.

CHAPTER 2

PREDICTING REPEAT CANDIDATES IN STATE LEGISLATIVE ELECTIONS

Introduction

Between 1970 and 2000 approximately 10% of US House incumbents faced the same general election challenger they had the previous election cycle (Taylor and Boatright, 2005). Examining state legislative elections between 1968 and 1989, Carsey et al. (2003) find that 12% of losing candidates appeared in the next general election. Given their somewhat regular occurrence, these repeat candidates have garnered the attention of scholars seeking to understand when unsuccessful candidates are likely to run again and to what extent they are successful in their subsequent attempts.

The volume of research dedicated to questions of strategic decision making, and specifically candidate emergence, stem from concerns over electoral accountability. If the quality of a democracy is measured by the presence of free and fair elections its vibrancy is best characterized by its supply of competitive elections. Competitive elections provide voters with choice among competing candidates, parties or ideologies and agency in determining the direction of democracy. Despite this, between 1998 and 1996 approximately 12% of US House and 35% of state legislative elections were uncontested (Squire, 2000). Among state legislative elections, nearly half (46%) of all elections are uncompetitive, with the winning candidate earning 70% of the vote or more (Carsey et al., 2003). In many of these state level races, novice challengers provide little by way of choice to voters.

This chapter focuses on repeat candidates in state legislative elections. It seeks to add to our understanding of candidate emergence by using election data to predict repeat candidates from among the universe of losing state legislative candidates. The results from this analysis provide support for the rational actor's model, suggesting that in aggregate repeat candidates are responding to changes in their electoral contexts when deciding whether to reboot their campaign organizations. Subgroup analysis of *Strong* and *Weak* candidates indicate that both sets of candidates are responding to similar stimuli. The overall fit of these models suggests there is much to be learned about why some losing candidates ultimately decide to repeat.

Theories of Candidate Emergence

Most of the research on candidate emergence employs a rational actor model in which potential candidates are assumed to weigh the costs of running a campaign against the probability of winning the election and the benefits of holding office (Black, 1972; Bianco, 1984; Rhode, 1979). While this model is a simplification of the way in which individuals make decisions, it enables scholars to make predictions as to the circumstances under which candidates will seek elected office. This line of inquiry has employed three main methodological approaches to help explain candidate behavior. The first and largest body of articles leverages election data to predict whether challengers are present in elections. The second approach surveys potential candidates directly, allowing them to self-report considerations that influence their emergence decisions. The third line of research uses case studies and candidate accounts to explain the rationale of candidates in uncompetitive contests.

At the congressional level, there is ample evidence that, in aggregate, candidates behave rationally when deciding if and when to run for office. For example, literature in this tradition has shown that candidates consider local conditions including the status of the race and an incumbent's previous vote share (Banks and Kiweiet, 1989; Bianco, 1984; Bond, Covington and Fleisher, 1985; Gaddie and Bullock, 2000; Jacobson, 1989; Krasno and Green, 1988; Squire, 1989; Wrighton and Squire 1997), the incumbent's previous fundraising (Box-Steffensmeier, 1996; Carson, 2005; Goldenberg, Traugott and Baumgartner, 1986; Hersch and McDougall, 1994) as well as broader political influences such as the national economy (Grier and McGarrity, 2002; Jacobson, 1989; Jacobson and Kernell, 1983; for criticism see Born, 1986), presidential approval (Jacobson, 1989) and proximity of redistricting (Carson et al., 2006; Cox and Katz, 2002; Hetherington et al., 2003) when making entrance decisions.

Studies of state legislative elections, similarly, find that emergence is conditioned by the districts' previous vote share (Hogan, 2004; Rogers, 2016; Van Dunk, 1997) and partisan composition (Hogan, 2004; Rogers, 2016), professionalism of the legislature (Hogan, 2004; Rogers, 2016), state campaign finance restrictions (Hogan, 2004), district size (Hogan, 2004; Rogers, 2016), the incumbent's age and legislative experience (Van Dunk, 1997), partisan competition within the legislature (Rogers, 2016; Van Dunk, 1997), changes in economic conditions (Rogers, 2016; Van Dunk, 1997), and presidential approval (Rogers, 2016).

The second vein of candidate emergence research surveys potential candidates directly, enabling researchers to answer both why these individuals run for office and why they abstain (Fox and Lawless, 2005; Maisel and Stone, 1997; Maisel, Stone and

Masestas, 2001; Maisel, Masestas, and Stone, 2005; Stone and Maisel, 2003). The results of these studies support the theory that candidates' entrance decisions are dependent upon their perceived likelihood of success. To this end, studies have demonstrated the importance of both the candidates' primary and general election prospects (Maisel and Stone, 1997; Stone and Maisel, 2003), the role of district partisanship (Stone and Maisel, 1997) as well as the impact of personal and strategic qualities for both the incumbent and challenger (Stone and Maisel, 2003; Stone, Maisel and Maestas, 2004). These later considerations suggest that personal characteristics, such as self-reported integrity and public speaking prowess, are fundamental to perceived success as are strategic qualities, like name recognition and the ability to raise money (Stone and Maisel, 2003; Stone, Maisel and Maestas, 2004). While furthering our understanding of *expressive ambition*, whether a potential candidate actually runs for office, the Candidate Emergence Project has also enhanced our appreciation of *nascent ambition*, the predisposition to become a candidate, (Fox and Lawless, 2005) and *progressive ambition*, the desire to climb the political ladder (Fox and Lawless, 2005; Masteas, Fulton, Maisel and Stone, 2006).

Despite the success of these first two approaches, the rational actor's model does not adequately explain the behavior of all candidates, for instance those who challenge incumbents in safe districts. Insight on the decision making of such candidates is best gathered from case study research on candidate emergence (Fischel, 1973; Huckshorn and Spencer, 1971; Kazee, 1980a; Maisel, 1986) as well as firsthand accounts of candidates (Orman, 1985; O'Neill, 1987). Huckshorn and Spencer (1971) provide a useful classification of rationales in their examination of ultimately unsuccessful House candidates. While they find that some candidates are simply unrealistic about their chances of winning (as does Leuthold, 1968), other candidates are not running with the singular goal of winning elected office.

The notion that some candidates are unrealistic or generously optimistic about their chance of success is an important consideration. Although one might argue that ignorance is evidence of irrational behavior on the part of these candidates, Black's theory does not assume perfect information. In fact, the influential *p* term in Black's theory of political ambition is not an objective measure of the likelihood of success but rather "the candidate's estimate of the probability that he can obtain an office should he attempt to seek it" (Black, 1972: 146). One should not be surprised that some candidates are inaccurate in estimating their electoral prospects. Studies in the behavioral economics literature are ripe with evidence that humans are poor at estimating the likelihood of events. These miscalculations or cognitive biases are frequently the product of uncertainty, when decisions are made with partial information through the use of heuristics such as the availability heuristic, representative heuristic or affect heuristic.

The availability heuristic (Tversky and Kahnemann, 1973) suggests that decision makers weigh recent information more heavily when making decisions as opposed to weighing all information equally. For potential candidates the implication is that candidates may recall recent upsets or underdog candidates who were successful in winning office, rather than the more frequent event of electoral losses. When gauging their own electoral prospects, potential candidates may allow these recent anecdotes to inflate their estimates.

The representative heuristic (Kahnemann and Tversky, 1972) suggests that decision makers make judgements about the likelihood of an event by comparing it to similar situations. The shortcoming of this approach, however, is that in focusing on similar situations one may ignore broader base rates in the population. In the case of a prospective candidate, they may make their evaluations on the likelihood of unseating an incumbent based on the most similar cases, for example other elections in which a Democratic state legislator challenged an incumbent Republican House member in a competitive district. While one may find that in 45% of similar cases they recall the incumbents were defeated, they may fail to consider that no more than 15% of House incumbents have been defeated in any cycle this century (OpenSecrets.org, n.d.-a). By restricting their assessments to small samples of like situations, they ignore larger trend and factors that were not part of defining representative examples. To this later point, that same candidate may ignore the role that support from the state party or national tide may have played in assisting these particular challengers because that information was not employed in selecting their set of similar elections.

Another opportunity for cognitive bias comes from the influence of emotional response, a process known as the affect heuristic (Slovic, Finucane, Peters, & MacGregor, 2002). This theory suggests that given limited information or time, decision makers will allow feelings such as fear or excitement to influence their judgements. Experiments on the affect heuristic have demonstrated that subliminal messaging (Winkielman, Zajonc and Schwarz, 1997) and insensitivity to probability (Slovic, Finucane, Peters, & MacGregor, 2002), for example, can lead to suboptimal decision making. In the case of prospective candidates, support from loved ones, encouragement from fellow partisans or feelings of ambition may lead to overestimating their likelihood of success.

Regardless of the exact mechanism, candidates are charged with making subjective assessments of complex situations. In a world of partial information, they resort to cognitive heuristics which ultimately lead to bias. This does not suggest that they make their entrance decisions irrationally, but rather with a biased calculus.

In addition to electoral victory, Huckshorn and Spencer (1971) find that candidates may have organizational, altruistic, ideological or personal reasons for running for office. Organizational reasons include the notion that contesting elections aids party development. By running in seemingly unwinnable districts, some losing House candidates aim to build the party organization and encourage other partisans to run for office. Fowler (1977), similarly, finds that some candidates run with the express purpose of serving the party's interests. Altruistic candidates run not with the lofty goal of building a stronger party organization, but rather to "fill the ticket" either on their own or because the party organization asked them to.

Huckshorn and Spencer (1971) find that another group of defeated House candidates ran because they had issues they wanted to promote or educate the public on. These candidates were inclined to use the campaign as a platform to debate or engage the incumbent on their issues. Maisel (1986) and Orman (1985) similarly demonstrate that some losing candidates use congressional races as a platform for issue advocacy.

Finally, Huckshorn and Spencer (1971) find a fourth group who ran for personal reasons. Personal reasons varied considerably, but some candidates ran because they found the campaign process exciting or personally enriching (Kazee, 1980a and Maisel, 1986 address this type of candidate) while others did so in hopes of gaining some other statewide or party office. Authors also suggest that some candidates run with the intent of raising their professional prospects, such as insurance salesmen aiming for increased business or lawyers looking for favor among the jury pool (O'Neill, 1987; Huckshorn and Spencer, 1971).

At least a few candidates in Huckshorn and Spencer's (1971) study ran for a mix of organizational and personal reasons. These candidates were explicit in that they were running now to sow seeds for future elections. Specifically, one candidate noted they were trying to raise name recognition for a run in a few years, while another was running against an entrenched incumbent in 1962 with the hopes of having claim to the nomination in 1964 when "Kennedy is at the head of the ticket" (p.76). These authors are not alone in documenting that an unsuccessful attempt may set the stage for a future run. Cavala (1976) notes that having run previously equips candidates with a campaign organization, name recognition and a head start in the following election. Fenno (1977) observed that incumbents spend substantial energy considering whether the previous challenger might repeat. This idea of spillover effects between elections serves as the rationale for studies measuring the success of repeat candidates.

As Canon (1993) indicates, no one theory can encapsulate the motivations of all potential candidates, especially those of political novices. To accommodate these limitations, scholars employing the rational actor's model frequently limit their analyses to those candidates most likely to act accordingly. A large number of congressional studies do so by predicting the presence of high quality or experienced candidates, often measured by whether the candidate previously held elected office (e.g., Banks and

Kiewiet, 1989; Bianco, 1984; Carson, 2005; Carson, Engstrom and Roberts, 2006; Hetherington, Larson, and Globetti, 2003; Jacobson, 1989). Canon (1993), goes further by analyzing the behavior of "ambitious amateurs" and "experience seekers" among political novices. In the state legislative context, only Van Dunk (1997) has embarked on the laborious task of coding candidate quality (and only for ten states between 1988 and 1982). Hogan (2004) uses the share of campaign fundraising as a means to capture the credibility of state legislative challenges.

Predicting Repeat Candidates: The Literature

Despite the wealth of studies on candidate emergence broadly, literature on repeat candidate emergence is circumscribed to a handful of articles which use election data to predict repeat campaigns. Two of these articles help describe the types of elections in which repeat campaigns are waged while the remaining three provide support that at least a subset of repeat candidates behaves according to the rational actor model.

The earliest of these repeat candidate studies comes from Ackerman (1957) who focused on matched congressional contests in 1954 and 1956. Among other propositions, Ackerman theorizes that repeat campaigns may occur in one-party districts, potentially as the result of minority parties reusing candidates in order to increase name recognition, or in districts in which the candidate had improved upon her party's past performance. The results from these congressional elections suggest that both phenomena may be at work. Specifically, Ackerman finds that about 40% of repeaters were beaten soundly in their initial elections (receiving less than 40% of the vote), while half emerged from critical districts (those in which the incumbent received less than 55% of the vote). Collectively, about half of repeat candidates had improved upon their party's historical performance, suggesting that comparative performance may influence the decision making of at least some repeat campaigns.

Among the 89 repeat campaigns Ackerman examined in the 1950s, eight contests each year included a former congressman attempting to reclaim the seat they lost the previous election. These "revenge" candidates are the focus of Squire's (1986) study of repeat campaigns. Squire's analysis provides compelling evidence that this unique form of repeat candidacy is a product of national tides which periodically sweep partisans from office. Among losing incumbents, Squire finds that those who are younger, lost by the least and served the fewest terms in congress are most likely to attempt regaining their seat.

This author has only been able to find three articles which aim to predict repeat candidacy. Despite examining different offices and subsets of candidates, collectively they support the notion that repeat candidates act rationally when deciding whether to wage a repeat campaign.

Taylor and Boatright (2005) provide a thorough examination of repeat candidates at the congressional level. They narrow the scope of their analysis to *Strong* challengers, those who received at least 40% of the vote in the initial election, based on the argument that the rational actor model better explains strategic decision making among this group of candidates. The authors also provide analyses on *Strong* challengers who first ran for a vacant House seat, a subgroup they call *Strategic Challengers.* As the candidate emergence literature demonstrates that high quality candidates are more likely to wait for vacant seats as opposed to challenging an incumbent (Banks and Kiweiet, 1989;

Jacobson, 1989), these candidates potentially represent the strongest or most politically attuned of congressional challengers.

The results of Taylor and Boatright's models indicate that although *Strong* challengers are among the most likely to demonstrate rationality in their entrance decisions, there are significant differences in the influences considered by *Strategic* as opposed to just *Strong* candidates. Specifically, while both groups of candidates considered their initial performance before jumping back in the political arena, *Strong* challengers were more likely to consider personal factors while *Strategic* challengers weighed other considerations. Among *Strong* challengers, repeat campaigns were less likely for candidates who had previously held elected office and as the cost of their initial campaign increased. *Strategic* challengers were not swayed by campaign spending or previous experience. Rather, broader political considerations and party nomination processes played a significant role in their entrance decisions. These included whether the election was a presidential midterm, the state of the economy and the type of primary contest they faced. These results indicate that while *Strategic* challengers' behavior largely reflected the rational actor's model, *Strong* challengers were at least somewhat swayed by other concerns.

Carsey et al (2003) predict repeat campaigns from among the universe of losing state legislative candidates. In doing so, they advance a theory which predicts at what ranges of previous vote share repeat campaigns are most likely. The estimates from their model greatly support the predicted curvilinear relationship between vote share and likelihood to repeat. Specifically, repeat campaigns were most likely among candidates at the top of the range (those receiving at least 40% of the vote) and those approximately at the 15% mark. Among other candidates, those receiving less than 15% or between 15%-40%, they find that the likelihood of a repeat campaign diminishes. While the results provide impressive adherence to their predictions, the authors rely heavily on the preferences of political parties and other, unobserved, candidates when constructing their theory. While their analysis enables them to predict the presence of repeat candidates, it doesn't allow for one to directly evaluate the mechanisms by which they make their predictions.

Beyond previous vote share, Carsey et. al (2003) include several other electoral considerations in their model. Among their independent variables, the authors control for the incumbency context of the election. They find that candidates who initially ran for a vacant seat were a less likely to repeat, regardless of whether the incumbent stood for reelection. Additionally, they show that candidates running for a chamber controlled by their own party were more likely run again. In the spirit of Black (1972), this finding suggests that being in the majority party increases the value of holding office thus making candidacy more attractive. Carsey et al. also find that losing candidates were more likely to repeat when they only had to wait two years for the next election, as opposed to four. The authors consider this a "distraction" factor where candidates are more likely to find other opportunities during a four year wait. As a whole, Carsey et. al (2003) provide strong support for the notion that state legislative candidates act according to the changing value of holding office as well as changes in their likelihood of success before deciding to run again.

In predicting state legislative repeat candidates, Carsey and Berry (2014) shift the focus of analysis from the individual candidate to the district. Rather than measuring whether particular candidates will repeat, their analysis answers the question “what type of challenger is likely to appear on the general election ballot?” (No challenger, a repeat challenger or a new candidate). They find that repeat candidates are most likely at the extremes of previous vote share, around 0% and approaching 50%. While this is where they are most likely, this is not to say that they are likely in general. The authors find that at their maximum, only 33% of districts are likely to have a repeat candidate while across most of the range the probability is near 0%. The results of this analysis provide an important reminder that while we are interested in the conditions under which losing candidates will run again, we are focusing on a minority of elections. A new challenger is by far the most likely outcome beginning at 10% of previous vote share and increasing across the range.

While this last point reminds us of the limited likelihood that a losing candidate will find themselves on the next general election, Carsey and Berry’s results do provide insight as to when this is most likely beyond previous vote share. They find that new challengers, as opposed to repeats, are most likely as the value of the seat increases- as legislative professionalism increases, as partisan control of government favors the candidate and among upper chamber as opposed to lower chamber elections. This means that repeat candidates are more likely to be found in elections for lower value seats- among lower chamber elections, in chambers with lower professionalism and where the opposing party has unified control over the legislature. While somewhat counterintuitive, this last finding is the result of all potential candidates responding rationally to the changing value of holding office as well as the probability of success.

This article contributes to the literature on candidate emergence by adding to the list of considerations which moderate the behavior of potential repeat candidates for state legislature. Among the new variables added are measures of campaign finance which Taylor and Boatright (2005) demonstrate are important predictors of repeat candidate emergence among *Strong* challengers for congress. I also expand the set of personal characteristics to include candidate ideology, allowing for the possibility that ideologically moderate and ideologically extreme candidates may differ in their propensity to repeat. Most importantly, my models control for district partisanship. Previous work suggests that candidates may be more likely to repeat when they perform better than anticipated given their party's past experience (Huckshorn and Spencer, 1971) or electoral context (Ackerman, 1957). No existing studies predicting repeat candidates or modeling their electoral success include both previous performance and an exogenous measure of district partisanship. In fact, both Taylor and Boatright (2005) and Mack (1998) include previous performance as proxy for how well candidates may fair in the district without taking into consideration the underlying partisan landscape. I remedy this by including a measure of partisanship derived from presidential election results rather than the outcome of the elections we are trying to explain. As it is evident from previous research that subsets of potential candidates may be influenced by disparate considerations, I conduct my analyses separately for lower and upper chambers and examine the results among both *Strong* and *Weak* candidates. I follow Taylor and Boatright (2005) among other scholars (Canon, 1993; Jacobson, 1997) in setting the threshold differentiating these two groups at 40%.

Data

The data for this study combines several important and seldom merged datasets to predict repeat candidates from among losing state legislative candidates. The source which serves as the foundation for my matrix is Klarner et al.'s State Legislative Election Returns, 1967 -2010 (2013). This provides information regarding candidates' names, district numbers, political parties, election status, length of terms and vote totals. This dataset also includes a unique candidate identifier which enables researchers to track candidates across elections and determine whether they appear on consecutive general election ballots for the same office.

In order to systematically control for the factors that influence candidate decision making, I had to make some compromises in terms of which elections could be included in the analysis. From the universe of state legislative candidates, I include only general election candidates from districts which are single member, occur in states without fusion elections and do not contain more than one candidate from each major party. I do not include special elections with the exception of Mississippi's 1992 statewide special general election in which all candidates were required to run after mid-decade redistricting was performed. I additionally removed a handful of districts for which the vote totals within the district did not reconcile. Nebraska's unicameral legislature is excluded due to non-partisan elections.

Electoral fusion allows for candidates' names to be listed on the ballot for multiple parties. While interesting in its own right, the challenges associated with modeling these elections alongside non-fusion states proved too difficult. Eight states afford candidates the ability to run under more than one party label (Connecticut, Delaware, Idaho, Mississippi, New York, Oregon, South Carolina and Vermont). Given the other restrictions on my data this only provided a major issue in Connecticut and New York. These states were removed in their entirety from the dataset due to the frequency with which candidates were nominated by more than one party. In the other states, fusion was a factor in only a handful of elections over the course of the twenty years. As a practical solution, I removed only those elections.

Louisiana’s open blanket primary system, or jungle primary, similarly offers challenges. In this system all candidates, regardless of party, appear on a primary ballot together. Given this process is meaningfully different than other primary systems and may result in two Republicans or two Democrats in the general election, Louisiana is excluded from the analysis. Otherwise, my research is agnostic as to the primary or caucus system which selects candidates for the general election.

Despite the availability of 43 years’ worth of election returns, I limit my analysis to those elections occurring between 1991 and 2010 for several reasons. Prior research suggests that incumbent fundraising deters candidate entry to US House (Box-Steffensmeier, 1996; Carson, 2005; Goldenberg, Traugott and Baumgartner, 1986; Hersch and McDougall, 1994) and state legislative elections (Hogan, 2001). While the National Institute on Money in State Politics (NIMSP or Followthemony.org) provides a comprehensive database of campaign finance records for state legislatures, such data is largely nonexistent before 1990 and in some states is not available until the mid ‘90s. Reinforcing this decision is the need to control for redistricting. Electronic resources, detailing which specific districts underwent mid-cycle adjustment, is far superior beginning in the 1990s. As my goal is to isolate the impact of repeat candidacy, ensuring that candidates are not responding to changing district boundaries is essential.

Redistricting cycles, including mid-decade adjustments, set the parameters for my models. Redistricting alters the electoral boundaries and therefore the context of elections. I focus my attention on repeat candidacies that occur within redistricting cycles, intentionally excluding any candidates who lose in the last election of a cycle and run again after new boundaries have been drawn. Elections immediately following redistricting serve as a base year from which repeat candidates may emerge. In the event that there was more than one round of redistricting in a decade, elections immediately following an adjustment are considered another base year. Where I could discern which specific districts within a state were impacted by mid-decade changes, I reset the redistricting counter on only those districts. Where it was impossible to be sure which or how many legislative districts were redrawn following a court decision or legislative resolution, I reset the entire chamber. Table 2-1 provides a list of states, chambers and years included in the dataset.

Table 2-1. Elections Included in the Dataset

State	Lower Chamber	Upper Chamber
Alabama	1994*, 1998, 2002*, 2006, 2010	1994*, 1998, 2002*, 2006, 2010
Alaska	1994*, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1994†, 1996†, 1998, 2000, 2002†,2004†, 2006, 2008
Arizona	Not included due to multi-member districts	1994*, 1996, 1998, 2000, 2004*, 2006, 2008, 2010
Arkansas	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010
California	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Colorado	1992*, 1994, 1996, 1998*, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Connecticut	Not included due to fusion elections	Not included due to fusion elections
Delaware	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010
Florida	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994, 1996†, 2000, 2002*, 2004, 2006, 2008, 2010
Georgia	1992*, 1994, 1996*, 1998, 2000, 2004*, 2006, 2008, 2010	1992*, 1994, 1996*, 1998, 2000, 2006*, 2008, 2010
Hawaii	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010
Idaho	Not included due to multi-member districts	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010
Illinois	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010
Indiana	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Iowa	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Kansas	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1996, 2000, 2004*, 2008
Kentucky	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1996†, 2000, 2002†, 2004†, 2006, 2008, 2010
Louisiana	Not included due to jungle/runoff primary system	Not included due to jungle/runoff primary system
Maine	1994*, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1994*, 1996, 1998, 2000, 2002, 2004*, 2006, 2008, 2010
Maryland	1994*, 1998, 2002*, 2006, 2010	1994*, 1998, 2002*, 2006, 2010
Massachusetts	1994*, 1996, 1998, 2000, 2004*, 2006, 2008, 2010	1994*, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010
Michigan	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1994*, 1998, 2002*, 2006, 2010
Minnesota	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1996, 2000, 2002*, 2006, 2010
Mississippi	1992*, 1995, 1999, 2003*,2007	1992*, 1995, 1999, 2003*, 2007
Missouri	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010

* Designates years in which all cases are used as base years
† Designates years in which only some cases are used as base years. This is common in staggered upper chamber elections and when a subset of districts are adjusted.

Table 2-1. Elections Included in the Dataset (Cont.)

State	Lower Chamber	Upper Chamber
Montana	1994*, 1996, 1998, 2000, 2002, 2004*, 2006, 2008, 2010	1994†, 1996†, 1998, 2000, 2002, 2004†, 2006†, 2008, 2010
Nebraska	Not included due to nonpartisan, unicameral elections	Not included due to nonpartisan, unicameral elections
Nevada	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
New Hampshire	1992*, 1994, 1996, 1998, 2000, 2004*, 2006, 2008, 2010	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010
New Jersey	Not included due to multi-member districts	1991*, 1993, 1997, 2001*, 2003, 2007
New Mexico	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1996, 2000, 2004*, 2008
New York	Not included due to fusion elections	Not included due to fusion elections
North Carolina	1992*, 1994, 1996, 1998, 2000, 2004*, 2006, 2008, 2010	1992*, 1994, 1996, 1998, 2000, 2004*, 2006, 2008
North Dakota	Not included due to multi-member districts	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Ohio	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Oklahoma	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Oregon	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Pennsylvania	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Rhode Island	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1994, 1996, 1998, 2000, 2004*, 2006, 2008, 2010
South Carolina	1992*, 1994, 1996, 1998†, 2000, 2004*, 2006, 2008, 2010	1992*, 1996, 2000, 2004*, 2008
South Dakota	Not included due to multi-member districts	1992*, 1994, 1996, 1998, 2000*, 2004, 2006*, 2008, 2010
Tennessee	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Texas	1998*, 2000, 2002*, 2004, 2006, 2008, 2010	1996†, 2000, 2002*, 2004, 2006, 2008, 2010
Utah	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
Vermont	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010
Virginia	1991*, 1993, 1995, 1997, 1999, 2001*, 2003, 2005, 2007, 2009	1991*, 1995, 1999, 2003*, 2007
Washington	Not included due to multi-member districts	1992†, 1994†, 1996, 1998, 2000, 2002†, 2004†, 2006, 2008, 2010
West Virginia	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	Not included due to multi-member districts
Wisconsin	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010
Wyoming	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010	1992*, 1994, 1996, 1998, 2000, 2002*, 2004, 2006, 2008, 2010

* Designates years in which all cases are used as base years

† Designates years in which only some cases are used as base years. This is common in staggered upper chamber elections and when a subset of districts are adjusted.

My main basis for campaign finance data is Adam Bonica's Database on Ideology, Money in Politics, and Elections (DIME) (Bonica, 2016). I use Bonica's data as the primary source because it provides most of the necessary campaign finance information from the National Institute of Money in State Politics (NIMSP) and well as his measures of candidate ideology. As Bonica's methodology requires a minimum number of donations to estimate ideology scores, his data excludes candidates for which there are too few or no donations in a given election year. A simple comparison of Bonica's DIME with the NIMSP source data identified the missing candidates whose campaign finance data was added back into the matrix. As neither Bonica's data nor NIMSP share a unique candidate identifier with the ICPSR data on state legislative elections, I merged these sources using information on the candidate's name, district, chamber, state and year of election.

The process of merging these data was somewhat manual given a lack of shared candidate identifiers. The candidate's first and last name were the most discrete items at my disposal, so they became the centerpiece of my matching scheme. As such misspellings, nicknames, name changes and confusion of first and last names were the most common errors. Ultimately I was able to match 61,371 of the 62,062 candidates (98.9%) who should have had financial records. I manually searched the data by year and state for the remaining 691 candidates allowing for them to be mistakenly coded into the wrong district. While I found no systematic error in missing data by year, state or chamber, those candidates for whom I could not find contribution data were much more likely to be third-party candidates (68% or 472 of 691). My suspicion is that some states did not require disclosures from candidates who neither raised nor spent money above a given threshold (thus making the majority of these true values '0'). To err on the side of caution, I set these values to missing and did not calculate district level campaign finance variables for these districts.

I operationalize campaign finance dynamics using three variables. The first, *Total Fundraising*, is a measure of aggregate contributions within the district. Where campaign finance data was available for all candidates, a district-level total contributions variable was created using a simple summation. I then calculated means and standard deviations for contributions by state, year and chamber (i.e. the California House in 2002) and converted *Total Fundraising* into a Z-score. As the cost of an election varies widely by state and chamber and is likely conditioned by factors such as size of the district, legislative professionalism, campaign finance laws and cost of living, there is no ideal way to include the real value of campaign contributions across state legislatures into a single model. By converting these raw numbers into Z-scores we can, however, speak to more or less expensive campaigns relative to similar districts. This variable represents the number of standard deviations above or below the chamber's mean contribution total for that year. *% of Contributions* measures a candidate's share of contributions from among the total raised in the district. *% Self-Funded* provides the proportion of a candidate's fundraising total which was donated by the candidate themselves.

From Bonica's Database on Ideology, Money in Politics, and Elections (2016) I employ an estimate of candidate ideology derived from information on donors. I use the calculation which allows candidate ideological points to vary between elections, making it possible for a candidate to become more or less ideologically extreme over the course of their careers. To simplify modeling, *Candidate Ideology* computes the absolute value of this measure. Higher candidate ideology scores imply a more extreme candidate while lower scores, bounded by zero, signal ideological moderation.

In the candidate emergence literature, district partisanship has been shown to influence potential candidates' perceptions of their electoral prospects and ultimately their entry decisions (Stone and Maisel, 2003). One of the weaknesses of previous research on repeat candidates is that it either uses previous vote share as a proxy for challenger party strength (Mack, 1988) or does not control for it. To construct a district partisanship measure, I start with the Democratic share of the 2000 presidential vote in each legislative district. I transform this data by subtracting .5 and multiplying the difference by a three-way party identification number ('-1' for Republicans, '0' for third-party candidates and '1' for Democrats). The resulting scale provides the congruence between the candidate's political party and the district's 2000 presidential vote. The theoretical bounds of the scale range from -.5 (for Democrats/Republicans running in an overwhelmingly pro-Bush/Gore district) to +.5 (for Democrats/Republicans running in a heavily pro-Gore/Bush district). Data on legislative district presidential vote share was generously donated by Gerald Wright and was collected as part of a National Science Foundation grant (Wright, 2001). Among other purposes this data serves as the main partisanship measure for Jon Winburn's thorough examination of redistricting outcomes (Winburn, 2008).

Wright's district partisanship variable was constructed using the final set of electoral boundaries from the 1990s and the first set of districts from the 2000 redistricting cycle. As such, if there were no mid-cycle changes in either decade, district partisanship data is available for the length of my study (1991-2010). When there was mid-cycle redistricting, Wright's data is only available for a subset of years. Since the data were constructed around districts which existed between 2000-2004, we are more likely to have district partisanship data in the middle of the study years. Once mid-decade redistricting altered the districts with which Wright's team built these scores, district partisanship is set to missing. 74,095 of 79,942 (92.7%) candidates in the final dataset have *District Partisanship* information appended.

Legislative Professionalism helps shape the benefits associated with holding office. Those elected to a professional legislature are rewarded with increased prestige, compensation and resources as compared to less professional or citizen legislatures. As the benefits of these offices are higher so should the competition for such seats. Given the strong evidence to suggest that legislative professionalism conditions strategic candidate emergence (Hogan, 2004; Squire, 2000), I include Squire's measure of *legislative professionalism*. As my data ranges from 1991-2010 I use Squire's 1986, 1996, and 2003 scores depending upon the year of election (Squire, 2007).

To measure national and state economic trend I use the annual change in real per capita income ending in the first quarter of the election year. This data was taken from Carl Klarner's "State Economic Data" (2013). National real per capita income is deflated by the BLS Consumer Price Index while state real per capita income is deflated by Berry, Fording and Hanson's State Cost of Living Index (Berry et. al, 2000). *National Incumbent Economy* and *State Incumbent Economy* measure the influence of absolute economic forces while *National Partisan Economy* and *State Partisan Economy* provide the test of partisan theories. These latter variables are created by multiplying the economic values against the legislative candidates' three-way party code and the party of the president or governor. Positive values indicate sharing a party label with a president or governor when economic conditions are improving or being of the opposite party during negative economic trend. Negative values represent belonging to the out-party during positive economic trend or sharing the president's or governor's party label during poor economic conditions. A score of zero for the partisan economic variables indicates no change in the economic conditions over the past year or that the legislative candidate or governor ran as an independent or under a third-party label.

Rogers (2016) provides compelling evidence that midterm elections significantly impact challenger emergence in state legislative elections. To control for partisan tide associated with federal and state executives, I include two variables: *Presidential Midterm* and *Gubernatorial Midterm*. These variables are trichotomous measures. '1' represents when the legislative election occurs contemporaneously with a midterm presidential or gubernatorial election in which the legislative candidate shares a party label with the executive. '-1' indicates a midterm election for a president or governor of the other party. When the legislative election does not occur during a presidential or gubernatorial midterm election, or when the legislative candidate or governor ran as an independent or under a third-party label, these measures are coded as '0'.

Jacobson (1989) and Rogers (2016) find that presidential popularity impacts challenger emergence in congressional and state legislative elections, respectively. As such, I include *Presidential Approval* to measure the extent to which repeat candidates are responsive to this consideration. The basis for this measure is the Gallup Poll's approval rating closest to June 15th of the election year (The American Presidency Project, n.d.). In the event two polls were evenly spaced around June 15th, I used the average of the two approval ratings. Similar to *District Partisanship*, .5 is subtracted from the proportion of Americans who approve of the president's performance. That number is multiplied by the candidate's three-way party code and the party of the President ('-1' for Republicans and '1' for Democrats). The resulting scale is the congruence between presidential popularity and the legislative candidate's party. Positive numbers (with a theoretical bound of .5) imply the candidate shares a party label with as a president who enjoys approval ratings above 50% or that the candidate does not share a party label with an unpopular president. Negative numbers indicate sharing partisanship with an unpopular president or not sharing partisanship with a popular president. Scores of '0' imply that a president has exactly a 50% approval rating or that the candidate ran under a third-party label or as an independent. Unfortunately, no systematic data on gubernatorial popularity is readily accessible.

In additional to controls for economic trend, midterm elections and presidential popularity, I include a dichotomous measure recording those candidates running for state legislature in the south. *South* is coded '1' when a candidate is running in Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, Texas or Virginia , and coded '0' otherwise.

Table 2-2 provides summary statistics for the entire database. While these summary statistics include all candidates, later tables will provide summary statistics after listwise deletion from modeling. The final dataset consists of 79,942 general election candidates for state legislature. Elections occur in all twenty years between 1991 and 2010 and in 81 of 99 state legislative chambers. This total includes major party as well as third-party, independent and write-in candidates.

Not surprisingly, nearly 78% of the data comes from lower house candidates, as shorter average term lengths lead to more elections over the course of decade. Also fueling this inequality is the fact that upper chambers have fewer districts on average. Incumbents represent 43% of candidates while challengers and open seat candidates make up 31% and 25%, respectively. Nearly 90% of those who run for state legislature in these districts are major party candidates.

79.5% of legislative candidates in the database ran in contested elections, regardless of the party of their competition, while 73.8% ran in elections with at least one Democrat and one Republican. This suggests that approximately 20.5% of all state legislative candidates were uncontested. Among non-base years (i.e. those elections for which we can determine repeat candidates), 44% of all candidates were incumbents, 50% are first time candidates and approximately 6% of all candidates are repeats. The remainder of Table 2-2 provides statistics on campaign finance, partisan and economic variables and control variables.

Table 2-2. Summary Statistics for the Final Dataset

Variable	Sample Size	Mean	St. Dev	Min	Max
Chamber (% Lower)	79,942	.775	.418	0	1
Incumbent	79,942	.434	.496	0	1
Challenger	79,942	.314	.464	0	1
Open	79,942	.252	.434	0	1
Partisanship:					
Democratic	79,942	.460	.498	0	1
Republican	79,942	.435	.496	0	1
Third-party/ Ind.	79,942	.105	.307	0	1
Competition:					
Contested Election	79,942	.794	.404	0	1
Two-Party Election	79,942	.738	.440	0	1
Campaign Finance Variables:					
Total Fundraising	61,531	.110	1.02	-3.02	12.14
% of Total Contributions	60,104	.574	.369	0	1
% Self-Funded	61,347	.082	.186	0	1
Economic and Partisan Tide Controls					
(+Multiplied by Candidates' Party and Party of President/Gov.)					
National Economy	79,942	1.43	1.91	-4.59	4.37
National Partisan Economy+	79,942	.012	2.27	-4.59	4.59
Presidential Midterm+	79,942	.001	.656	-1	1
Presidential Approval+	79,942	.003	.119	-.24	.24
State Economy	79,942	1.35	2.10	-5.19	14.21
State Partisan Economy+	79,942	-.005	2.33	-14.21	14.21
Gubernatorial Midterm+	79,942	.007	.644	-1	1

Table 2-2. Summary Statistics for the Final Dataset (cont.)

Variable	Sample Size	Mean	St. Dev	Min	Max
Other Controls:					
District Partisanship	74,095	.026	.139	-.4775	.4839
Candidate Ideology	52,910	.720	.476	0	6.12
Legislative Professionalism	74,942	.207	.130	.051	.653
Length of Term	74,942	2.34	.753	2	4
South	74,942	.239	.426	0	1
Among Non-Base Years:					
Incumbents	59,149	.441	.497	0	1
First Time Candidates	59,149	.502	.500	0	1
Repeat Candidates	59,149	.057	.232	0	1

Hypotheses

Along with existing research on repeat candidates, broader theories of candidate emergence provide a strong foundation from which we can generate testable hypotheses about when losing state legislative candidates are likely to mount a repeat campaign. As Van Dunk (1997), Hogan (2004), Carsey et al. (2003) and Rogers (2016) demonstrate that state legislative candidates are responding to largely the same set of factors as congressional candidates when contemplating entry into an election, I do not limit my scope to studies of state legislative elections when deriving hypotheses. As no previous research has been conducted on upper and lower chamber candidates separately, I have no theoretical basis to suggest that entry decisions are made using a different calculus. Similarly, no previous research has examined *Strong* and *Weak* candidates in isolation. That said, I anticipate that high quality candidates are more likely to act according to the rational actor's model. While there is likely some amount of political amateurism among *Weak* candidates, I would anticipate their entrance decisions are not devoid of rationality. As this work is exploratory in this regard, I do not make specific hypotheses for *Strong* and *Weak* candidates.

The most readily available and fundamental consideration for losing legislative candidates contemplating a second run is their performance in the initial election. Studies of repeat congressional candidates have shown that losers from marginal districts are proportionally more likely to repeat, although in an absolute sense there are more non-marginal repeaters (Ackerman, 1957; Mack, 1998). Squire's (1986) examination of losing congressional incumbents similarly revealed that closer margins encouraged more revenge campaigns. In the event that previous performance is significantly related to future vote share (which Squire and Smith, 1984 and Mack, 1998 suggest), it may serve as the best available proxy for future electoral prospects.

Carsey et al. (2003) find a non-linear relationship between initial vote share and likelihood to repeat for state legislative candidates. In their study, repeats are most likely in marginal districts (starting somewhere above 40% of the total vote) but the likelihood waxes and wanes below that point. To accommodate a non-linear relationship between previous vote share and the likelihood of repeat campaigns, I include second- and third-degree polynomials. I predict simply that those closest to victory in the initial election are most likely to run again. I am indifferent as to where exactly the turns in that relationship occur but have no reason to believe this shape would be different than that found in Carsey et. al (2003) despite a narrower set of election years.

> *H1: Among unsuccessful general election candidates for state legislature, those with higher initial vote shares should be more likely to repeat. Specifically, I anticipate the probability of a repeat will be highest among those candidates in the 45-50% range.*

Funding one's campaign is a key factor in the calculus to run for office for all candidates, not just repeats. The *C* term in Black's theory of political ambition (1972) relates to both the personal and financial costs of running for office. Maisel and Stone (1997) document that campaign finance considerations influence the decision making of potential congressional candidates. Taylor and Boatright (2005) show that for *Strong* potential candidates, as the amount spent on their initial election increases the likelihood of a repeat campaign diminishes.

As my model controls for both the candidates' previous performance and other district characteristics, measures of campaign finance reveal the impact of spending between similar candidates. Given these controls, I anticipate that the overall level of fundraising in a race (the total amount raised by all candidates relative to other districts in the chamber) and relative share of fundraising by the losing candidate will have significant and independent effects on the likelihood to repeat. Specifically, I anticipate the more money raised in the initial election and by the challenger relative to his or her opponents, the less likely losing candidates are to mount another campaign.

Models also include a measure of self-financing that records how much of the money contributed to a candidate's campaign came from the candidate themselves. While I am unaware of previous research which measures the impact of self-finding, I anticipate that the more candidates contribute to their initial election, the less likely they are to run again. The theory here is that candidates who spent their own money or borrowed to fund their first election are unlikely to have the resources necessary to do so again.

> *H2: Among unsuccessful general election candidates for state legislature, candidates in districts with higher aggregate spending are less likely to repeat.*
>
> *H3: Among unsuccessful general election candidates for state legislature, candidates that spent more money relative to her opponents are less likely to repeat*
>
> *H4: Among unsuccessful general election candidates for state legislature, candidates who personally contributed a greater proportion of their campaign's funds are less likely to repeat.*

To my knowledge no existing research has included measures of candidate ideology in predicting repeat candidate emergence. While I have no strong priors to predict the outcome of this test, I can imagine two plausible narratives for this relationship. The first is that ideological extremists are more likely to repeat either because having extreme ideologies increases the value of the holding office or because ideologically extreme candidates may simply be more ambitious. The second possibility is that those with more extreme ideologies are less likely to repeat. This second alternative could be the result of losing candidates declining to run because they find themselves too ideologically extreme for their districts or because more moderate candidates are successful in winning the successive primary process. As inclusion of this measure is exploratory, significance in either direction will shed some light on this relationship. I personally find the first of these two narratives more plausible as the second outcome requires selflessness on behalf of the losing candidate or strategic behavior from those selecting the party's nominee. That said, I'm inclined to believe that more ideologically extreme candidates are more likely to repeat.

> *H5: Among unsuccessful general election candidates for state legislature, candidates who are more ideologically extreme are more likely to repeat.*

Having rendered predictions on the variables associated with the initial election, I now consider characteristics of the successive campaign. The status of the race, that is whether or not there is an incumbent running for reelection, should play a significant role in the decision making process of potential repeat candidates for state legislature. Incumbents have significant advantage over challengers in US House elections (Cover, 1977; Erikson, 1971; Ferejohn, 1977; Gelman and King, 1990; King and Gelman, 1991; Levitt and Wolfram, 1997; Mayhew, 1974) and elections for state legislature (Breaux, 1990; Garand, 1991; Jewell and Breaux, 1988; King, 1991). Potential candidates are aware of this advantage and congressional incumbents rarely face strong challengers in the general election (Huckshorn and Spencer, 1971; Jacobson and Kernel, 1981; Mann and Wolfinger, 1980). In the dataset for this article, approximately 20% of candidates are running in uncontested elections and over 26% are running in districts without candidates from both major parties. Further review of the data suggests that only 60% of state legislative incumbents are challenged in the general election and that and only 56% face a major party opponent. In contrast to this, only 12% of open seat candidates are uncontested. Clearly incumbency conditions candidate emergence.

The models that follow include variables that measure the change in incumbency status between elections. The comparison point is the modal group- those candidates who lost to an incumbent and would face her again if they were to repeat. My hypotheses assume the likelihood of repeat candidacy varies according to the relative change in the status of the race. Clearly being the incumbent places a candidate in the best position to win an election. Shy of currently holding the office, running in an election without an incumbent is the next most attractive while running against an incumbent is the least.

Those who previously ran against an incumbent who has since left office, whether through retirement, death, promotion, or other means, are likely at an advantage over other candidates- they're familiar with the district, likely have name recognition, have a recent campaign organization to reactivate and may have a reasonable claim to the seat based on their previous performance. This group of repeat candidates are excluded from Taylor and Boatright's (2005) analysis as they focus on potential repeat candidates facing incumbents. Carsey et al. (2003) examine this subgroup of repeaters in the state legislative context but find no significant difference between them and those prospective candidates facing an incumbent twice. While extant research predicting repeat candidates offers no support for this hypothesis, Squire and Smith (1984) suggest that those running for open seats were by far the most successful class of congressional repeat candidates, winning 46% of their contests as compared to 11% for those that faced incumbents. Assuming a rational actor's model in which potential candidates respond to changing electoral prospects, we should anticipate a rise in repeat candidacy among those candidates who would be running for a vacant seat.

Those who previously ran for an open seat and came up short face a larger hurdle as they run against the same candidate armed with sophomore surge. According to Holbrook and Tidmarch (1991), state legislative sophomore surge averaged nearly 5.5% between 1970 and 1986. Given the decrease in their relative prospects I predict that losing candidates who would be running against a freshman incumbent would be less likely to repeat. Taylor and Boatright (2005) show this is the case with *Strong* congressional challengers. Those who ran for and lost an open congressional seat were significantly less likely to repeat than other unsuccessful candidates. Similarly, Carsey et al. (2003) find these candidates are less likely to repeat in state legislative races.

Incumbents who lost their seat in the previous election likely enter the next election cycle as a challenger, with incumbency advantage working against them. At the congressional level these revenge contests are by far the most effective challenges (27% success rate per Squire and Smith, 1984) as compared to first time candidates (5.7%) or other repeat candidates (11.1%). According to Squire and Smith's research these victories were largely dependent upon national tide. The most common outcome for ousted U.S. House incumbents is retirement, as only 20% ran in the next election. Assuming state legislators are similarly likely to retire, I anticipate that potential revenge candidates for state legislature are less likely to repeat than those candidates who would face an incumbent in successive elections.

> *H6: As compared to losing candidates facing an incumbent twice, unsuccessful state legislative candidates who initially ran against an incumbent but find themselves in an open state legislative district are more likely to repeat.*
>
> *H7: As compared to losing candidates facing an incumbent twice, unsuccessful state legislative candidates who initially ran for an open seat but are now facing a freshman incumbent will be less likely to repeat.*
>
> *H8: As compared to losing candidates facing an incumbent twice, unsuccessful state legislative candidates who were incumbents but lost their last general election will be less likely to repeat.*

Studies on the relationship between the economy and congressional election outcomes pose two alternative, or possibly complementary, theories. Research by Tufte (1978) and Jacobson (1989) suggest that a president's fellow partisans are rewarded when the economy improves and punished when the economy deteriorates on his watch. Grier and McGarrity (1998, 2002) argue that economic rewards are not conditioned upon party, but rather on an incumbency basis. They suggest those that are held most accountable are incumbents of the president's party. Looking at research on state elections, Chubb (1988) provides compelling evidence that state legislative election outcomes are influenced by national partisan economic trend. Van Dunk (1997) includes measures of both state and national economies in her models predicting quality challenger emergence in state legislative elections and finds the state economy to be the only significant predictor. Similarly, Rogers (2016) finds changes in state personal income condition state legislative challenger emergence.

I include four variables related to economic trend to measure the extent to which any of these factors significantly influence the emergence decisions of unsuccessful state legislative candidates.

> National Economy Theory:
> *H9: Unsuccessful state legislative candidates are less likely to repeat when the national economy has improved over the past year.*
>
> State Economy Theory:
> *H10: Unsuccessful state legislative candidates are less likely to repeat when the state economy has improved over the past year.*
>
> National Partisan Economy Theory:
> *H11: Unsuccessful state legislative candidates are more likely to repeat when the national economy has improved over the past year and they share partisanship with the president.*
>
> State Partisan Economy Theory:
> *H12: Unsuccessful state legislative candidates are more likely to repeat when the state economy has improved over the past year and they share partisanship with the governor.*

Taylor and Boatright (2005) demonstrate that *Strategic* challengers for the US House are less likely to repeat if they share a party label with the president and it's a midterm election. *Strong* candidates overall, however, were not significantly influenced by midterm elections. Rogers (2016) provides evidence that presidential midterm elections also influence candidate emergence for state legislature. No research to date measures whether presidential midterms influence emergence decisions among potential state legislative repeat candidates. That said, in the event that repeats behave similarly to state legislative candidates generally, we would predict that the same partisan trend holds. To allow for the possibility of state midterm effects, I also include a measure for gubernatorial midterm elections.

Presidential Midterm Theory:
H13: Unsuccessful state legislative candidates who share a party with the president are less likely to run during a midterm election. Candidates from the other major party should be more likely to repeat during a presidential midterm election.

Gubernatorial Midterm Theory:
H14: Unsuccessful state legislative candidates should be less likely to repeat when they share a party label with the governor and it is a midterm election. Conversely, members of the opposing party should be more likely to run during a midterm election.

Jacobson (1989) finds that challenger emergence and the outcome of congressional elections are conditioned by the popularity of the president. Rogers (2016) similarly demonstrates that state legislative elections are impacted by presidential popularity. Rogers finds not only that incumbents of the president's party are likely to face challengers when the president is unpopular, but that this effect is accentuated during midterm elections. If national partisan tides impact state legislative challenger emergence, we may see similar trend among potential repeat candidates.

Presidential Approval Theory:
H15: Unsuccessful state legislative candidates are more likely to repeat when they share a party label with a popular president. Conversely, losing candidates are less likely to run again when their party's president

is unpopular or they do not share the partisanship of a popular administration.

Although legislative professionalism has been found to suppress the quality of state legislative challengers (Hogan, 2004), more professional legislatures are associated with an increase in contested races (Carsey and Berry, 2014; Hogan, 2004; Squire, 2000). Carsey and Berry (2014) find that the relative probability of a new challenger as compared to a repeat challenger is highest in more professional legislatures. Given my model does not account for new challengers vs. repeat challengers, I focus instead on the impact of professionalism on the value of the seat. Given the benefit of winning a seat in a professional legislature is higher than that of a non-professional or citizen legislature, I anticipate the likelihood of repeat campaigns will be higher among more professionalized legislatures.

Legislative Professionalism Theory:
H16: Unsuccessful state legislative candidates are more likely to repeat when they are running for more professionalized legislatures.

Carsey, et al. (2003) document a "distraction" factor in their models predicting state legislative repeat candidates. Their results suggest the longer a candidate must wait between elections the less likely they are to run again. Given the amount of opportunities that might arise over the course of four, as opposed to two years, I anticipate similar findings.

Term Length Theory:
H17: Unsuccessful state legislative candidates are more likely to repeat when term lengths are shorter.

Stone and Maisel (2003) emphasize the importance of district partisanship in candidate entry decisions. Among repeat candidates, however, it is possible partisanship has inverse and/or competing effects. In an aggregate sense, the more a district favors a candidate's partisanship, the better their general election prospects. That said, candidates who failed to win a contest in friendly terrain might be discouraged from repeating. Given the model controls for efficacy of the campaign, including vote share, campaign finance, etc., I suspect given similar outcomes those who did more with less are more likely to repeat. Therefore, I predict unsuccessful candidates running in friendlier partisan contexts will be less likely appear on the next general election ballot.

Partisan Context Theory;
H18: Unsuccessful state legislative candidates are less likely to repeat when they ran in friendlier partisan contexts.

Results

I use logistic regression to test the theories of repeat candidacy above. The dependent variable is coded '1' for losing candidates who appear on the next general election ballot and '0' for non-repeaters. The scope of these models are limited to unsuccessful major party candidates from base years who faced major party competition. Through listwise deletion due to missing data only candidates for whom campaign finance, candidate ideology and district partisanship data is available are included. Models are run separately for lower and upper chambers and for *Strong* and *Weak* candidates within each. As observations within election year and within states are not independent, all tables report robust standard errors clustered by state and year.

A roadmap for the analysis is as follows. Tables 2-3 and 2-4 provide summary statistics for the subset of candidates included in the lower and upper chamber models, respectively. The aim here is to be transparent about the data that made it into the final models once the data is limited to contested races, major party candidates and through listwise deletion. These tables also allow us to compare the data by chamber. For the sake of brevity I do not include similar tables for *Strong* and *Weak* candidates separately. Table 2-5 presents the results of the logistic regressions for lower chamber candidates overall as well as for *Strong* and Weak lower chamber candidates. As the coefficients from logistic regression are not directly interpretable, Table 2-6 provides the change in odds ratios for the significant independent variables. Tables 2-7 and 2-8 provide identical information for upper chamber candidates. Figure 2-1 displays estimates for the relationship between previous vote share and likelihood to repeat, setting continuous variables to their means and dichotomous and trichotomous variables to zero. Estimates are calculated separately by chamber.

The summary statistics in Tables 2-3 and 2-4 provide some interesting background information as it relates to unsuccessful state legislative candidates. First, despite restricting the analysis to a particular subset of unsuccessful candidates (those who ran in general elections with a Democrat and a Republican), we have over 8,000 lower chamber and 2,000 upper chamber candidates with which to predict repeats. 16.3% of unsuccessful lower chamber candidates and 8.4% of unsuccessful upper chamber candidates ultimately ran again. Although this would suggest that candidates for lower houses are nearly twice as likely to run a repeat campaign, Carsey et al. (2003) find no systematic difference between upper and lower chamber candidates in their multivariate models.

Beyond this, losing candidates for lower and upper chambers are not altogether that different. On average, they earn approximately 39% of the vote and are responsible for 31% of the fundraising totals. They face similar electoral contexts and have comparable ideological distributions. Term lengths vary substantially between lower and upper chambers which, per Hypothesis 16, may contribute to the lower incidence of repeat candidacies in upper chambers.

Table 2-3. Summary Statistics for Predicting Lower Chamber Repeat Candidates

Variable	Sample Size	Mean	St. Dev	Min	Max
Dependent Variable:					
Will Repeat (0,1)	8,863	.163	.369	0	1
Factors Related to Initial Election:					
Vote	8,863	.389	.075	.012	.500
$Vote^2$	8,863	.157	.054	.000	.250
$Vote^3$	8,863	.065	.031	.000	.125
Total Fundraising	8,863	.421	1.05	-1.99	12.14
% of Total Contributions	8,863	.312	.196	.000	1.00
% Self-Funded	8,863	.125	.195	.000	1.00
Candidate Ideology	8,863	.884	.475	.000	5.93
Factors Related to Successive Election ($^+$Multiplied by Candidates' Party and Party of President/Gov.):					
National Economy	8,863	1.77	2.02	-4.59	4.37
National Partisan Economy$^+$	8,863	.045	2.62	-4.59	4.59
Presidential Midterm$^+$	8,863	-.003	.691	-1	1
Presidential Approval$^+$	8,863	.001	.117	-.24	.24
State Economy	8,863	1.57	1.96	-4.75	6.95
State Partisan Economy$^+$	8,863	.088	2.39	-6.95	6.95
Gubernatorial Midterm$^+$	8,863	.009	.691	-1	1
Change in Election Status:					
Challenger ➔ Chall.	8,863	.479	.380	0	1
Challenger ➔ Open	8,863	.174	.380	0	1
Open ➔ Challenger	8,863	.265	.442	0	1
Open ➔ Open	8,863	.022	.147	0	1
Incumbent ➔ Chall.	8,863	.054	.226	0	1
Incumbent ➔ Open	8,863	.005	.068	0	1

Table 2-3. Summary Statistics for Predicting Lower Chamber Repeat Candidates (cont.,)

Variable	Sample Size	Mean	St. Dev	Min	Max
Time Invariant Controls:					
District Partisanship	8,863	-.058	.111	-.471	.345
Legislative Profess.	8,863	.198	.126	.053	.626
Length of Term	8,863	2.03	.247	2	4
South	8,863	.149	.356	0	1

Table 2-4. Summary Statistics for Predicting Upper Chamber Repeat Candidates

Variable	Sample Size	Mean	St. Dev	Min	Max
Dependent Variable:					
Will Repeat (0,1)	2,063	.084	.277	0	1
Factors Related to Initial Election:					
Vote	2,063	.388	.075	.070	.500
Vote^2	2,063	.156	.054	.005	.250
Vote^3	2,063	.065	.031	.000	.125
Total Fundraising	2,063	.389	1.02	-2.70	6.36
% of Total Contributions	2,063	.311	.202	0.00	1.00
% Self-Funded	2,063	.144	.215	0.00	1.00
Candidate Ideology	2,063	.861	.492	.001	5.92
Factors Related to Successive Election: (+Multiplied by Candidates' Party and Party of President/Gov.)					
National Economy	2,063	1.59	2.10	-1.18	4.37
National Partisan Economy+	2,063	.086	2.57	-4.37	4.37
Presidential Midterm+	2,063	-.001	.731	-1	1
Presidential Approval+	2,063	.002	.123	-.24	.24
State Economy	2,063	1.72	2.09	-4.75	14.21
State Partisan Economy+	2,063	.083	2.56	-14.21	14.21
Gubernatorial Midterm+	2,063	-.022	.673	-1	1
Change in Election Status:					
Challenger → Chall.	2,063	.384	.487	0	1
Challenger → Open	2,063	.200	.400	0	1
Open → Challenger	2,063	.296	.456	0	1
Open → Open	2,063	.048	.214	0	1
Incumbent → Chall.	2,063	.059	.235	0	1
Incumbent → Open	2,063	.013	.114	0	1

Table 2-4. Summary Statistics for Predicting Upper Chamber Repeat Candidates (Cont.)

Variable	Sample Size	Mean	St. Dev	Min	Max
Time Invariant Controls:					
District Partisanship	2,063	-.061	.115	-.429	.301
Legislative Profess.	2,063	.178	.110	.051	.626
Length of Term	2,063	3.40	.916	2	4
South	2,063	.134	.341	0	1

Table 2-5 provides the results of models predicting repeat candidates in lower chambers. Looking first to the models including all lower chamber candidates, we find that previous vote share, as well as the squared and cubed term are significant at the 95th confidence interval. Given the difficulty in interpreting polynomials, Figure 2-1 plots the predicted values across the range of previous vote share for both upper and lower chambers. Despite not hypothesizing about where the turning points might occur, the shape is strikingly similar to that of Carsey et al. (2003). Specifically, a local maximum exists between 15% and 30% while the probability of a repeat campaign is greatest among those who came closest to victory. While the probability of a repeat campaign is lower in upper chambers, as was evident from the descriptive statistics, both the lower and upper chamber results trend similarly across the range.

Returning to Table 2-5, only a single campaign finance variable reaches statistical significance among all lower chamber candidates, *Total Fundraising*. The results suggest that losing candidates are less likely to repeat as the cost of campaigns rise. In terms of substantive interpretation (see Table 2-6), a one standard deviation increase in the cost of elections reduces the probability of a repeat campaign by 14%. An interesting point here is that it doesn't matter how much of that campaign fundraising the candidate was personally responsible for, losing candidates are simply deterred by more expensive elections. Similarly, self-funding appears to have little influence on repeat candidate emergence among all candidates. Given these results, we find sufficient evidence to reject the null hypothesis for Hypothesis 2 but find no support for Hypotheses 3 or 4 among all low chamber state legislative candidates.

Table 2-5. Logit Coefficients for the Probability of a Lower Chamber Repeat Candidate

Independent Variable	All Losing Candidates		Weak Candidates		Strong Candidates	
Factors Related to Initial Election:						
Vote (% of Total)	38.64	(11.30)**	43.34	(22.31)	-183.46	(45.31)
$Vote^2$	-152.21	(34.66)***	-175.89	(83.61)*	221.04	(50.08)***
$Vote^3$	188.59	(34.11)***	224.27	(101.23)*		-
Total Fundraising	-.154	(.042)***	-.202	(.090)*	-.137	(.045)**
% of Total Contributions	.197	(.180)	-.228	(.290)	.494	(.261)
% Self-Funded	.246	(.170)	.190	(2.19)	.358	(.254)
Candidate Ideology	.238	(.068) ***	.235	(.085)**	.243	(.105)*
Factors Related to Successive Election: *(+Multiplied by Candidates' Party and Party of President/Gov.)*						
National Economy	.005	(.017)	-.033	(.026)	.037	(.022)
National Partisan Economy+	-.029	(.012)*	-.049	(.021)*	-.014	(.015)
Presidential Midterm+	-.158	(.045)***	-.172	(.077)*	-.156	(.052)**
Presidential Approval+	.171	(.265)	.273	(382)	.106	(.376)
State Economy	.017	(.017)	.051	(.029)	-.009	(.020)
State Partisan Economy+	.004	(.014)	-.002	(.020)	.010	(.018)
Gubernatorial Midterm+	-.003	(.052)	-.030	(.075)	.016	(.059)
Change in Election Status (Base: Challenger → Challenger):						
Challenger → Open	.487	(.084)***	.145	(.117)	.824	(.113)***
Open → Challenger	-.664	(.090)***	-.481	(.139)***	-.727	(.116)***
Open → Open	-.106	(.189)	-.316	(.403)	.024	(.222)
Incumbent → Chall.	-.310	(.125)*	.194	(.635)	-.296	(.136)*
Incumbent → Open	-.397	(.437)	.438	(1.12)	-.443	(.486)

Table 2-5. Logit Coefficients for the Probability of a Lower Chamber Repeat Candidate (cont.)

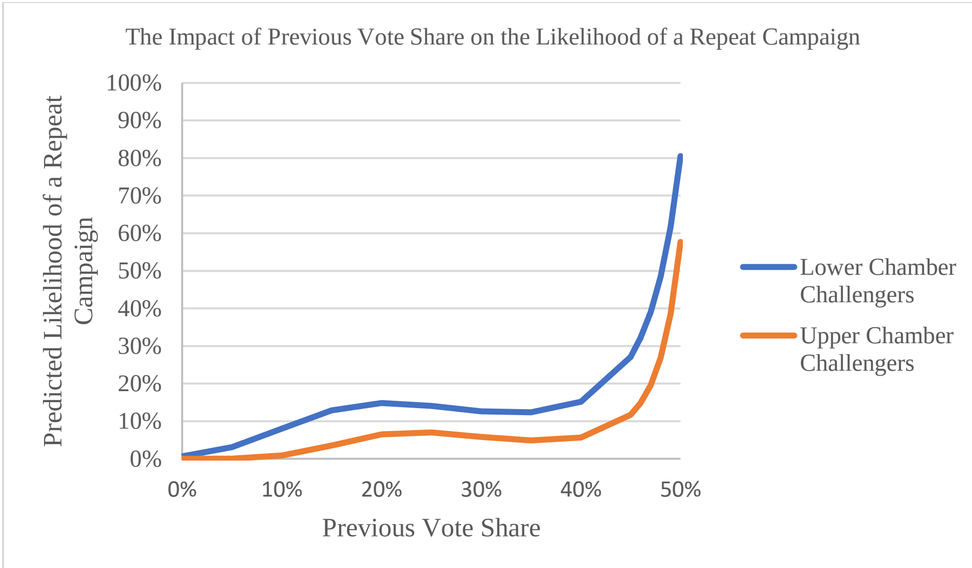
Independent Variable	All Losing Candidates		Weak Candidates		Strong Candidates	
Election Invariant Controls:						
District Partisanship	-1.20	(.339)***	-1.11	(.508)*	-1.25	(.441)**
Legislative Profess.	.355	(.219)	-.010	(.280)	.862	(.345)*
Length of Term	-.150	(.171)	.040	(.173)	-.347	(.330)
South	-.089	(.112)	-.199	(.163)	-.011	(.139)
Constant	-5.16	(1.24)***	-5.55	(1.97)**	36.36	(10.20)****
N	8,863		4,481		4,382	
Log Psuedolikelihood	-3718.50		-1684.39		-2008.43	
Pseudo R2	.055		.022		.077	
Modal category:	83.73%		87.10%		80.28%	
Correctly Predicted:	83.78%		87.10%		80.97%	
Reduction in Error:	.28%		0%		3.47%	

* p<.05; ** p<.01; *** p<.001
Standard errors adjusted for clustering by state and year

Table 2-6. Changes in Probability of a Lower Chamber Repeat Candidate (Insignificant Relationships not Shown)

Independent Variable	All Losing Candidates	Weak Candidates	Strong Candidates
Factors Related to Initial Election:			
Vote (% of Total)	See Graph 1		
$Vote^2$	See Graph 1	Not depicted	Not depicted
$Vote^3$	See Graph 1	Not depicted	
Total Fundraising (Z Score)	-14%	-18%	-13%
Candidate Ideology	+12%	+13%	+10%
Factors Related to Successive Election: *(⁺Multiplied by Candidates' Party and Party of President/Gov.)*			
National Partisan Economy^{+}	-7%	-9%	N/A
Presidential Midterm^{+}	-15%	-16%	-14%
Change in Election Status (Base: Challenger → Challenger):			
Challenger → Open	+63%	+38%	+128%
Open → Challenger	-49%	N/A	-52%
Incumbent → Challenger	-27%	N/A	-26%
Election Invariant Controls:			
District Partisanship	-12%	-12%	-12%
Legislative Professionalism	N/A	N/A	11%

Figure 2-1. The Impact of Previous Vote Share on the Likelihood of a Repeat Campaign



Hypothesis 5 predicted that more ideologically extreme candidates would be more likely to run repeat campaigns. The results from Table 2-5 support for this theory. As a candidate's ideological extremism increases, so does the probability that he or she will run again. Unfortunately, the model cannot provide guidance on the causal mechanism. On the one hand, it's possible that "sacrificial lambs" are rarely moderates- that is those most likely to "take one for the team" are more extreme members of party. On the other hand, this relationship could have nothing to do with party recruitment and instead be a product of self-selection from candidates who have particular agendas or use unsuccessful campaigns as a platform for issue advocacy. An increase of one standard deviation in candidate ideology is associated with a 12% increase in the likelihood of a repeat campaign. Interestingly, candidate ideology and campaign finance have similarly sized impacts on repeat candidacy.

As anticipated, the change in election status has a sizable impact on the likelihood of a repeat campaign. As compared to those candidates who would be challengers in both elections, losing candidates who inherit an open seat are 63% more likely to run in the successive election. Those who previously lost a race for a vacant state house seat are 49% less likely to run. Finally, potential revenge candidates are 27% less likely to run a successive campaign as compared to those who would be challengers in both races. Collectively, these variables provide strong support for Hypotheses 6 through 8.

From among the six variables measuring economic influences and midterm effects, only two variables are significant: *National Economy* and *Presidential Midterm*. *Presidential Midterm* is in the expected direction, but the results of *National Partisan Economy* run counter to the hypothesized relationship. The substantive impact of

Presidential Midterm suggests that repeat campaigns are 15% less likely when the successive election is held concurrently with a presidential midterm for a president of the candidate's party. Given these findings we reject the null hypothesis for Hypothesis 13. A shift of one standard deviation in *National Partisan Economy* results in a 7% decrease in the probability that a losing candidate will appear on the next general election ballot. While these results do not provide sufficient evidence to reject the null Hypothesis for Hypothesis 11, it's worthwhile to ponder why this might be the case. My attempt is to explain under what conditions losing candidates will appear on the general election ballot and my hypotheses are theorized on the rationality of the candidate, not the party or other actors. In between general elections primary or caucus processes select the candidates appearing in the next election. While my data does not allow me to measure whether these candidates entered and were unsuccessful during the primary processes, it is possible these candidates were willing repeats who were turned away by their party's voters or elite decision makers. Carsey and Berry (2014) do not include these variables in their models predicting which type of candidate will emerge in losing districts but given a choice it's reasonable to think that parties may prefer to start fresh or field a more qualified challenger given improved electoral conditions.

The final significant influence for lower chamber repeat campaigns is district partisanship. Hypotheses 18 suggests that losing candidates are less likely to repeat when they run in more friendly political contexts. The theory here is that those who lose in more welcoming districts will be discouraged from running again under the notion that they *should* have performed better. Carsey et al. (2003) and Carsey and Berry (2014) would likely argue that in these cases, either the party or other potential candidates are likely to stand in the way of a repeat candidacy. Regardless of the mechanism, candidates who lose in districts with more of their fellow partisans are less likely to appear on the successive general election ballot. Substantively, a one standard deviation increase in district partisanship results in a 12% decrease in the likelihood of repeat candidacy.

Looking to the other two columns of Table 2-5 we see differences between *Weak* and *Strong* lower chamber candidates. The different configurations of previous vote share is the result of several rounds of modeling in which I first ran the three functional forms (vote share, vote share squared and vote share cubed) and trimmed the models when the higher order variables were insignificant. While this may seem like "cherry-picking" the most significant results, this process was employed to allow the data to speak for itself and dictate the functional form of the relationship. For both models, no configuration, including vote share alone, resulted in a significant relationship for the base measure. For both *Weak* and *Strong* candidates, the squared term was significant (although negative for *Weak* candidates and positive for *Strong)* while the cubic term was significant among *Weak* candidates. These results are likely a product of restricting the model to a circumscribed range of vote share (0%-40% for *Weak* candidates and 40-50% for *Strong* candidates).

Among *Weak* lower chamber candidates, ideological extremism encourages repeat candidacy (with a similar magnitude to the overall model), while campaign spending, national economy, presidential midterms and district partisanship discourage repeat campaigns. Among *Weak* candidates the results suggest that repeats are more likely among those who would be running for a vacant seat but no more or less likely among candidates who previously ran for an open seat or among potential revenge candidates.

Strong candidates are similarly encouraged to repeat by candidate ideology and discouraged by campaign spending, presidential midterms and district partisanship. Changes in the electoral context provide support for the hypotheses that would-be open seat candidates are more likely to repeat while those facing a freshman incumbent are less likely (including revenge candidates). The largest difference for *Strong* candidates is their responsiveness to legislative professionalism, which failed to reach significance in the other two models. For *Strong* candidates a one standard deviation change in the professionalism of the legislative increases the probability of a repeat campaign by 11%. This suggests that among those lower chamber candidates who received at least 40% in their initial contest, legislative professionalism moderates their reemergence criteria.

The results from Table 2-5 and the substantive impact on Table 2-6 provide a complex narrative in terms of when repeat campaigns are likely. On the one hand candidates of all stripes appear to respond rationally to the changing status of the race, their previous performance, district partisanship and the cost of elections. On the other hand, we have the counterintuitive findings related to partisan economic conditions. As articulated earlier, I suspect driving force in these effects is the result of other, unmeasured candidates acting in self-interest. Specifically, as the probability of election increases other candidates who abstained in the previous round of elections may be more likely to consider candidacy. Despite this, we do find that in general losing lower chamber candidates behave as we'd expect under a rational actor's model.

Table 2-7. Logit Coefficients for the Probability of an Upper Chamber Repeat Candidate

Independent Variable	All Losing Candidates		Weak Candidates		Strong Candidates	
Factors Related to Initial Election:						
Vote (% of Total)	94.22	(37.92)*	2.59	(3.11)	29.65	(4.74)***
Vote^2	-333.88	(111.89)**		-		-
Vote^3	376.30	(107.47)***		-		-
Total Fundraising	-.149	(.102)	-.138	(.171)	-.065	(.546)
% of Total Contributions	-.876	(.490)	-.733	(.626)	-.710	(.732)
% Self-Funded	.783	(.422)	1.24	(.487)*	.055	(.826)
Candidate Ideology	.062	(.165)	-.285	(.198)	.485	(.345)
Factors Related to Successive Election: ($^+$Multiplied by Candidates' Party and Party of President/Gov.)						
National Economy	.014	(.058)	-.062	(.072)	.092	(.069)
National Partisan Economy$^+$.	.034	(.033)	.033	(.045)	.047	(.045)
Presidential Midterm$^+$	.074	(.113)	.010	(.191)	.151	(.149)
Presidential Approval$^+$	.014	(.646)	-.445	(.988)	.607	(.905)
State Economy	-.009	(.040)	.024	(.066)	-.035	(.056)
State Partisan Economy$^+$	.052	(.033)	.087	(.050)	.035	(.041)
Gubernatorial Midterm$^+$	-.150	(.110)	.105	(.154)	-.414	(.184)*
Change in Election Status (Base: Challenger → Challenger):						
Challenger → Open	.435	(.219)*	.200	(.329)	.766	(.321)*
Open → Challenger	-.474	(.229)*	-.246	(.340)	-.539	(.326)
Open → Open	-.778	(.561)	-.482	(.769)	-.917	(.753)
Incumbent → Chall.	-.304	(.394)		-	-.140	(.397)
Incumbent → Open	.478	(.512)		-	.641	(.513)

Table 2-7. Logit Coefficients for the Probability of an Upper Chamber Repeat Candidate (cont.)

Independent Variable	All Losing Candidates		Weak Candidates		Strong Candidates	
Election Invariant Controls:						
District Partisanship	-.924	(.918)	-2.42	(1.37)	-.086	(1.52)
Legislative Profess.	-.732	(.792)	.012	(.867)	-1.49	(1.24)
Length of Term	-.351	(.100)***	-.395	(.126)**	-.383	(.140)**
South	-.310	(.279)	-.300	(.357)	-.489	(.414)
Constant	-9.81	(4.19)*	-2.11	(1.14)	-14.43	(2.23)***
N	2,063		1,033		1,020	
Log Likelihood	-547.69		-258.82		-276.94	
Pseudo R2	.079		.047		.136	
Modal category:	91.61%		92.64%		90.49%	
Correctly Predicted:	91.66%		92.64%		90.69%	
Reduction in Error:	.58%		0%		2.06%	

* p<.05; ** p<.01; *** p<.001
Standard errors adjusted for clustering by state and year

Table 2-8. Changes in Probability for an Upper Chamber Repeat Candidacy (Insignificant Relationships not Shown)

Independent Variable	All Losing Candidates	Weak Candidates	Strong Candidates
Factors Related to Initial Election:			
Vote (% of Total)	See Graph 1	Not depicted	Not depicted
$Vote^2$	See Graph 1	-	-
$Vote^3$	See Graph 1	-	-
% Self-Funded	N/A	+35%	N/A
Factors Related to Future Election: *(⁺Multiplied by Candidates' Party and Party of President/Gov.)*			
Gubernatorial Midterm⁺	N/A	N/A	-34%
Change in Election Status (Base: Challenger → Challenger):			
Challenger → Open	+55%	N/A	+115%
Open → Challenger	-38%	N/A	N/A
Election Invariant Controls:			
Length of Term	-50%	-55%	-54%

Table 2-7 provides the results of the upper chamber models while Table 2-8 displays the changes in odd ratios for the significant independent variables. The results of the overall model are similar in some regards to that of the lower chamber models, but there are meaningful differences. In terms of previous vote share, Figure 2-1 provides the shape of the relationship across the range. As indicated earlier, the trend line looks remarkably similar to that of the lower chamber, but the likelihood of repeat candidates is lower for state senates, by as much as 20% as vote share approaches 50%.

As with the lower chamber models, we find responsiveness to changing incumbency contexts. Specifically, as compared candidates who would be matched against the same incumbent twice, those running in open seats are 55% more likely to repeat while those who ran for a vacant seat and would face a freshman incumbent are 38% less likely to run again. These changes are slightly muted as compared to the lower chamber models but are quite similar overall. In addition to changes in status, length of term has a sizable impact on repeat candidacies. As compared to candidates who would wait two years for their next election, those with a four-year gap between elections are half as likely to run again. This speaks to impact of the "distraction" factor which Carsey et al. (2003) find in their models.

While we find evidence of rational decision making in terms of previous vote share, incumbency context and length of term, none of the campaign fundraising, economic, midterm, presidential approval, candidate ideology or district partisanship variables appear to impact the calculus of upper chamber candidates. While candidates are undoubtedly aware of these considerations, once previous vote share, electoral context and term length are accounted for they fail provide significant improvement on the model. In addition to the lack of significance, it's important to note that we do not find the counterintuitive results we found for the lower chamber with regards to partisan economic trend. While no one has yet to systematically categorize the previous political or professional careers of state legislative candidates, I am hopeful that future research might begin to unpack the differences in challenger quality between chambers. If it's the case that political novices more frequently run for lower chamber seats, perhaps upper chamber races are subject to less political amateurism. If this was the case, then parties may be less inclined to select new candidates as electoral conditions improve. Again, the explanation for this finding, unfortunately, is outside of the scope of this project but worth further inquiry.

The *Weak* upper chamber model provides little explanation of strategic decision making. Even previous vote share, with or without squared and cubed terms, fails to reach statistical significance. Only two variables reach convention measure of statistical significance- term length and self-funding. A difference of two years in the amount of time between elections reduces the likelihood of a repeat campaign by 55%. Among *Weak* upper chamber candidates, self-funding appears to encourage repeat campaigns. A one standard deviation increase in the proportion of campaign funds donated by the candidate themselves increases the likelihood of repeat candidacy by 35%. This was the only model in which this variable reached significance and is counter to hypothesized direction.

The *Strong* upper chamber model provides a unique set of significant predictors. Previous vote share has significant and sizable impact on the likelihood of repeating as does term length which decreases the probability of a repeat campaign by 54% as terms increase from two to four years. Unlike any of the previous five models, gubernatorial midterms significantly reduce the chance of a repeat campaign among *Strong* upper chamber candidates by 34%.

I would be remiss if I didn't touch upon the predictive strength of the models in general. While they provide some insight as to what influences emergence decisions among this subset of candidates, they are far from comprehensive in their explanatory power. Some of this may have to do with the realities of modeling repeat campaigns. As the descriptive statistics indicated, repeat campaigns are a low incident event. Carsey and Berry (2014) demonstrate that the most likely outcome for any losing party is to field a new candidate in the subsequent election. In the broader candidate emergence literature, it is clear that far more potential candidates consider candidacy than actually run. Given this, researchers are charged with the daunting task of predicting a small number of '1's from a vast sea of '0's. The reduction in error statistics provided at the bottom of Table 2-5 and 2-7 speak to this difficulty. Despite the great number of independent variables included in the model and large sample size afforded by looking at nearly twenty years of elections, the models provide at best modest improvement on the naïve hypothesis that no candidates will repeat. These models improve our ability to predict repeat candidates by less than a percentage point in the overall models and 2.06% for *Strong* lower chamber candidates and 3.47% for *Strong* upper chamber candidates. Neither of the weak candidate models are any better than assuming candidates never repeat. The strength of these models, however, are not atypical. While Carsey et. al (2003) do not report the reduction in error for their models, Taylor and Boatright (2005) report improvements of approximately 7% and 5% for *Strong* and *Strategic* candidates, respectively.

This is not to say that understanding the factors which predict repeat candidates isn't a worthwhile venture. The findings from this study and its predecessors contribute to a larger body of literature which have identified factors of candidate emergence. Even if they provide guidance at the margins, taken collectively they provide many pieces of data which support the rationality of potential candidates. The overall low predictive strength, however, should be a reminder that these decisions are complex and likely include a wealth of considerations beyond what is directly observable from simple election data. This only highlights the need for future case study and survey approaches, like those of the Candidate Emergence Project, which gather data directly from candidates and can tap into subject areas not possible with observational data.

Conclusion

The aim of this chapter was not to comprehensively explain candidate emergence. If that were the goal, I am guilty of large-scale error and omission. The wealth of existing literature and array of approaches used to study candidate emergence speaks to the complexity of decision making on the part of potential candidates. Rather, my goal was to leverage existing election data on state legislative candidates to demonstrate under what conditions losing candidates will run in successive state legislative elections. Despite the narrow scope of this effort, the hope was by learning what makes these candidates more likely to run we may learn more about candidate emergence more broadly.

Prevailing theories of candidate emergence look to the presence of challengers or quality challengers to find evidence of candidate rationality. The theory suggests that as the benefits of holding office and likelihood of election increases and costs of candidacy decrease candidates are more likely to run for office. The six models analyzed in this chapter do provide some support for this notion. Despite the precise configuration within each model, previous electoral performance, campaign finance, candidate ideology, presidential midterms, district partisanship, term lengths and the status of elections have all been shown to significantly impact candidates' calculus of (re)emergence. While some counterintuitive results leave more questions than answers, they point to a need for more exploration on what happens between general elections, specifically during primaries and party caucuses. Additionally, new measures such as district partisanship and candidate ideology have provided new significant findings deserving of further inquiry. Perhaps survey research or other techniques may be able to shed light on the causal mechanism that make more ideologically extreme lower chamber candidates more likely to repeat.

The overall predictive strength of the models here are, on the one hand, a frank reminder of just how difficult predicting human decision-making is, especially with a limited set of observational data. On the other hand, it speaks to quality and necessity of multi-method approaches to explaining complex phenomenon. I am confident that there is much to be done on the study of repeat candidates specifically and candidate emergence more broadly, especially with regards to state legislative elections. Obvious places for improvement in our measures include systematically coding the experience or quality of challengers for state legislatures. Being able to dissect candidates into those with previous electoral experience may provide additional analytical leverage in explaining rational decision making. Further, surveys of state legislative candidates may enable scholars to better understand the attitudes and considerations of lower level candidates as compared to candidates for congress.

The decision to run for office is a significant life decision that affects the lives of candidates and their families. Survey research has shown that career decisions, financial security and a myriad of other important, personal factors are weighed before one registers as a candidate. While these considerations are outside the scope of observational data, this article is among many which indicate that personal considerations are not the lone influencers. Candidates weigh many considerations before deciding to run, and in doing so provide much deserved choice to voters.

CHAPTER 3

MEASURING THE EFFECTIVENESS OF STATE LEGISLATIVE REPEAT CAMPAIGNS

Introduction

The previous chapter sought to predict the circumstances under which losing state legislative candidates are likely to wage repeat campaigns. The results suggest that marginal and non-marginal candidates alike respond to previous election results and changing electoral conditions when making entrance decisions. District partisanship, changes in status of the race, national and state level partisan tide, changes in the economy, campaign finance, candidate ideology and time between elections were all found to influence whether state legislative candidates appear on the next general election ballot. While interesting, these findings offer little guidance as to whether this unique set of candidates are distinct in terms of electoral outcomes. The aim of this chapter is not only to answer whether repeat candidates are more successful in winning elected office but also to determine whether any differences in success may be attributed to intervening variables such as changes in campaign fundraising or partisan tide.

Repeat Campaign Effectiveness: The Literature

Ackerman's (1957) seminal work on identical congressional contests provides mixed results on the efficacy of repeat campaigns. On the one hand, he finds no difference between elections with repeat candidates and all contested races in terms of average electoral margins. Ackerman does, however, find that incumbents are more vulnerable when engaged in matched contests. In the 1954 and 1956 congressional elections, incumbents lost their seats in 7.4% and 6.5% of all contests, respectively. Among identical contests, these proportions increase to 20.5% and 13.3%, respectively. If these elections are typical of other congressional election years, Ackerman's findings would suggest that repeat candidates are twice as likely as other challengers to unseat incumbents.

Since Ackerman there has been some debate as to whether repeats are a privileged or stronger class of candidates. On the one side, Born (1977) and Squire and Smith (1984) find little to substantiate Ackerman's findings that repeat candidates enjoy greater electoral success. On the other side, Kazee (1980b) and Mack (1998), suggest that rewards for repeat candidacy are conditioned upon candidates' previous performance. Within this debate, the mechanism with which repeat candidates may earn an advantage is explored. Some authors suggest repeat candidates may simply be the beneficiary of national tides (Squire, 1986; Squire and Smith, 1984) or that strong initial performances may lead to increased campaign fundraising capacity, signaling to potential donors that a candidate is viable (Jacobson, 1980; Kazee, 1980b, Mack, 1998, Squire and Smith, 1984).

Born (1977) uses pairs of matched candidates as a quasi-experiment to measure if congressional incumbency advantage is derived from campaign experience, as well as the perquisites of holding office. If incumbents perform worse against repeat candidates, as compared to first-time candidates, it would be reasonable to conclude that campaign experience contributes to incumbency advantage. While he fails to find any significant difference between repeat and first-time candidates, Born's model is somewhat limited in that he predicts incumbent inter-election vote change as a function of three dichotomous independent variables- one for freshmen incumbents, one for sophomore incumbents and one for those facing repeat candidates. While the interpretation is correct- on average repeat candidates do not perform better than first time candidates, Born (1977) does nott control for the electoral contexts in which these races are run. Specifically, because the model lacks controls for things like campaign fundraising and district partisanship, we can't say for certain if two candidates in similar political environments, one repeat and one first-time, would experience comparable results. As Chapter 2 indicates, repeat campaigns are not randomly distributed amongst all losing candidates. As such the results of this test are likely biased by the entrance calculus of repeat candidates.

Squire and Smith (1984) examine repeat congressional challengers between 1960 and 1980, finding approximately 8% of all congressional elections during that time were contested by a repeat challenger. Unlike Ackerman (1957) and Born (1977), who focused on identical pairings, Squire and Smith also include those candidates who were unsuccessful in a prior election but run in the next cycle when the seat is vacant. These authors provide some perspective on both the efficacy of repeat campaigns as well as the mechanisms through which repeats may find increased success. A key finding for their research is that on average, between 1960 and 1980, 5.7% of first-time candidates were successful in winning their contests as compared to 17% of repeat candidates. While at first this may seem like evidence that repeat candidates perform better than first-time candidates, when narrowed to just those repeat candidates who faced an incumbent twice, 11% won a congressional seat in their repeat campaign. It is notable that a 5.7% success rate for first-time candidates and 11% for repeats are statistical equivalents. Over two election cycles an incumbent is just as likely to lose when facing two first-time candidates as opposed to the same, repeat candidate.

Despite being unable to document a statistical advantage for the average repeat candidate, Squire and Smith (1984) provide some perspective as to when repeats are more likely to succeed. For instance, repeat candidates who inherent a vacant seat in their successive election are far more likely to win (46%) as opposed to candidates facing the same incumbent (11%) or a freshman incumbent they previous lost to (13%). Although the timing of elections (presidential vs. midterm) does not appear not to influence when repeat candidates will run during this period, their findings suggest that repeat candidates' fortunes are greatly determined by national partisan tides. Examining win rates by party and year, the numbers suggest that repeat candidates may less be architects of their own victories and more so the beneficiaries of partisan fortune.

Another key contribution to the theory of repeat candidacies is Squire and Smith's focus on the financing of repeat campaigns. Their analysis suggests that winning and losing repeat candidates are distinct- those who ultimately won their second election received an average of 46% of the vote in their first election as compared to 37% for those candidates who were ultimately unsuccessful. As such, Squire and Smith pay particular attention to repeats' performance in the first election when examining campaign fundraising, for both the challenger and incumbent, in the second election. They find that candidates receiving more than 40% of the vote in the initial race received a fundraising bonus of over $10,000 per point above 40%. On average this suggests that candidates who surpassed the 40% threshold received approximately $46,000 more in campaign contributions than other, less successful repeats. Jacobson (1980) similarly examines repeat candidate campaign fundraising using a 40% threshold. His descriptive results suggest a more staggering differential in fundraising prowess between marginal and non-marginal candidates.

Squire and Smith (1984) find that a repeat candidate's initial performance has a much greater influence on their fundraising in the second election than on the incumbent's. Incumbents do not receive increased campaign donations once their opponent crosses the 40% threshold. Taken together with their results that challenger spending significantly influences the results of the second election while incumbent spending does not, they provide a strong argument that those repeat candidates who are successful are likely so because their first election results encouraged increased fundraising for their second campaign.

Squire's (1986) research on "Revenge-Seekers" reveals that of the 44 former incumbents who attempted to regain their seats between 1964 and 1982, only 12 (27%) were ultimately successful. While this success rate is larger than other classes of repeat candidates documented by Squire and Smith (1984), Square's (1986) analysis suggests that the success of these candidates is largely dependent on national tides and stymied by sophomore surge. Of the 12 revenge seekers who regained their seats, five did so in 1966, two years after the 1964 elections in which 44 incumbents lost their seats. Squire similarly provides evidence of substantial sophomore surge as throughout the 20 years of their research, candidates who defeated incumbents increased their vote share by as much as 5.5% on average, in the subsequent election.

Kazee (1980b) was the first scholar since Ackerman (1957) to document an electoral advantage for repeat candidates. His ability to do so was greatly influenced by the fact that he examines competitive and non-competitive repeats in isolation. Like Born (1977), Kazee (1980b) uses repeat candidates to help explain inter-election vote change. At the time of these two articles, scholars were particularly interested in explaining widening vote margins. As such, both Kazee and Born are looking to explain how much of incumbency advantage is attributable to campaign experience as compared to the benefits associated with holding congressional office.

Looking first at competitive and non-competitive districts separately (using a 45% threshold), Kazee (1980b) finds that the decreasing challenger vote share is concentrated in competitive districts and is not the result of increasing margins in uncompetitive districts. Second, he examines repeat and first-time candidates in aggregate and finds little difference between their inter-election vote change, as Born documents. It's not until marginal and non-marginal repeat candidates are analyzed separately that a clear narrative develops. Over 30 years (1946-1976) challengers' vote share steadily decreased within competitive districts not containing a repeat candidate (by as much as 9% on average in 1974-1976). By comparison, marginal repeat candidates do not demonstrate much trend at all. This suggests that, on average, repeat candidates were outperforming first-time candidates in previously marginal districts and in doing so cutting into the increasing incumbency advantage.

Writing prior to Squire and Smith (1984) and contemporaneously with Jacobson (1980), Kazee (1980b) identifies campaign spending as a possible mechanism through which repeat candidates may be effective in combating the wave of incumbency advantage. Comparing repeat and first-time candidates within competitive districts, he finds that repeats significantly and consistently outspent their counterparts. These results suggest that adequate funding of challenger campaigns may have been responsible for more competitive elections in an era of increasing vote margins.

Mack (1998) also focuses on campaign finance as a source for repeat candidates' potential electoral advantage. He finds that repeat candidates in marginal districts are both better financed than other candidates in their initial challenge and, on average, add to their financing lead in the subsequent election. An OLS regression model predicting campaign fundraising confirms that while on average repeat and first-time candidates with similar challenger quality have similar fundraising capacities, repeat candidates who performed especially well in their initial contest have a significant and substantive fundraising advantage, to the tune of $6,000 per point they received in the previous election. Overall this adds support to the theory that any repeat candidate advantage may be realized through increased campaign fundraising.

Modeling vote share, Mack (1998) finds a similar dynamic to repeat candidates' electoral performance. Using a two-stage least squares regression model, he isolates the influence of repeat candidacy on election returns. Here, too, he finds that not all repeat candidates are alike. On average, repeat candidates performs 3.65% *worse* than first-time candidates seeking congressional seats. However, for each point a repeat candidate received in the previous election they receive an additional .151% of the vote share. Taken together this implies a repeat candidate would need to earn approximately 47% of the vote in the first election before their advantage would amount to victory. These findings are important as they suggest unsuccessful candidates who give an incumbent a strong challenge in their first election may be rewarded in next election cycle.

While Mack's article is by far the most comprehensive analysis of the impact of repeat candidacy, it suffers from some methodological shortcomings. For instance, in his model comparing the election results of first time and repeat candidates, he employs a "conditional party strength" variable as the control for partisanship in districts. This is operationalized as challengers' vote share in the previous election and the main comparisons of repeats and first-time candidates stem from interactions with this variable. The issue is that the measure is obscured for first-time candidates as the previous vote share is a product of factors related to the previous election. These include the previous candidates' name recognition, their previous spending and the unique characteristics of the campaign. While this variable is meaningful for repeat candidates, who are responsible for their previous performance, it does not provide an unbiased comparison point with which to compare classes of candidates. While ultimately I use nearest neighbor matching to provide the most unbiased estimates of the difference between repeat and first-time candidates, all models in this chapter employ a district partisanship measure which is based on the 2000 presidential vote and is therefore exogenous to outcome of state legislative elections.

To date, no research on the impact of repeat candidacy has focused on the state legislative context. While Carsey et al. (2003) and Carsey and Berry (2014) provide significant guidance as to when losing state legislative candidates will run a repeat campaign, no literature captures the result of said efforts. This chapter aims to remedy this by comparing state legislative repeat and first-time candidates' electoral outcomes and examining through which mechanisms any differences may arise.

Theory

Before describing the data and analyses used to compare first-time and repeat candidates, I would be remiss if I didn't articulate the importance of these kind of studies. On its face, looking across time at such a distinct set of candidates may appear unimportant or limiting. Other scholars have found such contests convenient to explore phenomena including incumbency advantage (Born, 1977; Kazee, 1980b) and the effectiveness of campaign fundraising (Levitt, 1994). Authors turn to these contests because they provide what appears to be a quasi-experimental design to test other variables of interest. The assumption is that by narrowing a dataset to paired matches, one need not control for district specific factors and other variation that hampers cross-sectional approaches. While it's likely that district level characteristics are similar over the sequential elections, these tests fail to meet the burden of experimentation as case selection is not random. As Chapter 2 indicates, repeat candidates' decision making is influenced by a variety of factors which render their occurrence non-random.

If these elections are a minority of cases and occur non-randomly, then why bother studying them? Their importance lies in what we know about candidate emergence. As referenced in Chapter 2, a great deal of what we understand about when potential candidates will emerge relies upon a rational choice tradition championed by Black (1972). Black posits that a potential candidate will run for office when the benefit of holding office, multiplied by the probability of winning, is greater than the costs associated with running. For at least some subgroup of candidates, however, it appears that holding office may not be the primary aim of candidacy (Canon, 1993; Fowler, 1977; Huckshorn and Spencer, 1971; O'Neill, 1987). Per Huckshorn and Spencer's (1971) typology, other reasons for candidacy include supporting one's party organization, altruism, issue advocacy or other personal considerations such as increasing one's business prospects. It's the final group of rationales, personal reasons, that I think deserves further attention.

Scholars studying repeat candidates are not coy about why these contests are of interest. Inherently, we are seeking proof that running in consecutive elections is a successful approach to winning elected office. If something tangible from a losing campaign is retained between elections, then wouldn't it be strategic to run a losing campaign now to capitalize in the next election cycle? If it's the case that there are spillover effects between campaigns, either between successive elections for the same office or between elections for other offices, then Black's formula may need revision. Perhaps a missing term in the entrance calculus is a measure of political capital (PC) which is transferrable between elections. While quality candidates may not be willing to exert the effort necessary to run a campaign with less than favorable odds, they may be willing to do so if such efforts increase their prospects in a future campaign for the same, or different, office.

This political capital (PC) amendment likely includes other unmeasurable considerations discussed by Huckshorn and Spencer (1971), such as raising one's status in a political party or increasing one's chance of appointment to a coveted political position. While it would be nearly impossible to find evidence that these factors influenced the decision making of potential candidates, other than through survey or case study approaches, we can test whether in practice repeat candidacy is effective. If we find that repeat candidates have a head an advantage, as compared to first-time candidates, then it would be rational for ambitious politicians to enter less favorable contests with the hopes of jumpstarting their careers. More broadly, such evidence would speak volumes to the relationship between candidates and voters, between candidates and donors (if repeat candidates are financially advantaged), how voters conceptualize candidate "quality" and ultimately how individuals make their voting decisions.

If such evidence exists, the formal amendment to Black's theory would be:

U(o)=pB-C+PC

Where:

U(o) is the utility or value of candidacy
P is the probability of winning the seat assuming the potential candidate decides to run;
B is the benefit derived from winning the election and holding office
C is the cost associated with standing for election
PC is the political capital gained from candidacy. This capital assumed to be transferrable between elections and to impact the p value of future campaigns.

If we are unable to find evidence the repeat candidates are advantaged in consecutive elections for the same office, then sequential elections should likely be viewed as discrete and unrelated events.

Data

The analyses in this chapter stem from the same data as Chapter 2. The main difference between these chapters is how the data is utilized. Rather than using the results of previous elections to predict whether a candidate will repeat, in this chapter we focus on the outcome of elections and look backward in time for candidates' previous performance, if such contests exists. Given the same independent variables are relevant to both sets of analyses, I employ the same data matrix, principally comprised of information gathered from Klarner et al.'s State Legislative Election Returns, 1967 -2010

(Klarner et al., 2013), Bonica's Database on Ideology, Money in Politics, and Elections (DIME) (Bonica, 2016) with supplements from The National Institute on Money in State Politics (NIMSP), Gerald Wright's measure of district partisanship (Wright, 2001), Squire's measures of legislative professionalism (Squire, 2007) and Carl Klarner's "State Economic Data" (2013). As I am using largely the same variables in both chapters, the transformations described in Chapter 2 are identical. As the dependent variableis two-party vote share, I amend my calculation for campaign fundraising to be the percentage of two-party fundraising, rather than the percentage of district-wide fundraising. The largest change in approach is that repeat candidates are now being compared to first-time candidates in the second election rather than predicted from among all unsuccessful candidates. In this chapter, as in the last, I aim to be transparent about the rules for inclusion in each analysis.

Analysis

As no previous research has measured the efficacy of repeat campaigns for state legislature, this chapter should be considered exploratory. As such, my goal is not only to test whether repeat candidates outperform first-time candidates in elections but also to provide a thorough examination of the data behind this analysis. Given the uncertainty surrounding the mechanisms through which repeat candidates may be privileged, I intend to address the following questions in this chapter:

(1) Are the outcomes of sequential elections statistically related?
(2) Are electoral outcomes significantly different for repeat and first-time candidates?
(3) Are repeat and first-time candidates substantively different in terms of candidate characteristics or electoral contexts?

(4) *What differences exist between winning and losing repeat candidates' first campaigns?*
(5) *What differences exist between repeat candidates' first* and second campaigns *that might explain disparate outcomes?*
(6) *Are future campaign contributions contingent upon a candidate's initial performance?*
(7) *Controlling for other considerations, do repeat candidates receive higher average vote share?*

Are the Outcomes of Sequential Elections Statistically Related?

One of the basic assumptions of strategic repeat candidacy is the notion that consecutive elections are related. This is fundamental to the idea that running for office now provides future political capital. If successive elections were independent, that is the vote share in the initial election and future election were statistically unrelated, then unsuccessful campaigns would serve no future political goals. Table 3-1 provides a test that successive general election results are related. The model predicts candidates' share of the two-party vote and includes all major party candidates who ran in major party contested legislative races in consecutive elections, including incumbents and repeat candidates. The independent variables in this model include largely the same set of considerations used to predict repeat candidates in Chapter 2. This includes measures related to campaign finance, district partisanship, candidate ideology, national and state partisan tide and economic trend. A small difference in the model specification is that I include an interaction between the measure of state economic trend and incumbency to allow for the possibility that incumbents are held accountable for changes to the state economy under their watch. To test whether current vote share (time_t) is related to the previous election's vote share (time_{t-1}), I include the candidates' previous two-party vote share, the squared previous two-party vote share and interactions between both terms and incumbency. In the upper chamber model, the squared term for two-party vote share (not interacted with incumbency) was insignificant and was ultimately pruned from the model.

The main test for the interconnectedness of sequential elections is whether the previous vote share measures are significantly related to current vote share. Previous research on congressional repeat candidates, specifically Mack (1998) and Kazee (1980b), provide a compelling argument that consecutive elections are related. Both authors find that repeat candidates' future vote share is conditioned upon how well they performed in the initial election. Kazee (1980b) finds that candidates receiving at least 45% of vote in the initial election outperform first-time candidates while less successful repeats do not. In Mack's (1998) model, each additional point in the initial election is worth approximately .66% in the future election. Looking at inter-election vote change for congressional incumbents, Lee (2001) finds a strong, positive relationship between the number of terms in congress and future vote share. As seniority is associated with cumulative electoral gains, it reasonable to assume incumbent vote share between successive elections are strongly correlated. Given evidence that consecutive election outcomes are related for both congressional repeat candidates and incumbents, my hypothesis is that state legislative elections are similarly related. As we are focused exclusively on the impact of previous vote share on current vote share, I forgo making predictions on the remaining independent variables.

> *H1:* Controlling for relevant predictors of state legislative elections, we should expect that as vote share in the initial election rises so should vote share in the successive race. I anticipate this relationship will exist for both repeat candidates as well as incumbents.

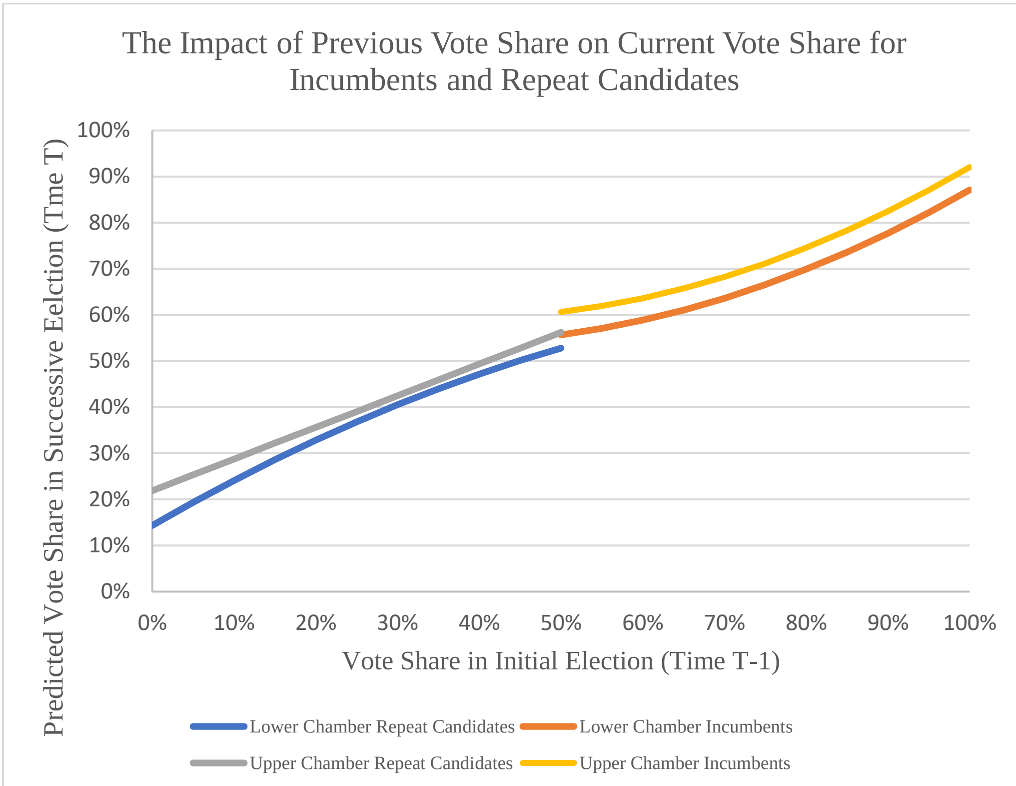
To be realistic, the null hypothesis for this test is not actually whether elections are statistically independent. Rather, Table 3-1 provides my best attempt at predicting two-party vote share and adds previous vote share to see whether it explains any additional variance. There are two plausible reasons why we might find significant relationships between previous and current vote share. The first is that the two elections are causally related. This implies that how well an incumbent or repeat candidate does in the first election influences the result of the next. A second, and not mutually exclusive, alternative is that the model is underspecified and omitted variable bias leads to a relationship between the two elections' two-party vote share. This would suggest that there are factors which influence vote share in both elections that are not included in the model. I hypothesize that the first mechanism is in play, but I am certain of the second. Despite my best efforts, there will be considerations which fail to reach the model, either because they are under-studied, under-specified or simply because of oversight. This doesn't mean, however, that this initial test fails to add value although it does lower the bar some. At this point we are simply looking for an excuse to halt further analysis that running in consecutive elections matters. If we find that the lagged vote share does not influence current vote share, this is a strong sign of statistical independence. In the event that the two elections are related, which is likely partially due to omitted variable bias, then it signals that further inquiry may be warranted. Rejecting the null hypothesis of statistical independence, however, should not be viewed as overwhelming proof that successive election results are statistically related.

Table 3-1. OLS Regression Coefficients Estimating Vote Share Among Incumbents and Repeat Candidates

Independent Variable	Lower Chamber		Upper Chamber	
Candidate Characteristics:				
Incumbent_t	.462	(.035)***	.455	(.059)***
Challenger_t	-.024	(.003)***	-.028	(.007)***
Total Fundraising $(\text{Z Score})_t$	-.008	(.001)***	-.014	(.001)***
% of Two Pty Contributions_t	.134	(.003)***	.125	(.006)***
% Self-Funded_t	-.004	(.005)	-.017	(.011)
Candidate Ideology_t	-.003	(.002)	.001	(.003)
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
District Partisanship_t	.180	(.006)***	.204	(.130)***
National Economy_t	-.001	(.001)	.002	(.003)
National Partisan Economy^{+}_{t}	.004	(.000)***	.003	(.000)***
Presidential Approval^{+}_{t}	.114	(.005)***	.149	(.010)***
Presidential Midterm^{+}_{t}	-.030	(.001)***	-.023	(.002)***
State Economy_t	-.002	(.001)**	-.000	(.002)
State Economy_t*Incumbent	.005	(.001)***	.001	(.002)
State Partisan Economy^{+}	-.000	(.000)	-.002	(.000)***
Gubernatorial Midterm^{+}_{t}	-.005	(.001)***	.002	(.002)
Previous Vote Share by Candidate Status:				
Two party vote_{t-1}	1.03	(.130)***	.687	(.044)***
Two party vote^2_{t-1}	-.519	(.174)**	-	
Two party vote_{t-1}*Incumbent	-1.56	(.152)***	-1.29	(.178)***
Two party vote^2_{t-1}*Incumbent	1.29	(.184)***	.822	(.131)***
Other:				
South	-.024	(.007)**	-.057	(.014)***
Constant	.080	(.024)	.153	(.024)***
N	8,546		1,898	
Adjusted R^2	.8381		.8362	

* p<.05; ** p<.01; *** p<.001
Results were obtained using OLS Regression in Stata IC v. 14.2
Fixed Effects for State and Year not shown.

Figure 3-1. The Impact of Previous Vote Share (Time T-1) on Current Vote Share for Incumbents and Repeat Candidates



The results of Table 3-1 suggest that many of the predictors that encourage repeat candidacy also influence the outcome of state legislative elections. For instance, campaign fundraising has the expected relationships with electoral prospects- as aggregate spending rises average vote shares diminish, but the more a candidate raises relative to his or her opponent, the higher their share of the two-party vote. While candidate ideology does not appear to influence electoral outcomes, district partisanship has the anticipated positive effect. It is noteworthy that we find mixed results on some of the economic and state-level context variables. The lower chamber model suggests that the state economy influences elections on a challenger vs. incumbent basis, while the upper chamber model reveals a significant partisan relationship but in the unexpected direction. Gubernatorial midterms only appear to influence the outcomes of lower chamber elections.

More importantly, Table 3-1 documents a largely positive and significant relationship between previous ($time_{t-1}$) and current ($time_t$) vote share. Given the polynomials and interaction variables, Figure 3-1 provides the substantive relationship between these measures, graphing the relationship between previous and current vote share separately for lower and upper chamber incumbents and repeat candidates. These predictions were created by setting all continuous independent variables to their mean values, all dichotomous and trichotomous variables to zero and varying only previous vote share. I predict values for repeat candidate between 0% and 50% and for incumbents between 50% and 100%. Looking at Figure 3-1, it is interesting how similar the lines are between both chambers despite being generated separately. Also, except for diminishing returns at the middle of the distribution, the relationship between the two elections is nearly linear. Generally speaking, as vote shares rise in the initial election, so does future vote share.

Two other observations from Figure 3-1 are worth noting. The first is the point at which repeat candidates' future vote share crosses the 50% threshold. Both lines, lower and upper chamber, appear to cross the 50% mark somewhere around 45% which is consistent with Mack's (1998) congressional predictions. The second point is the pseudo-intercept for incumbents. Looking at the 50% mark for previous vote share (where the incumbent predictions begin), lower chamber incumbents appear to have a predicted future vote share of about 55% while upper chamber incumbents exceed 60%. The distance between predictions at the 50% points, for repeat candidates and incumbents, demonstrates incumbency advantage.

To place our conclusions from this experiment in greater context, I reran the models in Table 3-1 without the lagged vote share measures (models not shown). Recall that a significant downside of this approach is that we don't know what portion of these variables' influence is due to true impact versus omitted variable bias. One way we might place this in broader context is to see how much variance is explained without the lagged measures. The R^2 from Table 3-1 are .8381 and .8362, for lower and upper chambers respectively. Without the lagged dependent variable, the R^2 are .7645 and .7623. This suggests that without the previous vote share the models explain about three quarters of the variance in current vote share and that previous vote share appears to explain about 7% of the variance in current vote share above and beyond that of the other independent variables. While I am certain omitted variable bias still plays a significant role in these findings, I think the strength of the models without the lagged variables should provide increased confidence that this is not the result of a woefully inadequate model.

Are Electoral Outcomes Significantly Different for Repeat and First-Time Candidates?

Given the previous test suggests that successive elections may be related, it is now reasonable to look for evidence that repeat candidates receive larger vote shares and/or are more likely win elections than first-time candidates. The most obvious first step in this analysis is to examine the voting returns for both sets of candidates. Table 3-2 and Table 3-3 provide the aggregate two-party vote share and win rates for state lower chamber and upper chamber non-incumbents, respectively. Note that I provide two separate estimates of these aggregate findings in each table. The first table includes all candidates for whom I could calculate two-party vote share and the outcome of the election. The second table includes only those candidates who have a complete data matrix for the relevant set of independent variables. I include this second table because it's important to be transparent about the assumptions of the multivariate models that follow. Note that the listwise table has approximately two-thirds the base as the table including all candidates. This is because it excludes any candidates who are missing campaign finance, candidate ideology, district partisanship, or other such information. Unfortunately, missing information is not randomly distributed.

Tables 3-4 and 3-5 provide further detail on the pattern of missingness for the models predicting comparing first-time and repeat candidates that will be included in this chapter. I provide two columns, Missing Data and Complete Data. Missing Data summarizes the data we have available for candidates who were ultimately dropped from the models. Complete data includes the candidates who have information for all relevant independent variables and therefore are included in the models. Note that this information is not random, for a good reason. Based on the base sizes in Tables 3-4 and 3-5, it is apparent that candidate ideology is the variable responsible for the lion's share of excluded cases. This is because Bonica's methodology relies upon candidate donations to calculate candidates' ideological placement. In the event a candidate raised no money or had too few donations to calculate an ideology score, they did not receive a value. When a candidate did not receive an ideology score, I had to merge campaign finance data from directly from The National Institute on Money in State Politics database (NIMSP). Ultimately, values were either quite low, or nonexistent. As a result, we should anticipate that these two samples are meaningfully different.

Examining Tables 3-4 and 3-5 we note that, on average, those candidates with complete data have higher outcome measures. They receive significantly higher two-party vote share and are more likely to win their contests. They are also are found in elections with higher fundraising and are responsible for a greater share of it. Ideologically, those with complete data are somewhat more extreme, although the differences are modest. Those with complete data are also likely to run in friendlier districts, in terms of partisanship, and run when the national economy is improving and when presidential approval is more favorable.

Table 3-2. Vote Share and Win Rates Among Lower Chamber Non-Incumbents

Among All Lower Chamber Candidates:

	Challengers		Open Seat Candidates	
	First-Time	Repeats	First-Time	Repeats
Mean Vote Share	36.92%	38.30%***	50.64%***	42.63%
St. Dev.	(.096)	(.106)	(.143)	(.118)
Win %	7.69%	11.39%***	51.91%***	27.58%
N	10,019	1,766	7,274	631

* p<.05; ** p<.01; *** p<.001 represent significant differences between First-time candidates and Repeat candidates within type of election.
Equal variances assumed for all independent sample t-tests

Among All Lower Chamber Candidates with Complete Data:

	Challengers		Open Seat Candidates	
	First-Time	Repeats	First-Time	Repeats
Mean Vote Share	39.04%	41.16%***	51.97%***	44.37%
St. Dev.	(.085)	(.084)	(.134)	(.098)
Win %	9.36%	14.31%***	54.98%***	30.18%
N	6,322	1,090	5,362	454

* p<.05; ** p<.01; *** p<.001 represent significant differences between First-time candidates and Repeat candidates within type of election.
Equal variances assumed for all independent sample t-tests

Table 3-3. Vote Share and Win Rates Among Upper Chamber Non-Incumbents

Among All Upper Chamber Candidates:

	Challengers		Open Seat Candidates	
	First-Time	Repeats	First-Time	Repeats
Mean Vote Share	37.87%	37.31%	50.25%***	43.52%
St. Dev.	(.093)	(.101)	(.147)	(.108)
Win %	9.07%	6.64%	50.94%***	26.60%
N	2,535	256	2,387	94

* p<.05; ** p<.01; *** p<.001 represent significant differences between First-time candidates and Repeat candidates within type of election.

Among All Upper Chamber Candidates with Complete Data:

	Challengers		Open Seat Candidates	
	First-Time	Repeats	First-Time	Repeats
Mean Vote Share	39.47%	38.78%	51.62%***	44.02%
St. Dev.	(.086)	(.088)	(.138)	(.103)
Win %	10.61%	6.08%	54.18%***	25.76%
N	1,630	148	1,794	66

* p<.05; ** p<.01; *** p<.001 represent significant differences between First-time candidates and Repeat candidates within type of election.
Equal variances assumed for all independent sample t-tests

Table 3-4. Comparison of Cases Removed by Listwise Deletion in Lower Chamber Models Comparing Repeat and First-Time Candidates

	Missing Data		Complete Data	
	N	Mean	N	Mean
Key Variables:				
Repeat Candidate	6,450	.1304**	13,228	.1167
Two Party Vote$_t$	6,450	.3748	13,228	.4464***
Won Election$_t$	6,450	.1684	13,228	.2898***
Candidate Characteristics:				
Total Fundraising$_t$	3,018	-.0668	13,228	.4328***
% of Two Pty Contributions$_t$	3,258	.1775	13,228	.4006***
% Self-Funded$_t$	3,289	.1233*	13,228	.1155
Candidate Ideology$_t$	856	.8147	13,228	.8745***
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
District Partisanship$_t$	5,595	-.0658	13,228	-.0245***
National Economy$_t$	6,450	1.62	13,228	1.84***
National Partisan Economy$^+{}_t$	6,450	-.0487	13,228	-.0438
Presidential Midterm$^+{}_t$	6,450	-.0495	13,228	-.0471
Presidential Approval$^+{}_t$	6,450	-.0061	13,228	.0062***
State Economy$_t$	6,450	1.65	13,228	1.62
State Partisan Economy$^+$	6,450	.0320	13,228	.0016
Gubernatorial Midterm$^+{}_t$	6,450	-.0064	13,228	.0048
Other:				
South	6,450	.2281***	13,228	.1564
Term Length	6,450	2.03	13.228	2.04

* p<.05; ** p<.01; *** p<.001 represent significant differences between those candidates with missing vs. complete data.

Table 3-5. Comparison of Cases Removed by Listwise Deletion in Upper Chamber Models Comparing Repeat and First-Time Candidates

	Missing Data		Complete Data	
	N	Mean	N	Mean
Key Variables:				
Repeat Candidate	1,634	.0832**	3,638	.0588
Two Party Vote$_t$	1,634	.3917	3,638	.4552***
Won Election$_t$	1,634	.1940	3,638	.3219***
Candidate Characteristics:				
Total Fundraising$_t$	913	-.0506	3,638	.4003***
% of Two Pty Contributions$_t$	1,006	.2255	3,638	.4130***
% Self-Funded$_t$	1,034	.1223	3,638	.1190
Candidate Ideology$_t$	433	.8876	3,638	.8519
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
District Partisanship$_t$	1,239	-.0630	3,638	-.0181***
National Economy$_t$	1,634	1.58	3,638	1.76**
National Partisan Economy$^{+}{}_t$	1,634	-.0982	3,638	.0159
Presidential Midterm$^{+}{}_t$	1,634	-.0526	3,638	-.0181
Presidential Approval$^{+}{}_t$	1,634	-.0110	3,638	.0068***
State Economy$_t$	1,634	2.16**	3,638	1.92
State Partisan Economy^{+}	1,634	.0016	3,638	-.0301
Gubernatorial Midterm$^{+}{}_t$	1,634	-.0092	3,638	.0118
Other:				
South	1,634	.2081***	3,638	.1402
Term length	1,634	3.09	3,638	3.39***

* p<.05; ** p<.01; *** p<.001 represent significant differences between those candidates with missing vs. complete data.

Most importantly, we find that the proportion of repeat candidates is significantly different between the two samples. Among lower chamber candidates with complete information, 11.67% are repeat candidates. Among those with partial information, 13.04% are repeats. The numbers for the upper chamber are 5.88% and 8.32%, respectively. What this means is that the key independent variable we are trying to measure is not exogenous to the selection process for modeling. This is unfortunate, but likely not catastrophic. Given the selection criteria of complete information hinges mostly upon candidate ideology scores, and therefore campaign finance information, it means we are excluding those candidates who either failed to report contribution data or candidates who were not required to do so. In this later case candidates either raised too little to require reporting or did not fundraise what-so-ever.

This means we are excluding from analyses mostly sacrificial lambs- those that appear on the ballot but fail to campaign in earnest. The differences in outcome variables provide support that these candidates are likely to weakest class of candidates. Given future modeling is multivariate or match based, we likely are controlling for these factors anyway, but it's important to remember that from among all the non-incumbents we are ultimately excluding a subset that is the weakest. Within that universe, repeat candidacy is statistically more likely. To ensure that listwise deletion is not influencing the outcomes of the models, I ran multivariate models in this chapter with and without candidate ideology. The effects of the main independent variables do not change significantly.

Returning to the question at hand, we look to Tables 3-2 and 3-3 for differences in outcomes between repeat and first-time candidates. Looking first at all lower chamber challengers, repeat candidates received significantly more of the two-party vote share and are significantly more likely to win challenger elections. Note that the 11% win-rate for repeat candidates is quite similar to the proportion of congressional repeat candidates who ultimately win per Squire and Smith (1984). First-time candidates, however, win 7.69% of lower chamber challenger races, making them statistically more likely to win over the course of two elections (14.78% for two first-time candidates vs. 11.39% for repeats). Open seat candidates for the lower chambers provide some unanticipated results. Squire and Smith (1984) found that vacancies were where congressional repeat candidates were most successful, winning some 46% of elections. It appears that in state legislative elections, this is not the case. Looking at the first table among all candidates, repeat candidates win only 27.58% of contests, as compared to 51.91% for first-time candidates. Average vote share supports these results.

The lower table in 3-2, provides similar results. Both measures, vote share and win rates, are higher for all classes of candidates, but this is to be expected as we've effectively narrowed the data to those candidates who engaged in at least some campaign fundraising. Statistical significance mirrors that of the former table. Taken collectively, Table 3-2 suggests that repeat candidates, on average, are more likely to win elections than first-time candidates when they appear as challengers. For open seats, first-time candidates far outperform repeats.

Table 3-3 provides a similar analysis for upper chamber elections. Unlike lower chamber candidates, there is no statistical difference in the outcome of elections between repeat and first-time candidates when they face an incumbent. Among open seat elections we see a similar pattern, however. First-time candidates consistently outperform repeat candidates in open contests. Again, the win rate for repeat candidates, 26.6%, is far below what Squire and Smith (1984) found for open congressional seats.

In summary, Tables 3-2 and 3-3 suggest that while repeat candidates are at a statistical disadvantage in open contests, as compared to first-time candidates, they appear to be privileged as challengers in lower chamber elections. Next, we will explore why this might be the case.

Are Repeat and First-Time Candidates Substantively Different in Terms of Candidate Characteristics or Electoral Contexts?

Given repeat candidates are more successful than first-time challengers in lower chamber elections and less successful in open contests for both chambers, what might be the cause of these disparate outcomes? To examine the data further, Tables 3-6 and 3-7 provide a comparison of both types of candidates for lower and upper chambers, respectively. Independent sample t-tests are included to measure whether the groups are significantly different on any of the relevant independent variables. Only candidates with complete data for all independent variables are included in these tables.

Table 3-6. Mean Characteristics of First-Time (FTC) and Repeat Candidates for Lower Chambers

	Challengers		Open Seats	
	First-Time	Repeats	First-Time	Repeats
Key Variables:				
Two Party Vote$_t$	.3904	.4116***	.5197***	.4437
Won Election$_t$	.0936	.1431***	.5498***	.3018
Candidate Characteristics:				
Total Fundraising$_t$	.3711	.4305	.4932	.5836
% of Two Pty Contributions$_t$	.2993	.3080	.5403***	.381
% Self-Funded$_t$	.1265*	.1119	.1050	.0937
Candidate Ideology$_t$	.9351	.9526	.7851	.8998***
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
District Partisanship $_t$	-.0514	-.0502	-.0153***	-.0585
National Economy $_t$	1.82	1.92	1.84	1.86
National Partisan Economy$^+$ $_t$	-.0595	-.1515	.0191*	-.3080
Presidential Midterm$^+$ $_t$	-.0903	-.0661	.0052***	-.0176
Presidential Approval$^+$ $_t$	.0092	.0128	.0002	.0200
State Economy $_t$	1.61	1.72	1.52	1.66
State Partisan Economy$^+$	.0226	-.0563	-.0119	.0083
Gubernatorial Midterm$^+$$_t$	.0090	-.0018	-.0048	.0749*
Other:				
South	.1490	.1541	.1708***	.0947
Length of Term	2.04	2.03	2.04	2.04
N	6,322	1,090	5,362	454

* p<.05; ** p<.01; *** p<.001 represent significant differences between First-time candidates and Repeat candidates within type of election.
Equal variances assumed for all independent sample t-tests

Table 3-7. Mean Characteristics of First-Time (FTC) and Repeat Candidates for Upper Chambers

	Challengers		Open Seats	
	First-Time	Repeats	First-Time	Repeats
Key Variables:				
Two Party Vote$_t$	.3947	.3878	.5162***	.4402
Won Election$_t$	.1061	.0608	.5418***	.2576
Candidate Characteristics:				
Total Fundraising$_t$	.3412*	.1377	.4707	.5361
% of Two Pty Contributions$_t$	.2932	.2690	.5337***	.4142
% Self-Funded$_t$	.1375	.1550	.0994	.1136
Candidate Ideology$_t$	.9155	.9487	.7855	.8693
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
District Partisanship $_t$	-.0467	-.0583	.0125***	-.0534
National Economy $_t$	1.88	1.97	1.63	2.06
National Partisan Economy^{+} $_t$	.0050	.0259	.0269	-.0393
Presidential Midterm^{+} $_t$	-.0607	.0676*	.0111	.0455
Presidential Approval^{+} $_t$	.0134	-.0035	.0181	-.0005
State Economy $_t$	2.01	1.99	1.83	2.018
State Partisan Economy^{+}	-.0522	.3924	.0146	.1145
Gubernatorial Midterm^{+}$_t$	.0160	.0068	.0100	-.0303
Other:				
South	.1466	.1216	.1355	.1515
Length of Term	3.36	3.11	3.44	3.36
N	1,630	148	1,794	66

* p<.05; ** p<.01; *** p<.001 represent significant differences between First-time candidates and Repeat candidates within type of election.
Equal variances assumed for all independent sample t-tests

The challenger columns in Table 3-6 should provide us with the most interesting information as it was among this audience that repeat candidates were most successful. Two theories debated in the congressional literature suggest that repeat candidates may be more successful because either they had an advantage in campaign fundraising or because they were the beneficiaries of strong partisan tide. Interestingly, the results of Table 3-6 do not provide support for either theory. Other than the key outcome measures, only the proportion of campaign finance that comes from the candidate, % Self-funded, is significantly different between the two classes of candidates. Other than this one measure, lower chamber repeat challengers appear to be a completely average group of candidates, despite their higher performance. Table 3-6 does little to shed light on the mechanism through which repeat challengers are more successful than first-time candidates.

Tables 3-6 and 3-7 do, however, give us a good idea as to why repeats are less successful than first-time candidates in open seat contests. In both chambers, first-time candidates for vacancies raise more money relative to their opponents and run in friendlier districts. On average, first-time candidates who run in lower chamber open contests are responsible for 54% of the two-party fundraising, as compared to just 38% for open seat repeat candidates. For upper chamber candidates these numbers are 53% and 41% for first-time and repeat candidates, respectively. In the lower chamber races (Table 3-6), repeat candidates are also slightly more ideologically extreme and are more likely run in presidential midterms that favor their opponents' party. That said, on average they tend to run when gubernatorial midterms are more in their favor. Upper chamber open seat candidates (Table 3-7) differ exclusively on campaign finance, district partisanship and the outcome of elections.

Tables 3-6 and 3-7 provide a rather direct answer as to why open seat repeat candidates perform worse, on average, than first-time candidates. They mount their campaigns in districts which are less inclined to vote for their party and they are overwhelmingly outspent by first-time candidates and, for that matter, by their opponents. When we look to elections including incumbents, where repeats outperform first-time candidates, the data does not provide a clear mechanism through which repeats are advantaged. On average repeat candidates perform better, but we can't say why.

What differences exist between winning and losing repeat candidates' first campaigns?

Another approach which might help us better understand repeat campaigns is to compare winning and losing repeat candidates' first elections to see if they are different in meaningful ways. This analysis is aimed at determining whether winning repeat candidates are a distinct group of candidates from repeats who ultimately lose. Tables 3-8 and 3-9 provides independent sample t-tests comparing losing and winning repeat candidates' first elections. Due to low sample sizes for winning repeat candidates, especially in upper chambers, I include all data available for candidates regardless if some variables are missing. To this end I provide the relevant base size for each variable.

Table 3-8. Comparison of Winning and Losing Lower Chamber Repeat Candidates' Initial Elections

	Losers		Winners	
	N	Mean	N	Mean
Key Variables:				
Two Party Vote$_{t-1}$	2,012	.3736	373	.4644***
Candidate Characteristics:				
Total Fundraising$_{t-1}$	1,466	.2021	271	.8077***
% of Two Pty Contributions$_{t-1}$	1,466	.2802	271	.4303***
Candidate Ideology$_{t-1}$	1,249	.9373*	265	.8629
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
District Partisanship $_{t-1}$	1,925	-.0805	362	.0108***
National Economy $_{t-1}$	2,012	1.79	373	1.77
National Partisan Economy^{+} $_{t-1}$	2,012	-.0864	373	-.0538*
Presidential Midterm^{+} $_{t-1}$	2,012	-.0422	373	-.0188
Presidential Approval^{+} $_{t-1}$	2,012	.0012***	373	-.0515
State Economy $_{t-1}$	2,012	1.31	373	1.50
State Partisan Economy^{+} $_{t-1}$	2,012	-.0048	373	.0052*
Gubernatorial Midterm^{+}$_{t-1}$	2,012	-.0099	373	.0214
Other:				
South	2,012	.1635	373	.1421

* p<.05; ** p<.01; *** p<.001 represent significant differences between those candidates with missing vs. complete data.
Equal variances assumed for all independent sample t-tests

Table 3-9. Comparison of Winning and Losing Upper Chamber Repeat Candidates' Initial Elections

	Losers		Winners	
	N	Mean	N	Mean
Key Variables:				
Two Party Vote$_{t-1}$	308	.3821	42	.4723***
Candidate Characteristics:				
Total Fundraising$_{t-1}$	206	.2032	31	.8986***
% of Two Pty Contributions$_{t-1}$	206	.2704	31	.4532***
Candidate Ideology$_{t-1}$	178	.8614	31	.8920
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
District Partisanship$_{t-1}$	266	-.0778	35	.0313***
National Economy$_{t-1}$	308	1.47	42	1.42
National Partisan Economy$^{+}_{t-1}$	308	-.1208	42	.7131
Presidential Midterm$^{+}_{t-1}$	308	0.00	42	0.1667*
Presidential Approval$^{+}_{t-1}$	308	.0116**	42	-.0561
State Economy$_{t-1}$	308	1.37	42	1.46
State Partisan Economy$^{+}_{t-1}$	308	-.2132	42	.6733*
Gubernatorial Midterm$^{+}_{t-1}$	308	-.0422	42	.1667
Other:				
South	308	.1753	42	.2857

* p<.05; ** p<.01; *** p<.001 represent significant differences between those candidates with missing vs. complete data.
Equal variances assumed for all independent sample t-tests

Table 3-8 provides a comparison of initial elections for lower chamber candidates. The results of this comparison make it clear that not all repeat candidates are alike. For instance, those who ultimately win earned 46% of their initial vote as compared to 37% for candidates who will eventually lose their repeat campaigns. Squire and Smith (1984) find similar numbers at the congressional level. Likewise, eventual winners run in districts with higher overall fundraising, are responsible for a much larger proportion of that fundraising and run in districts which are more party neutral as compared to the 8-point deficit facing eventual losers. In addition, while eventual winners are likely to have run in friendlier partisan economic climates, their initial run, on average, is more likely to be in a midterm year for their party's president.

Table 3-9 provides the same data for upper chamber candidates. Unfortunately, we have only 42 eventual winners, eleven of which are missing data for campaign finance and candidate ideology variables. That said, similar patterns emerge when comparing eventual winners and losers. Those who will ultimately win their second race earn more of the two-party vote share, are engaged in campaigns with higher overall fundraising and are responsible for 45% of the total dollars raised, as compared to just 27% for eventual losers. Like lower chamber winners, upper chamber repeat candidates who ultimately win their second election run in districts which are, on average, 3-points in their favor as compared to eventual losers who run in districts nearly 8-points in favor of the opposition. Like lower chamber repeat winners, first elections for upper chamber winners are more likely to be run when the state economy is in their party's favor. That said, these first elections are also more likely to be run when the national partisan economy and presidential favorability favor their opponents.

Of the findings that come from Tables 3-8 and 3-9, the most striking data point is that eventual winners come from a pool of candidates who lose their initial elections by narrow margins. On average, eventual winners lose their initial elections by 7% while eventually losers lose their initial contests by margins closer to 25%. The campaign finance and district partisanship data provide the supporting narrative for why these races are so close. Eventual winners are indeed distinctly different from those repeat candidates who ultimately lose.

What Differences Exist Between Repeat Candidates' First and Second Campaigns That Might Explain Disparate Outcomes?

Yet another analytical tool that might be fruitful is to compare the consecutive elections of winning and losing repeat candidates. This would allow us to identify which characteristics vary between attempts, regardless of whether they are under candidates' control. Tables 3-10 and 3-11 compare the initial and successive elections of winning and losing repeat candidates for lower and upper chamber elections, respectively. As with the last analysis, I use all available data to preserve sample size. Given we're examining data for two elections simultaneously, the likelihood of missing campaign finance, candidate ideology or district partisanship data increases.

Table 3-10. Comparison of Winning and Losing Lower Chamber Repeat Candidates

	Losing Repeats			Winning Repeats		
	N	$Time_{T-1}$	$Time_T$	N	$Time_{T-1}$	$Time_T$
Key Variables:						
Two Party Vote	2,012	.3736***	.3669	373	.4644	.5422***
Candidate Characteristics:						
Total Fundraising	1,433	.2076	.2021	267	.8080	1.13***
% of Two Pty Contributions	1,450	.2808***	.2401	270	.4311	.5048***
Candidate Ideology	1,130	.9393	.9749***	263	.8630	.8729***
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*						
National Economy	2,012	1.79	1.91*	373	1.77	1.59
National Partisan Economy$^+$	2,012	-.0864	-.1725	373	-.0538***	-.4257
Presidential Midterm$^+$	2,012	-.0422	-.0239	373	-.0188***	-.3887
Presidential Approval$^+$	2,012	-.0172	-.0352	373	-.0019***	-.1871
State Economy	2,012	1.31	1.75***	373	1.50	1.52
State Partisan Economy$^+$	2,012	-.0048	.0810	373	.0052	-.0117
Gubernatorial Midterm$^+$	2,012	-.0099	.0199	373	-.0214	-.0456

* p<.05; ** p<.01; *** p<.001 represent significant differences between $Time_{T-1}$ and $Time_T$ using paired sample t-tests.

Table 3-11 Comparison of Winning and Losing Upper Chamber Repeat Candidates

	Losing Repeats			Winning Repeats		
	N	$Time_{T-1}$	$Time_T$	N	$Time_{T-1}$	$Time_T$
Key Variables:						
Two Party $Vote_t$	308	.3821***	.3682	42	.4723	.5483***
Candidate Characteristics:						
Total Fundraising	203	.2048	.1213	31	.8986	.9016
% of Two Pty Contributions	203	.2734*	.2445	31	.4532	.5717
Candidate Ideology	165	.8725	.9389***	29	.8718	.8736
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.)*						
National Economy	308	1.47	1.78*	42	1.42	1.90
National Partisan $Economy^+$	308	-.1208	-.0046	42	.7131	.0755
Presidential $Midterm^+$	308	0.00	.0942	42	.1667***	-.3333
Presidential $Approval^+$	308	.0019	.0145	42	.0868**	-.1470
State Economy	308	1.37	2.01***	42	1.46	1.90
State Partisan $Economy^+$	308	-.2132	-.3881	42	.6733	.2274
Gubernatorial $Midterm^+$	308	-.0422	-.0325	42	.1667	.0952

* $p<.05$; ** $p<.01$; *** $p<.001$ represent significant differences between $Time_{T-1}$ and $Time_T$ using paired sample t-tests.

Turning to Table 3-10, we find that vote share for ultimately unsuccessful repeat candidates declines between elections. This provides support for the notion that while some subset of candidates is rewarded for their initial performance, at least some subgroup of candidates is penalized for underperformance. Likely influencing their downward trend, we find that campaign fundraising, in terms of share of two-party dollars, also declines between elections. While not significant in the partisan interactions, both the national and state economies appear to improve for the second race of an ultimately unsuccessful lower chamber repeat candidate. Both winning and losing repeat candidates become appear more ideologically extreme in their second contests. This does not mean, that their policy positions have changed between elections, rather this means that the donor pools of these candidates become more ideologically extreme in the second election.

Looking to those lower chamber candidates who ultimately win, we find that average vote share rises between elections, which is a product of the analysis itself. That said, campaign finance variables increase significantly between campaigns. Second elections ($Time_T$) are associated with more total fundraising and the winning repeat candidate, on average, is responsible for over half of all dollars raised compared to just 43% in their initial race. Interestingly, the controls for national partisan economy, presidential midterms and presidential approval all seem to decline between campaigns suggesting that while these winning candidates are armed with increased resources to wage their next battle, they are facing significantly more difficult political environments. This conflicts with Squire and Smith's (1984) theory that winning repeat candidates are the beneficiaries of improving political environments.

Turning to Table 3-11 for the upper chamber data, we find largely the same trends. Among losing repeat candidates, vote share and share of two-party contributions decline between elections while the national economy and state economy improve. Among winning upper chamber repeat candidates, share of two-party contributions increases while presidential approval and presidential midterms shift against their party.

While far from providing a smoking gun as to why some repeat candidates win and others lose, the data does suggest that winning repeat candidates, on average, are among those who came closest to victory in the initial election and were able to improve upon their campaign fundraising. The idea that winning repeat candidates simply luck into victory with improved partisan tide fails to find support. In fact, winning repeat candidates are running campaigns in harsher political environments than their first election.

Are future campaign contributions contingent upon a candidate's initial performance?

Several studies in the congressional repeat candidates' literature examine the dynamics of campaign finance for marginal and non-marginal repeat candidates (Jacobson, 1980; Kazee, 1980b; Squire and Smith, 1984). Collectively they suggest that winning repeat candidates are ultimately successful by running a competitive first election and being rewarded with additional campaign funds in the next election. Jacobson (1980) and Squire and Smith (1984) both use 40% of the vote as benchmark at which potential donors take notice. Kazee (1980b) uses 45% to denote marginal races. Given the use of two-party vote and the lower visibility of state legislative campaigns, I use 45% as the threshold at which candidates may be considered viable during a repeat campaign. Tables 3-12 and 3-13 compare the initial and successive campaigns for marginal and non-marginal state legislative repeat candidates. Table 3-12 examines lower chamber races while Table 3-13 compares elections for upper chambers. Again, due to sample size considerations related to comparing two elections, I display all available data for candidates, not just those for candidates with complete information.

The findings from studies of congressional repeat candidates suggest that marginal repeat candidates (those receiving above 40% or 45% in their initial elections) outspent first-time candidates and other repeats in the subsequent election (Jacobson, 1980; Kazee, 1980b; Squire and Smith, 1984). This pattern does not appear in the state legislative data. Looking at Table 3-12, we first notice that non-marginal candidates, on average, slightly improve their vote share between elections but ultimately win only 5.6% of their races. Marginal candidates, those receiving at least 45% of the vote in the first election, do not significantly improve upon their average initial vote share but do win 35% of contests. Looking at the campaign finance variables, non-marginal candidates are involved in somewhat average campaigns in terms of total fundraising. The level of overall spending does not significantly change between elections but their share of the two-party fundraising total declines by 2% between elections. Marginal repeat campaigns see a significant increase in total fundraising between elections although substantively the increase is about one-tenth of standard deviation. Interestingly, and contrary to the prevailing theory, marginal repeat candidates see a decrease in their share of the two-party fundraising totals in the second election, from 45.72% in the first election to 42.93% in the second.

Table 3-13 provides the results for upper chamber candidates. Neither marginal nor non-marginal candidates appear to significantly improve their vote share between elections. On average non-marginal candidates win just 2.7% of their second attempts while marginal candidates win 28.1%. Neither of the campaign finance variables differ significantly between elections for marginal or non-marginal repeat candidates. Collectively, Tables 3-12 and 3-13 suggest that candidates are not rewarded with windfall donations after a relatively close election. Rather, lower chamber marginal repeats appear to raise less, compared to their opponent, and upper chamber marginal candidates see no significant movement in campaign financing. Previous analyses suggested that those repeat candidates who ultimately win raise significantly more money in their second attempt, but the results of Table 3-12 and 3-13 argue that reaching the 45% mark is insufficient to guarantee an increase in campaign resources.

Table 3-12. Comparison of Lower Chamber Repeat Candidates' Elections by Marginality

	N	Non-Marginal 1st Race (<45%) $Time_{T-1}$	$Time_T$	N	Marginal 1st Race $Time_{T-1}$	$Time_T$
Key Variables:						
Two Party Vote	1,577	.3414	.3509***	808	.4783	.4789
Won Election	1,577	.0000	.0558	808	.0000	.3527
Candidate Characteristics:						
Total Fundraising	1,126	-.0102	.0031	574	.9142	1.03**
% of Two Pty Contributions	1,142	.2270***	.2070	578	.4572**	.4293
Candidate Ideology	838	.9745	1.00*	555	.8501	.8875***
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*						
National Economy	1,577	1.76	1.85	808	1.84	1.88
National Partisan Economy+	1,577	-.1164	.2203*	808	-.0128	.1961*
Presidential Midterm+	1,577	-.0545	-.0799	808	-.0074*	-.0829
Presidential Approval+	1,577	-.0133***	-.0653	808	-.0178	-.0465
State Economy	1,577	1.34	1.72***	808	1.35	1.69***
State Partisan Economy+	1,577	.0001	.0619	808	-.0098	.0755
Gubernatorial Midterm+	1,577	-.0216	.0019	808	.0074	.0248

* p<.05; ** p<.01; *** p<.001 represent significant differences between $Time_{T-1}$ and $Time_T$ using paired sample t-tests.

Table 3-13. Comparison of Upper Chamber Repeat Candidates' Elections by Marginality

	Non-Marginal 1st Race (<45%)			Marginal 1st Race		
	N	$Time_{T-1}$	$Time_T$	N	$Time_{T-1}$	$Time_T$
Key Variables:						
Two Party Vote	222	.3435	.3411	128	.4788	.4743
Won Election	222	.0000	.0270	128	.0000	.2813
Candidate Characteristics:						
Total Fundraising	148	-.0017	-.0781	86	.8103	.7458
% of Two Pty Contributions	148	.2108	.1999	86	.4460	.4392
Candidate Ideology	110	.8895	.9388***	84	.8501	.9165**
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*						
National Economy	222	1.56	1.84	128	1.28	1.71
National Partisan Economy+	222	.0129	.0748	128	-.0790	-.1160
Presidential Midterm+	222	.0225	.0450	128	.0156	.0391
Presidential Approval+	222	.0240	-.0113	128	-.0086	.0063
State Economy	222	1.32	1.86**	128	1.49	2.24**
State Partisan Economy+	222	-.2107	-.2693	128	.0734	-.3922
Gubernatorial Midterm+	222	-.0586	-.0090	128	.0547	-.0313

* p<.05; ** p<.01; *** p<.001 represent significant differences between $Time_{T-1}$ and $Time_T$ using paired sample t-tests.

Controlling for Other Considerations, Do Repeat Candidates Receive Higher Average Vote Share?

So far, the analysis suggests that repeat candidates are more likely than first-time candidates to win lower chamber elections as challengers and less likely to win in open contests, regardless of chamber. Examination of candidate characteristics suggests that the difference in open seat contests results from relative better funding for first-time candidates. We've yet to undercover any explanation as to why repeats are slightly privileged in lower chamber challenger races. Despite this, the data shows that winning repeat candidates are simply better financed and running in districts more inclined towards their party. Campaign fundraising does appear linked to the outcome of elections, with winning repeats increasing their relative spends between elections. That said, unlike congressional races, state legislative candidates are not, on average, rewarded for the outcome of their initial elections with dollars. Rather, we have yet to uncover a mechanism through which winning repeat campaigns increase their fundraising operations and drive their candidates to victory.

Having reached the limits of descriptive statistics to compare first-time and repeat candidates, we now turn to inferential statistics. Specifically, despite the patterns that developed in Tables 3-2 to 3-13, we're still unable to determine whether, on average, repeat candidates perform better than first-time candidates controlling for electoral context. The descriptive statistics shown thus far demonstrate the complexity of data, especially as it relates to campaign finance. To truly isolate the impact of repeat candidacy, we must turn to multivariate techniques.

Table 3-14 presents the findings from an OLS regression model predicting major party non-incumbents' two-party vote share. In addition to the standard battery of variables included in previous models, I include a trio of measures related to repeat candidacy. While it would be ideal to use previous vote share in the model, first-time candidates do not have a suitable surrogate (see my earlier criticism of Mack, 1998), so we are left with simple categorical controls for repeat candidacy. For both lower and upper chamber candidates, I classify "weak" repeats as those receiving less than 38% of the vote, "medium" repeats as those receiving 38-47% of the vote and "strong" repeats as those receiving 47% or more. These cut points were chosen based on the distribution of the data, seeking to find comparable sample sizes between groups. The comparison group is first-time candidates, with the coefficients representing the mean difference in two-party vote share associated with each class of repeat candidates.

Given Mack's (1998) results indicating that the advantage of congressional repeat candidacy is conditioned upon previous vote share, I am inclined to believe it will be similar for state legislative candidates. As "medium" repeat candidates are average performers and may be on either side of reward/penalty line, I do not make a hypothesis specific to this group, but rather anticipate no, or modest change as compared to first-time candidates.

> *H2: Controlling for relevant predictors of state legislative elections, I expect that weak repeat candidates perform significantly worse, on average, than first-time candidates. I expect this relationship to hold for both lower and upper chamber elections.*

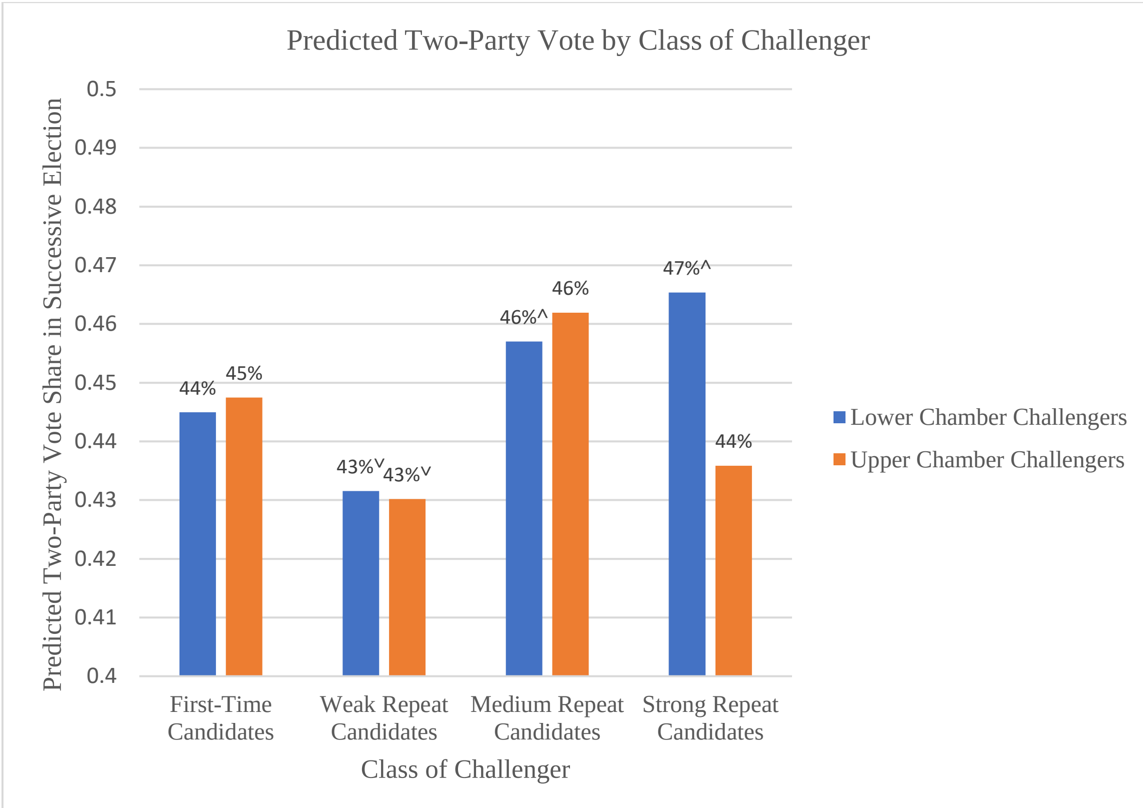
> *H3: Controlling for relevant predictors of state legislative elections, I expect that strong repeat candidates perform significantly better, on average, than first-time candidates. I expect this relationship to hold for both lower and upper chamber elections.*

Table 3-14. OLS Regression Coefficients Estimating the Impact of Repeat Candidacy on Vote Share

Independent Variable	Lower Chamber		Upper Chamber	
Candidate Characteristics:				
Weak Repeat Candidates	-.013	(.003)***	-.017	(.008)*
Medium Repeat Candidates	.012	(.003)***	.014	(.007
Strong Repeat Candidates	.020	(.003)***	.002	(.008)
Total Fundraising (Z Score)	.005	(.001)***	.006	(.001)***
% of Two Pty Contributions	.256	(.003)***	.243	(.005)***
% Self-Funded	-.026	(.003)***	-.037	(.006)***
Candidate Ideology	-.019	(.001)***	-.020	(.003)***
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
District Partisanship	.445	(.005)***	.471	(.010)***
National Economy $_t$	-.003	(.002)	-.002	(.003)
National Partisan Economy$^+{}_t$	.004	(.000)***	.004	(.000)***
Presidential Approval$^+{}_t$	.176	(.005)***	.160	(.010)***
Presidential Midterm$^+{}_t$	-.017	(.001)***	-.014	(.002***
State Economy $_t$	-.001	(.000)	-.000	(.001)
State Partisan Economy$^+$	-.000	(.001)	-.001	(.002)
Gubernatorial Midterm$^+{}_t$	-.007	(.001)***	-.009	(.002)***
Other:				
South	-.009	(.007)	-.001	(.011)
Constant	.376	(.005)***	.378	(.010)***
N	13,228		3,638	
Adjusted R^2	.7313		.7609	

* p<.05; ** p<.01; *** p<.001
Results were obtained using OLS Regression in Stata IC v. 14.2
Fixed Effects for State and Year were included in the model.
Note: Weak/Medium/Strong repeat candidates earned <38%/38-47%/47%+ in Time$_{T-1}$

Figure 3-2. Predicted Two-Party Vote by Class of Challenger



∧ Significantly Higher than First Time Candidates (95% CI)

∨ Significantly Lower than First Time Candidates (95% CI)

Table 3-14 provides the test for Hypotheses 2 and 3. Looking first to the lower chamber results, we note that most of the independent variables in the model significantly influence non-incumbent vote share. All three fundraising variables reach significance as does candidate ideology, district partisanship, national partisan economy, presidential approval, presidential midterms and gubernatorial midterms. Each of these variables also displays the anticipated sign. The direction of the national economy, in absolute terms, and any measure state economic trend fail to reach significance. In total the model explains about 73% of variance in two-party vote share. Based on the size of the coefficients, it's clear than district partisanship and percent of two-party contributions do much of the heavy lifting in the model. Models including just these two variables alone (not shown) explain 66% of the variance thus stressing the importance of campaign finance and electoral context.

Looking to the key independent variables, all three reach significance for lower chambers. On average, weak repeat candidates receive 1.3% less of the two-party vote share than first-time candidates, while repeat candidates getting at least 47% of the initial two-party vote share earn an additional 2% as compared to first-time candidates.

Examining the results of the upper chamber model, we find very similar patterns of significance and explanatory power. A large difference, however, relates to the measures of repeat candidacy. On average, weak repeat candidates receive 1.7% less two-party vote share than first-time candidates, but medium and strong repeats are statistically indistinguishable from first-time candidates. As such we can reject the null hypothesis for Hypothesis 3-2 for both chambers but fail to reject the null hypothesis for

Hypothesis 3-3 among upper chamber candidates. Figure 3-2 displays the predicted vote share by class of candidate for lower and upper chambers.

While the models displayed in Table 3-14 provide some initial indication as to the impact of repeat candidacy using multivariate techniques, they too suffer from some methodological shortcomings. Much like other studies which use repeat candidates for pseudo-experimentation purposes, the OLS models fail to control for selection bias. Chapter 2 indicates that repeat candidates self-select into their subsequent elections based on influences such as their previous vote share, changes in the status of their seat, campaign finance considerations and trend in political tide and the economy. Comparisons between repeat and first-time candidates become problematic if the criteria used to select into the second race renders repeats uncharacteristic of the broader candidate population. According to the analyses in Tables 3-6 and 3-7, open seat repeat candidates are very different than first-time candidates for open seats. On average, first-time candidates outspent repeats and enjoyed considerably friendlier contexts in terms of district partisanship and national partisan tide. These inequalities make balancing our data necessary to ensure we are ultimately measuring the difference between repeat and first-time candidates using comparable groups of candidates.

Table 3-15. Comparison of Pre- and Post-Processing Sample Composition for Lower Chamber Candidates

	Repeat Candidates	All FTC	Repeat Candidates	Matched FTC
Candidate Characteristics:				
Democrat $_t$	.5421*	.5115	.5421	.5220
Republican $_t$	.4579	.4885*	.4579	.4780
Total Fundraising $_t$	.4755	.4271	.4755	.4988
% of Two Pty Contributions $_t$	.3301	.4099***	.3301	.3242
% Self-Funded $_t$	.1066	.1166*	.1066	.1098
Candidate Ideology $_t$	-.0455	.0603***	-.0455	-.0009
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
Challenger	.7060***	.5411	.7060	.6962
Open	.2940	.4589***	.2940	.3038
District Partisanship	-.0526	-.0208***	-.0526	-.0514
National Economy	1.90	1.83	1.90	1.82
National Partisan Economy$^+$	-.1975	-.0234*	-.1975	-.1986
Presidential Midterm$^+$	-.0518	-.0465	-.0518	-.0784
Presidential Approval$^+$	-.0427	-.0177	-.0427	-.0428
State Economy	1.70	1.61	1.70	1.69
State Partisan Economy$^+$	-.0373	.0068	-.0373	-.0411
Gubernatorial Midterm$^+$	.0207	.0027	.0207	.0525
Other:				
South	.1367	.1590*	.1308	.1367
Legislative Professionalism	.1990	.2033	.1990	.1991
N	1,544	11,684	1,544	1,544

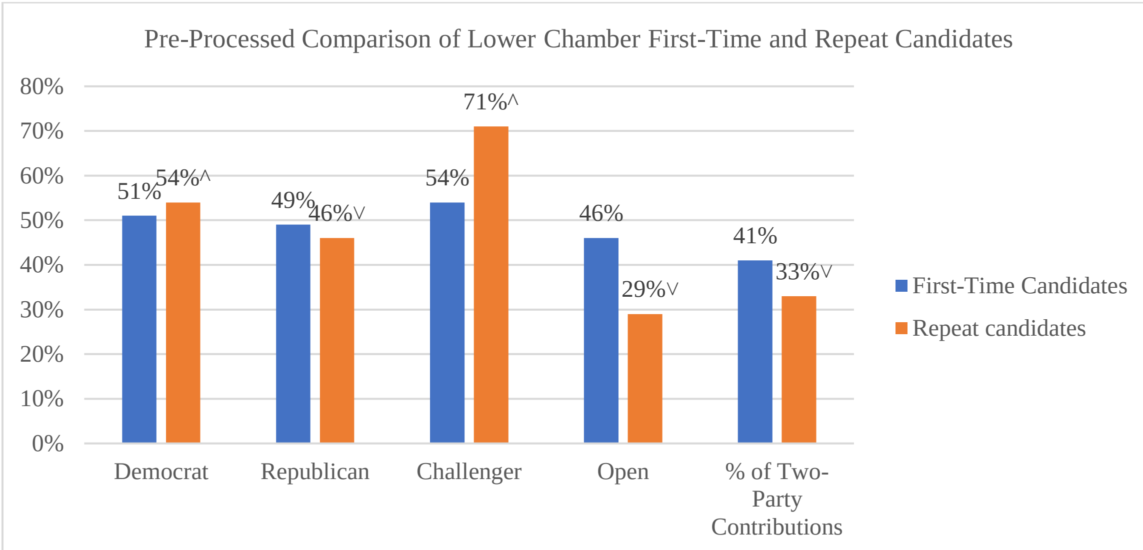
* p<.05; ** p<.01; *** p<.001 represent significant differences between repeat and first-time candidates.
Equal variances assumed for all independent sample t-tests
Note: Candidate ideology used to match repeats and first-time candidates was the raw ideology score not the absolute value that was employed in earlier analyses.

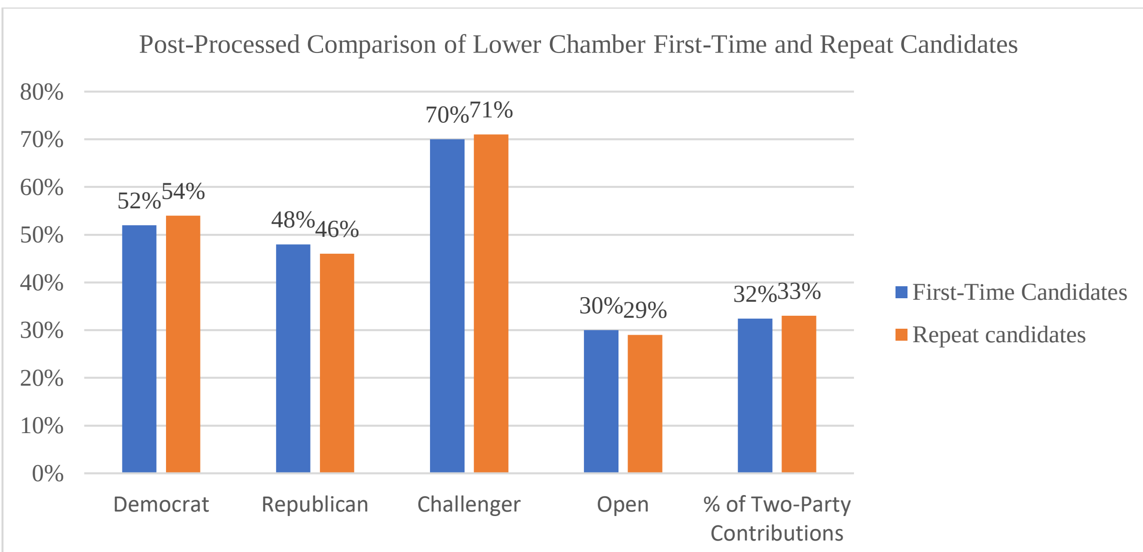
Table 3-16. Comparison of Pre- and Post-Processing Sample Composition for Upper Chamber Candidates

	Repeat Candidates	All FTC	Repeat Candidates	Matched FTC
Candidate Characteristics:				
Democrat $_t$	.5000	.5029	.5000	.4673
Republican $_t$	.5000	.4971	.5000	.5327
Total Fundraising $_t$	.2606	.4091*	.2606	.3163
% of Two Pty Contributions $_t$	.3138	.4192***	.3138	.3300
% Self-Funded $_t$	.1423	.1175	.1423	.1652
Candidate Ideology $_t$	.1486	.0906	.1486	.2028
*Electoral Context (*Multiplied by Candidates' Party and Party of President/Gov.):*				
Challenger	.6916***	.4761	.6916	.6963
Open	.3084	.5239***	.3084	.3037
District Partisanship	-.0568	-.0157***	-.0568	-.067
National Economy	2.00	1.75	2.00	1.71
National Partisan Economy$^+$	.0058	.0165	.0058	-.0254
Presidential Midterm$^+$	.0607	-.0231	.0607	.0561
Presidential Approval$^+$	-.0120	-.0169	-.0120	.0122
State Economy	2.00	1.92	2.00	2.07
State Partisan Economy$^+$	-.2360	-.0172	-.2360	-.3990
Gubernatorial Midterm$^+$	-.0047	.0129	-.0047	-.0935
Other:				
South	.1308	.1408	.1308	.1402
Legislative Professionalism	.1745	.1886	.1745	.1710
N	214	3,424	214	214

* p<.05; ** p<.01; *** p<.001 represent significant differences between repeat and first-time candidates.
Equal variances assumed for all independent sample t-tests
Note: Candidate ideology used to match repeats and first-time candidates was the raw ideology score not the absolute value that was employed in earlier analyses.

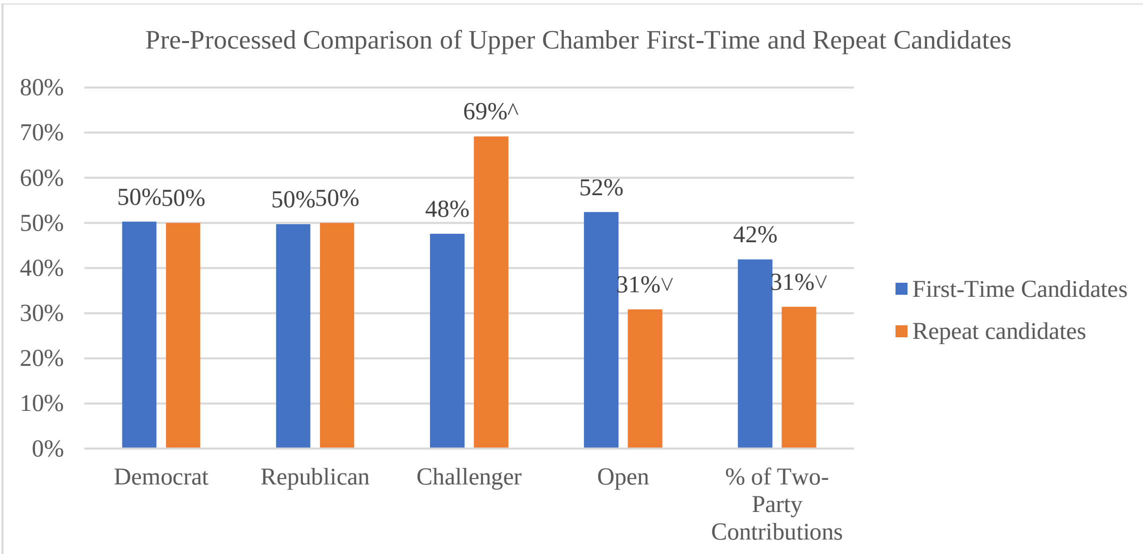
Figure 3-3. Comparison of Pre- and Post-Processing Sample Composition for Lower Chamber Candidates

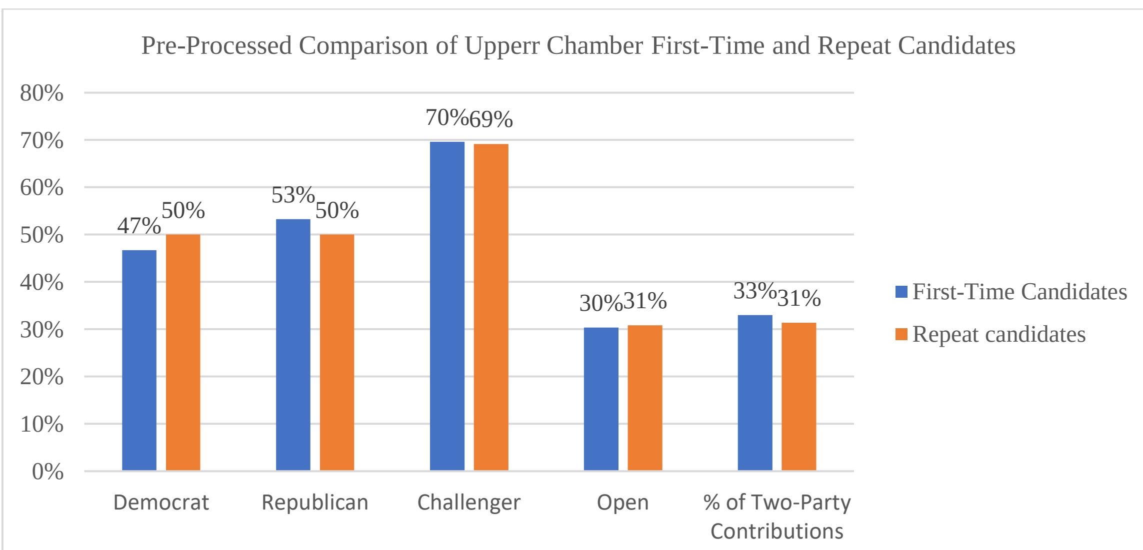




∧ Significantly Higher than First Time Candidates (95% CI)
∨ Significantly Lower than First Time Candidates (95% CI)

Figure 3-4. Comparison of Pre- and Post-Processing Sample Composition for Upper Chamber Candidates





^ Significantly Higher than First-Time Candidates (95% CI)
∨ Significantly Lower than First-Time Candidates (95% CI)

To ensure our final models are as balanced as possible, I pre-processed the data using a solution outlined by Ho et al. (2007a). It calls for narrowing the control population (first-time candidates) such that it mirrors the characteristics of the treatment group (repeat candidates). The ideal outcome is two identical groups differing only by whether they are first-time or repeat candidates. To implement the matching plan, I begin with all major party candidates that come from non-base years, face major party opposition in the general election and have complete information on the relevant control variables. For lower chamber models, this left me with 13,228 candidates, of which 1,544 (12%) are repeat candidates. For upper chamber models, the narrowed population includes 3,638 total candidates of which 214 (6%) are repeat candidates

To implement the matching scheme, I relied on the MatchIt program in R (Ho et al., 2007b) and conducted 1:1 nearest neighbor match that paired each repeat candidate with its most similar case from among the first-time candidate population. The matching criteria included all independent variables included in this chapter's analyses plus additional controls for political party, status of the seat and legislative professionalism. Rather than the absolute value of candidate ideology used in previous analyses, the matching scheme employed the original ideology data to ensure similar distributions of ideological extremism. I conducted this matching scheme four times: once for each chamber using all repeat candidates and a second time using just those candidates who received at least 40% in their initial election. This will allow us to estimate an average repeat candidate advantage as well as the difference between first-time candidates and repeats who emerge from more competitive settings.

Tables 3-15 and 3-16 provide the pre- and post-matching comparison of first-time (FTC) and repeat candidates. Prior to matching, lower chamber first-time candidates were significantly different from repeat candidates on 10 of the 17 variables displayed in Table 3-15. Once we selected the most similar cases from among the control population, the two samples are statistically indistinguishable. The same is true for upper chamber candidates displayed in Table 3-16, although the starting place is a bit closer on most variables.

Figures 3-3 and 3-4 provide a graphical representation of the differences in pre- and post-processed data for lower chamber and upper chamber candidates, respectively. The figures display the differences between classes of candidates for political party, status of the election and share of two-party contributions. Looking at the pre-processed data for both chambers, it is obvious that repeat candidates more frequently appear on general election ballots as challengers, rather than open seat candidates. They are also under-funded by comparison. For lower chamber candidates, repeat candidates disproportionately come from the Democratic Party while there is no difference in affiliation for upper chamber candidates. Once the matching scheme has been employed, first-time and repeat candidates are statistically indistinguishable on these metrics.

Armed with comparable sets of cases for first-time and repeat candidates, we re-estimate the regression models. Tables 3-17 and 3-18 display the results of the final models for lower and upper chamber candidates, respectively. Each table is comprised of three columns. The first column provides the results of the earlier model, including dichotomous variables for weak, medium and strong repeat candidates. The second column includes a single dummy measure for repeat candidates. The coefficient of this single repeat variable will provide the average difference between repeat and first-time candidates. The third column displays the results of the second model applied to the matching scheme that includes only repeats who received at least 40% of the two-party vote share in their initial election.

Table 3-17. OLS Regression Coefficients Estimating the Impact of Repeat Candidacy on Lower Chamber Vote Share Using Matched Pairs Only

Independent Variable	All Repeats		All Repeats		Repeats 40%+	
Candidate Characteristics:						
Weak Repeat	-.018	(.003)***	-		-	
Medium Repeat	.021	(.003)***	-		-	
Strong Repeat	.032	(.003)***	-		-	
Repeat Candidate	-		.013	(.002)***	.025	(.003)***
Total Fundraising	.012	(.001)***	.014	(..001)***	.008	(.001)***
% of Two Pty Contributions	.194	(.006)***	.209	(.006)***	.216	(.007)***
% Self-Funded	-.013	(.006)*	-.017	(.006)**	-.008	(.010)
Candidate Ideology	-.018	(.003)***	-.021	(.003)***	-.025	(.004)***
Electoral Context (+Multiplied by Candidates' Party and Party of President/Gov.):						
District Partisanship+	.342	(.011)***	.367	(.011)***	.344	(.014)***
National Economy	-.006	(.003)*	-.007	(.003)**	-.008	(.003)*
National Partisan Economy+	.003	(.000)***	.003	(.000)***	.004	(.001)***
Presidential Approval+	.144	(.010)***	.152	(.010)***	.128	(.012)***
Presidential Midterm+	-.021	(.002)***	-.020	(.002)***	-.021	(.002)***
State Economy	-.001	(.001)	-.001	(.001)	.000	(.001)
State Partisan Economy+	-.001	(.001)	-.001	(.001)	.000	(.001)
Gubernatorial Midterm+	-.001	(.002)**	-.005	(.002)*	-.007	(.002)**
Other:						
South	-.004	(.013)	-.003	(.014)	-.005	(.016)
Constant	.368	(.010)***	.363	(.010)***	.360	(.012)***
N	3,088		3,088		1,954	
Adjusted R^2	.6369		.6188		.5964	

* p<.05; ** p<.01; *** p<.001
Results were obtained using OLS Regression in Stata IC v. 14.2
Fixed Effects for State and Year were included in the model.
Note: Weak/Medium/Strong repeat candidates earned <38%/38-47%/47%+ in $Time_{T-1}$

Table 3-18. OLS Regression Coefficients Estimating the Impact of Repeat Candidacy on Upper Chamber Vote Share Using Matched Pairs Only

Independent Variable	All Repeats		All Repeats		Repeats 40%+	
Candidate Characteristics:						
Weak Repeat	-.017	(.009)	-		-	
Medium Repeat	.017	(.008)*	-		-	
Strong Repeat	.011	(.009)	-		-	
Repeat Candidate	-		.004	(.006)	.014	(.009)
Total Fundraising	.016	(.003)***	.018	(.003)***	.017	(.004)***
% of Two Pty Contributions	.183	(.015)***	.194	(.014)***	.199	(.020)***
% Self-Funded	-.030	(.013)*	-.031	(.014)*	-.013	(.024)
Candidate Ideology	-.018	(.006)**	-.017	(.007)**	-.005	(.008)
Electoral Context ($^+$Multiplied by Candidates' Party and Party of President/Gov.):						
District Partisanship$^+$	.417	(.029)***	.429	(.029)***	.314	(.041)***
National Economy	.005	(.007)	.006	(.007)	.011	(.009)
National Partisan Economy$^+$	.002	(.001)	.002	(.001)	.004	(.002)**
Presidential Approval$^+$	.199	(.029)***	.199	(.030)***	.175	(.044)***
Presidential Midterm$^+$	-.018	(.005)***	-.017	(.005)***	-.025	(.007)***
State Economy	-.001	(.002)	.001	(.002)	-.003	(.002)***
State Partisan Economy^{+*}	-.001	(.001)	-.001	(.001)	.002	(.002)
Gubernatorial Midterm$^+$	-.010	(.005)	-.011	(.005)*	-.000	(.007)
Other:						
South	-.104	(.044)*	-.097	(.044)*	-.023	(.054)
Constant	.515	(.035)***	.510	(.035)***	. 402	(.046)***
N	428		428		258	
Adjusted R^2	.7191		.7130		.6220	

* p<.05; ** p<.01; *** p<.001
Results were obtained using OLS Regression in Stata IC v. 14.2
Fixed Effects for State and Year were included in the model.
Note: Weak/Medium/Strong repeat candidates earned <38%/38-47%/47%+ in $Time_{T-1}$

The results in Table 3-15 look fairly similar to the pre-processed results in Tables 3-13. That said, the impact of repeat candidacy is slightly more extreme. For instance, we find that weak repeat candidates receive 1.8% less of the two-party vote share than the average first-time candidate. Medium repeats earn, on average, 2.1% more than first-time candidates and strong repeats, those receiving at least 47% of the two-party vote share in their initial election, receive 3.2% more than first-time candidates. Columns 2 and 3 suggest that on average repeat candidates for lower chamber races earn 1.3% more than first-time candidates. Those earning at least 40% in their initial election receive a 2.5% bonus. Collectively, the results of Table 3-15 provide support for the notion that repeat candidates are rewarded according to their initial performance. Those candidates who do poorly in their initial race are punished in subsequent attempts while those who performed reasonably well are rewarded in the next election cycle. Given these findings, it seems rational that ambitious office seekers may enter less than favorable lower chamber contests, confident if they put up a good fight they will be rewarded for their performance in the next election.

Looking at Table 3-18, we find somewhat inconclusive results. According to the first column, weak candidates appear to receive 1.7% less than first-time candidates, but the significance falls just outside of conventional limits (p=.067). Medium repeat candidates are significantly advantaged as compared to first-time candidates, receiving an average lift of 1.7% in two-party vote share. Strong repeats, however, are statistically indistinguishable from first-time candidates. Looking to the two remaining columns, on average upper chamber repeat candidates do not appear to be significantly different than first-time candidates. For upper chamber candidates, there is no systematic reward for repeat candidacy.

Discussion

The goal of this chapter was to explore data on state legislative repeat candidates and measure to what extent their electoral outcomes were significantly different from non-repeat candidates. Early diagnostics suggested that challengers for lower chamber races outperformed first-time candidates but that open seat candidates in both chambers performed much worse on average. Despite several inquiries related to the lower chamber challenger results, no clear mechanism was discovered to explain why repeat candidates perform better. The final analyses in this chapter provides the most unbiased approach to comparing first-time and repeat candidates. Findings from matched samples suggest that future electoral outcomes are influenced by previous performance for lower chambers, but that pattern does not hold for upper chambers.

It is curious that we would find a significant relationship between repeat candidacy and vote share in lower chamber elections but not for upper chamber races. On the statistical side of things, we have far more data for lower chamber elections and repeat candidacy is nearly twice as common among these candidates. Perhaps it's the relatively small sample size for upper chamber repeat candidates (n=244) that plays some role in the outcome of our tests. That said, if there were truly systematic differences between these classes of candidates, I am confident the tests are sensitive enough to capture it.

Given the difference between repeat and first-time candidates is not a factor of increased spending or changing electoral tides (our matching controls for these factors), we are left to wonder why repeats perform better than first-time candidates in lower chambers and not in upper. While I have no data to back this up, I have three theories as to why a repeat candidate advantage would exist. The first is that repeat candidates have an advantage because they already have a campaign organization built, essentially giving them back some amount of campaign time first-time candidates would use to build out their organization. I could easily see this resulting in increased vote share, if the campaign is able to reach voters they otherwise would not be able to. If this were the main mechanism, however, I'm not sure why we wouldn't see this difference in upper chambers as well.

Another mechanism through which lower chamber repeat candidates may be privileged is through awareness or name recognition. After having run a campaign in the previous election, voters are likely to have some residual memory of the candidate's name or advertising. Given this mechanism, it's possible that only repeat candidates for lower chambers reap these rewards because lower chamber races are lower information affairs as compared to upper chamber races. Perhaps given the increased importance and spending for upper chamber seats, this informational advantage dissipates. While this might explain why we see such patterns in the lower chamber and not in upper chambers, it doesn't explain why the repeat effective is negative for those who performed poorly. Voters don't have less information on these previous candidates just because they lost. If it were simply name recognition, we'd likely see a slightly positive or no effect for the worse performing repeat candidates.

One final mechanism that might explain why we find lower chamber results and not upper chamber is that repeat candidacy impacts voters' perceptions of candidate quality. Essentially the argument is that by having run in the previous election, voters consider these candidates on even footing with those candidates who have previously held elected office. Candidate quality then influences how voters think about candidates and ultimately make their voting decisions. Although no one has systematically coded candidate quality for state legislatures, it's likely that candidates for the upper chamber are frequently higher quality candidates than those for lower chamber seats. If this were the case, the reason we wouldn't see a repeat advantage is that upper chamber candidates are already of high quality. This would also explain the negative impact of a poor performance as those who performed poorly would be considered "low quality" and therefore inferior to future candidates. While I find this last mechanism most likely, this will remain untestable until we have data on the quality of state legislative candidates.

An obvious path for future research is to extend the match methodology to the study of congressional repeat candidates. While Mack's (1998) findings are in alignment with the findings from the lower chamber races, selection bias and other methodological considerations offer some uncertainty. Specifically, given the prevailing argument is that congressional repeats run better funded campaigns (Jacobson, 1980; Kazee, 1980b; Mack, 1998; Squire and Smith, 1984), it would be interesting to see if this advantage dissipates once a matching scheme controls for campaign finance. Specifically, the question is whether congressional repeats are advantaged because they are better funded or if congressional repeats are advantaged and they are better funded. The methodology introduced in this paper can likely help answer this question.

CHAPTER 4

MEASURING THE IMPACT OF INTEREST GROUP ENDORSEMENTS ON U.S. SENATE CAMPAIGN CONTRIBUTIONS

Introduction

Interest groups play an important role in American political campaigns. Extant research suggests that interest group endorsements influence voter information processing and ultimately the outcome of elections (Arceneaux and Kolodny, 2009; Clark and Masters, 2001; Delaney, Masters and Schwochau, 1990; Hannagan et al., 2010; Karpowitz et al., 2001; Kenny, McBurnett and Bordua, 2004; Lupia, 1994; McDermott, 2006; Rapoport, Stone and Abramowitz, 1991). Their role in the campaign for political resources, however, is far less understood. Building on previous research that suggests that interest group endorsements lead to campaign contributions (Baker, 2015; Crespin and Dietz, 2010), I add to our understanding and confidence in these relationships by improving upon the identification scheme. Specifically, my data collection moves beyond traditional cross-sectional approaches by adding a temporal dimension. Rather than focusing on candidates' cumulative campaign fundraising, I examine weekly contribution totals across the length of the campaign. This transformation has two main advantages. First, it enables us to enforce temporal accountability by measuring the effects of endorsements only after endorsements are made, as opposed to measuring changes in contributions in aggregate over the course of elections. Second, because the data are collected in weekly totals, we can depict the impact of endorsements graphically, providing better understanding as to the timing and shape of the response. Ultimately, caution in assessing causation leads to a matching scheme in which weekly contribution totals between otherwise similar candidates are compared, enabling us to measure the difference between endorsed and unendorsed candidates.

This paper proceeds as follows. The first section reviews the existing literature on donors, outlining what we know about donor motivations and which candidates receive contributions based on survey, observational and field study research. The second section reviews the existing literature assessing the impact of interest group endorsements on political donations. The third section describes the source of the data and provides descriptive statistics. The penultimate section provides the main tests for the premise that interest group endorsements lead to contributions. The final section provides a discussion of the findings.

Previous Literature on Political Donors

The broad theoretical underpinnings of the campaign finance literature assume that donor motivations are best described either by ideological considerations, in which donors contribute money to candidates who best represent their interests, or by investment strategies, in which donors make contributions in an effort to purchase political favor (Baron, 1989; Ben-Zion and Eyan, 1974; Grossman and Helpman, 1994; Grossman and Helpman, 1996; Snyder, 1989; Welch, 1974; Welch, 1980). Much of this literature focuses on economically-oriented PAC contributions and assumes that they follow an investment strategy. Empirical literature assessing the efficacy of donations as investments, however, largely rejects the notion that money buys policy favors (Ansolabehere, Figueriedo and Snyder, 2003; Grenzke, 1989; Wayman, 1985; Wright, 1985; but see Stratmann, 2005). Rather, this literature shows that economically-oriented PAC contribution strategies are best explained as buying access rather than policy per se (Hall and Wayman, 1990). Numerous studies are dedicated to explaining what types of candidates receive PAC contributions (Cox and Magar, 1999; Grier and Munger, 1993; Jacobson, 2013; Milyo, 1997; Welch, 1980; Rudolph, 1999). Collectively these works suggest that PACs prioritize incumbents over challengers, candidates for the majority party, and those on relevant committee assignments gfiven the importance of these considerations on members' legislative influence. That said, studies including a broader collection of groups draw distinctions between access-driven PACs and more ideological oriented interest groups (Ansolabehere, Snyder and Tripathi, 2002; Barber, 2016; Snyder, 1990; Snyder, 1992).

In contrast, there has been far less written about the motivations of individual political donors. The foundation of our knowledge on the *donorate* (Hill and Huber, 2016) comes from the survey research tradition which examines the demographic characteristics and motivations of donors (Brown et al., 1995; Francia et. al, 2003; Rosenstone and Hansen, 1993; Verba, Schlozman and Brady, 1995). The seminal work in this literature (Francia et al., 2003) demonstrates that donors give for a variety of reasons including ideological, material, and social considerations, reinforcing the typology first articulated by Clark and Wilson (1961). In aggregate, ideological considerations, including candidates' issue positions and wanting to influence both electoral and legislative outcomes, are by far the most self-reported motivations for donating (Francia, 2003). The authors' segmentation of donors demonstrates that "ideologues", those donating for ideological reasons or to influence the outcome of elections (36% of donors) are a larger cross-section of contributors than "investors" (25%) or those who give for social reasons ("intimates," 24%). While donors are grouped into these clusters based on self-reported motivations, it is important to note that a majority of both "investors" and "intimates" also give for ideological reasons, while very few outside of the respective segments report giving for social or material reasons. In addition to self-reported motivations for donating, surveys of political donors also provide demographic profiles of contributors. These profiles demonstrate that donors are not a representative segment of the voting population. Rather donors are older, more likely to be male, and have higher levels of education and income than the broader population or electorate (Francia et al., 2003).

Beyond survey-only approaches, several studies merge survey and contribution data to help further our understanding of congressional donors. Merging several large-n studies of political attitudes to zip code level contribution data, Bramlett, Gimpel and Lee (2010) demonstrate that zip codes with the highest aggregate contribution totals have ideologically distinct and extreme issue preferences. Specifically, they find that these higher donating zip codes are more "cosmopolitan or libertarian" as opposed to "populist or moralistic." Their findings suggest that given their concentration of wealth and political activity, these donor enclaves may be driving candidates away from the political center. Merging a newly fielded survey of donors with contribution data, Barber (2016) reports that "ideological agreement," "to affect election outcome," and "unacceptable opponent" are the top motivations for those who donated to the twenty-two Senators who sought re-election in 2012. His analysis of donor ideology demonstrates the importance of these ideological considerations increases as donor ideology increases. Similarly, Hill and Huber (2016) merge the 2012 Cooperative Congressional Election Study (Ansolabehere, 2012) with Bonica's Database on Ideology, Money in Politics and Elections (DIME) (Bonica, 2013), enabling them to examine ideology among a confirmed group of voters and donors, as opposed to relying on self-reported behavior. Their findings suggest that ideological extremity increases with levels of political participation. Specifically, donors are the most ideologically extreme group of political actors, followed by those who participated in the 2012 congressional primaries, followed by general election voters and then non-voters. Collectively these works further amplify the notion that political donors are an ideologically motivated and extreme subset of the population.

Several recent studies change the focus of analyses from the donor to explaining which candidates are likely to receive contributions. For instance, while Hill and Huber (2016) demonstrate that, in aggregate, donors are more ideologically extreme than voters, their models find no relationship (within party) between an ideology score constructed on stated issues positions and an ideology score based on their contribution behavior. These findings suggest that donors do not choose between recipients based on ideological congruence. This echoes the work by McCarty, Poole and Rosenthal (2008) which demonstrates that ideology on its own is not predictive of aggregate individual contributions. Other work, however, does find an ideological component to giving. Ensley (2009), for instance, finds that ideology of candidates is significantly related to their total campaign contributions. Bonica (2014) finds that models predicting campaign contributions are significantly enhanced by the inclusion of ideological similarity. Barber, Canes-Wrone and Thrower (2016) likewise find that policy agreement significantly increases the likelihood of donating to incumbent Senators' reelection campaigns in 2012.

Several articles make the argument that strategic or material motivations also influence contribution patterns. In a study of corporate executives, Gordon, Hafner and Landa (2007) find that business executives' contributions are significantly related to the proportion of their income tied to company performance. Executives with more on the line give more often, suggesting a political investment strategy. Likewise, Barber, Canes-Wrone and Thrower (2016) make a compelling case that donors act strategically, making donations to Senators who represent their business interests and sit on relevant committees. Although strategic in a different sense, Gimpel, Lee and Pearson-Merkowitz (2008) find that strategic considerations (i.e. competitiveness, open seats, etc.) drive out-of-district contributions to US House candidates. They suggest a "monetary surrogacy" (Mansbridge 2003, 523) in which donors shop a political marketplace for ideologically appealing candidates in strategic need. As compared to investments into the welfare of corporate outcomes, these investors are contributing in hopes of a partisan return.

While scholars most frequently focus on the demographic, ideological and strategic dimensions to political contributions, a novel article examines the behavioral dynamics related to donating. Peskowitz (2017) posits that contribution behavior may be conditioned upon the electoral fate of past donation recipients. His theory is rooted in Bendor, Diermeier and Ting's (2003) finding that future voter turnout is dependent upon satisfaction with past election outcomes. To this end, the theory predicts that donors should be more likely to donate when their candidates win. Peskowtiz's results do find behavioral reinforcement, as vote share is significantly related to the probability and size of a future donations. Specifically, a single percentage point in candidate returns (for the recipient in the closet election) increases the likelihood of future contributions by 6% and the size of future contributions by 42%. While these behavioral effects are dampened for more experienced contributors, the benefits of reinforcement are not limited to a specific candidate but rather extend to others.

Although the previous literature describes who donors are, their ideological leanings, their motivations and to whom they donate, we know far less about the proximate or causal mechanisms for giving. Specifically, self-reported motivations are a product of memory and while donors may report ideological motivations for contributing, political information or other forgotten influences may have impacted contribution decisions. Fortunately, field experiments remedy this hindsight bias by providing a clear causality between randomly assigned control and treatment groups. Several recent field studies have measured the impact of political information on donor behavior.

Miller and Krosnick (2004) conduct such a field experiment testing the effectiveness of two different messaging strategies in letters to potential donors for NARAL Ohio. Their findings suggest that recipients of a "policy change threat" message (indicating that members of congress were working to make abortions more restrictive) were more likely to donate but not more likely to sign and return a postcard to President Clinton urging him to support abortion rights. Those receiving a "policy change opportunity" message (indicating that members of congress were working to make abortions less restrictive), were more likely to return the postcard but not more likely to donate. Their findings suggest that the "policy change threat" message created a sense of urgency sufficient to induce donations while "policy change opportunity" message did not. These results have important implications both for the contribution decision-making of donors and for the strategic messaging of interest groups.

In his unpublished dissertation, Schwam-Baird (2016) includes two field experiments and an observational study that measure the impact of political information on contribution patterns. The first field experiment assesses the impact of non-partisan, factual information about candidates on the contribution behavior of donors. Specifically, Schwam-Baird sent approximately 40,000 post cards to likely voters which included one of seven sets of factual information listing data about both major party candidates for Ohio Governor and Secretary of State. Postcards listed the same information for all four candidates, had no request for donation and were sent by an academic institution. Interestingly, the results of his analysis demonstrate that a simple election reminder was enough to encourage donations among the leading and better-funded Republican candidates but had no effect on the Democrats. He speculates that in absence of other information (including their fundraising advantage) potential donors were encouraged to support the candidate they likely had heard most about. Other postcards, which included the amounts each candidate had raised as of the last filing deadline, encouraged donations to the Democratic candidates, who were trailing in the money chase, but had no discernable effect on Republican candidates. This impact on Democratic candidates, however, was not evenly distributed across partisans as previous donors were less likely to give to Democratic candidates when they were informed about their relative lack of fundraising. Ultimately none of the other cells, including endorsement information or other campaign finance data, were significantly associated with changes in the propensity to contribute or the amount of donations. Collectively, the findings from this chapter are compelling in that non-partisan political information (lacking a request for donations) was able to stimulate campaign contributions. Further, the findings that among potential new donors the Democratic candidates' fundraising weakness inspired donations hearkens to Miller and Krosnik's (2004) finding that threats encourage political participation.

Schwam-Bairds's (2016) second field experiment assesses whether knowledge of an Ohio tax credit or New York contribution matching program influenced the contribution decisions of potential donors. In Ohio, the field experiment described above was amended to add a description of Ohio's tax credit (this message was included in half of all mailings). In New York City, 20,000 new postcards were mailed with four messages, half of which included information on New York's public incentive. Information about the tax incentive and matching programs failed to influence donor behavior, although a message encouraging potential donors to contribute to a candidate who supports their causes was effective. Focusing on donor motivations, these findings suggest that the cost of donations were insufficient to influence donor behavior.

Other studies focus not on testing the effects of solicitations, but rather examine who receives solicitations and the types of appeals they include. Grant and Rudolph (2002) demonstrate that voters with higher income and education, men, older voters and those with higher political knowledge are more likely to receive solicitations from both political parties and candidates. Those with high political interest and partisan strength are also more likely to receive solicitations from political parties. Strikingly, when predicting the likelihood of making a political contribution either to candidates or parties, the effects of receiving a solicitation were consistently significant and larger than the impact of income. This speaks volumes as to the importance of appeals. Hassell and Monson (2014) further this line of inquiry, examining what types of appeals are made to what types of voters. Their results suggest that ideological appeals are more likely to be sent to past contributors, extreme partisans and those with the middle or high incomes. Subtly different, solidary appeals are targeted to extreme partisans and those with the highest incomes. Appeals targeting material benefits were sent to those active in political groups and who have more moderate incomes. The implications of the study are two-fold. First, campaigns are efficient at targeting appeals to those who are ideologically or demographically predisposed to respond to them. Secondly, the unrepresentativeness of the donor class is reinforced and perpetuated by campaigns through such targeting.

There is a debate in the literature as to what extent campaign advertising might also inspire campaign donations. Although political advertisements do not regularly include a request for financial contributions, Collins (2012) builds upon Taijfel and Turner's (1986) social identity theory which posits that political advertisements tap party-based social identities and activate partisan sentiments. Using time series data measuring the impact of weekly advertising, Collins finds that negative ads from both parties during the 2004 presidential campaigns increased campaign contributions. Urban and Niebler (2014) similarly find a large significant relationship between advertising and contributing to the 2008 campaign, but as Schwam-Baird indicates, methodological concerns raise some doubt as to the relationship. Rerunning Urban and Niebler's analysis examining the impact of political advertisements on campaign contributions within media zones using population normalized variables (as opposed to zip codes which vary in population), his results indicate that Democratic advertising in 2008 may have had a small but significant impact on campaign contributions but that Republican advertising effects were insignificant.

The literature on individual contributions to political campaigns point to several important features that predict both *who gives* and *to whom*. When modeling individual contributions, it is imperative that we control for these influences. Given the approach of predicting contributions to candidates gives us little recourse to control for the individual mechanisms that promote giving, I focus on the literature addressing recipient characteristics. Specifically, Ensley (2009), Bonica (2014) and Barber et al. (2016) suggest that contributions are related to the ideology of candidates. As such, the models that follow include controls for the ideology of candidates using Bonica's Database on Ideology, Money in Politics and Elections (DIME) (Bonica, 2016). Research from Gordon, Hafner and Landa (2007) and Barber, et al. (2016) make a compelling argument that strategic considerations remain after controlling the ideological influences of giving. To control for the possibility that candidates in positions of power receive higher levels of contributions, I include a control variable that captures whether candidates are the chair or ranking member of the Finance, Appropriations or Veteran Affairs committees, or whether the candidate is part of the party leadership. As Gimpel, Lee and Pearson-Merkowitz (2008) suggest that broader political considerations drive out-of-district contributions, I include controls for the status of seat, competitiveness of the district, candidate quality and partisanship in the state as measured by the most recent presidential election vote. By including these controls, we should be able to better predict candidates' contributions and therefore better isolate the effect of endorsements.

Interest Group Endorsements and Donors

Endorsements are the focus of much attention in studies of voter information processing (Arceneaux and Kolodny, 2009; Lupia, 1994; McDermott, 2006), but they are understudied in their impact on campaign finance. There are a few reasons why we might anticipate endorsements to influence the behavior of donors. First, according to Francia et al. (2003), donors are much more likely than the broader population to belong to ideological interest groups. Coupled with the evidence that suggests donors are ideologically oriented, it is not unreasonable to suggest donors are likely to receive political information about endorsements. Second, the literature on voter information processing suggests that endorsements serve as ideologically-laden heuristics for voters, especially in low information settings. While we would expect donors to be well-informed about elections in their own locales as Gimpel, Lee and Pearson-Merkowitz (2008) argue, “The information costs involved in monitoring and assessing the competitiveness of nonlocal congressional elections would be enormously high if they were borne by individuals alone” (pg. 390). These authors suggest that “partisan networks” strategically direct campaign contributions to competitive districts. Ideological interest groups may help fill this role, indicating to members and fellow ideologues where their contributions would be most impactful.

Crespin and Dietz (2010) assess the impact of interest groups endorsements from committees focused on electing female candidates. Including groups like Emily’s List, Wish List and the Susan B. Anthony List, the authors find that female candidates endorsed by one of these donor networks significantly outraise similar male candidates and non-endorsed female candidates. Specifically, their models indicate that an endorsement from one of these groups nets female candidates approximately $128,000 more in total contributions as compared to similar male candidates. Unendorsed female candidates raise $102,000 less than their male counterparts. These findings suggest that female donor networks may have found a way to narrow the gender gap in campaign finance, effectively funneling small contributions to high quality female candidates. That said, female candidates who do not receive such an endorsement fall short of the average male candidate's total contributions.

While I'm theoretically inclined to believe Crespin and Dietz's premise that candidates endorsed by these donor networks are more successful at fundraising, misspecification in their model gives me cause for concern. Specifically, the authors treat the endorsement function as exogenous to candidate characteristics. Day and Hadley (2005) suggest that endorsements from Emily's List are awarded to female Democratic, pro-choice candidates based on viability, which includes previous experience, access to money, an active campaign organization and a network of supporters. That said, if Emily's list picks candidates based on these traits and the selection function remains un-modeled, then the findings in Crespin and Dietz (2010) are likely overstated.

Baker (2015) assesses the impact of endorsements on House non-incumbent campaign fundraising between 2006 and 2012. As opposed to focusing on female donor networks like Crespin and Dietz (2010), Baker takes a broad survey of endorsements from candidate websites and counts the number of endorsements from quality and non-quality organizations[1]. Rather than the absolute total of contributions raised during a campaign, Baker operationalizes her dependent variable as the difference between primary and general election fundraising, predicting the trajectory of contributions rather than the absolute number. Further, because she includes four consecutive elections, she is able to measure the impact of endorsements during presidential (2008, 2012) and midterm (2006, 2010) election cycles.

Baker's initial models reveal stark differences in the effect of interest group endorsements between presidential and midterm elections. In midterm years, Baker finds that for every endorsement a candidate receives, they can anticipate receiving between ~$3,400 (2006) and ~$4,400 (2010) in additional campaign contributions. In presidential elections, the increase in contributions associated with each additional endorsement is ~$17,400 (2008) and ~$22,200 (2012). The differences between these elections are intriguing, as presumably the same signal in two different electoral contexts results in five times the amount of contributions. Baker's qualitative interviews with senior staff at interest groups support the notion that fundraising in presidential years is easier, with increased excitement about the election leading to higher flows of money to down-ballot races.

Tests examining "quality" endorsements lead to a similar pattern of findings. Specifically, a quality endorsement in a midterm election is associated with contribution increases of ~$30,200 in 2006 and ~$22,800 in 2010. Quality endorsements in presidential years were worth ~$89,000 (2008) and ~$104,700 (2012). Taken

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[1] Her definition of endorsement quality assumes that groups with more members and that make more endorsements during the campaign season are distinct from other endorsing organizations.

collectively, these results demonstrate not only the importance of context (whether the endorsement is made in presidential or midterm election years) but also the importance of who is sending the signal. Excluding 2006 as an outlier, quality endorsements from groups like the NRA or Chamber of Commerce, are found to have the same financial impact as roughly five endorsements from other, non-quality groups.

A strength of Baker's analysis is the multi-method approach she uses. Rather than treat the endorsement decision as exogenous, Baker employs Coarsened Exact Matching (Blackwell, Iacus, King, & Porro, 2009) to provide a quasi-experimental test of the relationship between endorsements and dollars. This additional analysis is necessary because endorsements are not distributed at random. If interest groups select endorsees based on quality or fundraising capabilities, we are left to wonder whether differences in contributions are a product of the endorsement, related to the selection criteria or both. Baker's matched models highlight the importance of such controls and likely provide a more realistic measure of endorsement effects. After pre-processing her data, Baker finds that on average an endorsement from any group is associated with a ~$16,100 increase in total campaign contributions. A quality endorsement is worth only a ~$17,400 increase. While these results are comparable to the results for any endorsement, the quality endorsement results are substantively lower than the $22,800 to $105,000 previously estimated in unmatched models. It is likely the matching controlled for variation between candidates which also influenced campaign contributions.

Baker's qualitative interviews with staffers at interest groups provide further confidence that there is a relationship between endorsements and dollars. Her interviews indicate that groups consider the value of their endorsements as having two effects. The first is providing the information-laden heuristic suggested in the voting literature. Second, groups provided varying levels of mobilization efforts on behalf of their candidates. On the low end, some groups simply provided information about the candidate on their website or in newsletters. On the higher end, groups effectively took over fundraising efforts on behalf of the candidate, making direct appeals to members for donations. These findings strongly suggest that the effect of endorsements may be contingent upon the vigor of the group's mobilization.

This article's primary contribution to the literature rests heavily in its identification scheme. Like Baker (2015), I use a multi-method approach to estimate the impact of endorsements on campaign contributions. That said, rather than aggregating interest groups and campaign contributions, I take a more nuanced approach to both. First, I include endorsements made by specific interest groups, as opposed to treating all endorsements as a unit. As Baker's (2015) qualitative findings suggest that groups are heterogeneous in their mobilization efforts, averaging these effects likely obscures important differences. Second, rather than examining contributions either in total or as the difference between the general and primary election cycles, I predict weekly contribution totals as the temporal dimension adds to our capacity to assess causality.

I employ three distinct multivariate tests on the relationship between endorsements and contributions. As my data is collected as a cross-sectional time series where the unit of analysis is the candidate/week combination, my initial models represent a disaggregated hazard model. While this model will provide estimates of the average contribution response to endorsements (with coefficients representing changes in weekly contributions), it fails to indicate anything about the functional form of these relationships. The second analysis remedies this concern. Using a regression discontinuity design (RDD) we are able to assess the shape of the response among endorsed candidates. Specifically, RDD will visually depict this relationship, allowing us to assess whether effects are proximate to the endorsement (as opposed to delayed), and whether they decay, escalate or remain constant across time.

While these first two approaches speak to the average endorsement effect and shape of the relationship, on their own they provide insufficient assurances that the detected relationships aren't a function of selection bias. The final models follows Baker (2015) in using a matching scheme to approximate a quasi-experimental design and compare contributions between treatment and controls groups consisting of otherwise similar candidates. Only with the results of these three tests can we be confident in the causal nature of the relationship between endorsements and campaign contributions. The following section provides an overview of the data as well as descriptive statistics related to contributions and endorsements.

Data and Methods

Fundamentally, the goal of my research is similar to that of Baker (2015) and Crespin and Dietz (2010)- I seek to measure the impact of interest group endorsements on campaign contributions. That said, my data and analysis differ in a few important ways. First, rather than U.S. House elections, I focus on U.S. Senate elections in 2010. I chose Senate elections because little research has been done on endorsement effects for voters in these contests. If low information is a necessary condition for endorsement effects in donors, as it appears to be for voters, then this should provide a conservative test.

Healthy skepticism requires one to consider what is fundamentally different about Senate elections that might make this change of focus problematic. A consideration, for instance, might be if campaign fundraising, specifically the reliance upon individual contributions, were substantively different between U.S. House and Senate candidates. Itemized individual contributions in 2010 were responsible for 44% of House incumbent, 50% of House challenger and 58% of House open seat candidates' total contributions (Herrnson, 2012). In this same year, Senate incumbents received 58% of their contributions from itemized individual contributions while challengers and open seat candidates received 41% and 46% of their donations from the same source, respectively (Herrnson, 2012). While Senate challengers and open seat candidates were relatively less reliant upon individual contributions, incumbents relied on individuals for a larger proportion of their total resources. Given these differences are not systematic, I'm inclined to believe this is not a cause for concern.

I also chose to focus on Senate elections because they provide a manageable set of cases for which I could collect candidate data given my interest in the temporal dynamics of contributions. Specifically, I am curious whether endorsements provide a one time "bump" in contributions, near the time of endorsement, or whether on average endorsed candidates have higher contribution totals for the length of the campaign. To explore this question, I change the unit of analysis from Baker's net contributions to candidates' weekly contribution totals. I chose weekly totals to measure endorsement effects as daily totals felt too narrow and noisy a measure. As compared to weekly totals, daily totals would result in far greater variance in the dependent variable based simply on a campaign's schedule of events. In contrast, monthly totals would likely aggregate over important differences and leave too few data points with which to analyze endorsements that come late in the campaign. Accordingly, my dataset is a cross-sectional time series in which candidates have entries for each week their campaign is active, starting with their first itemized contribution of the election season. I chose to investigate the 2010 elections, as opposed to another election year, because these contests were the most recent when I began this research project. As this is a midterm election, Baker's initial regression models suggest endorsements may have muted effects.

Contribution data was downloaded directly from the FEC website and includes only itemized individual contributions. Candidates are only required to report individual contributions of $200 or more and, as such, my models include only significant contributions. An ideal database for my tests would also include contributions smaller than $200 but unfortunately these donations are reported in aggregate and do not have dates such that they could be summed into weekly totals. Given my interest in temporal dynamics, contribution data is added into weekly totals running Wednesday to Tuesday for 95 weeks, ending on Election Day, November 2, 2010[2]. Since I wanted to be able to measure the impact of endorsements even early in the campaign season, the data goes back 95 weeks, beginning on the week from Wednesday January 6 to Tuesday January 13, 2009. As downloadable FEC files include contributions from January 2009-

[2] Data on individual contributions was collected in September 2018. An earlier draft of this article included campaign contributions that were collected manually from the FEC website in 2012. In 2012 these data were not available as downloaded files, and were collected manually from the website 50 contributions at a time. Unfortunately that earlier data collection failed to collect data for unopposed candidates, those facing opponents who did not fundraise and the Senate election in Arizona (as it was not completely transparent how to separate John McCain's various campaign committees). Given my goal to include a census of candidates who appeared in Senate elections on November 2, 2010, I recollected these data in 2018. I am confident that this data is of higher quality as it was not prone to the same human error as introduced by copying/pasting tables several hundred times. I was fortunate to still have these original data as the FEC appears to be missing a few weeks of data for Iowa Republican incumbent Chuck Grassley, Hawaii Republican challenger Campbell Cavasso and an entire quarter's worth of contribution data for Former Senator Dan Coat's campaign in Indiana. Rather than leave this case out of my analysis, I substituted the weekly contribution totals I collected in 2012. The correlation between the two datasets (weekly totals collected in 2012 and those downloaded in 2018) is .94 suggesting that the FEC has made changes to the data over the last 6 years but that it's likely inconsequential to my analyses.

December 2010, this starting point fits nicely with available data. I do not include campaign contributions that occur after Election Day as I would argue these are largely unrelated to the goals of winning elected office and therefore not relevant to this exercise. It may certainly be the case that donations received after election day are in response to late occurring endorsements, but it would be difficult to disentangle the effects of the endorsement on these contributions from the impact of winning the general election.

By focusing on itemized individual contributions during the campaign cycle, my study ignores several important sources of campaign resources. I focus on individual contributions as opposed to PAC or party donations as I am interested in the connection between endorsements and individual behavior. I theorize that individuals respond to interest group endorsement information by contributing to endorsed candidates. I exclude PACs and party contributions, as I find it unlikely that endorsements from other organizations influence their donation patterns, especially if they have their own strategic considerations. Further, my model is silent on another important source of campaign funds: Cash-on-hand. As compared to challengers, incumbent officeholders frequently begin the campaign season with leftover campaign funds in their campaign accounts. The amount of these roll-over campaign funds is not trivial. According to Kolodny (2016), in 2014 House candidates began the 2014 cycle with $136 million cash-on-hand and added an additional $74 million to that by the cycle's end. There is some debate as to whether these "war chests" are effective in fending off challenges by high quality candidates (Ansolabehere and Sunder, 2000; Box-Steffensmeier, 1996; Goodliffe, 2001; Goodliffe, 2007; Squire, 1989) and to what extent they are related to professional ambition (Ansolabehere and Snyder, 2000). That said, these campaign funds originate in the previous cycle(s) and are therefore unaffected by contemporary endorsements.

My dataset includes all major party general election candidates for which the FEC has itemized contribution data. Both normally scheduled Senate class III elections as well as special elections which occurred on November 2, 2010 are included. In most elections, I have data for two major party candidates. There are three exceptions. First-term incumbent Republican John Thune of South Dakota ran unopposed in both stages of the election. As my goal is to provide a census of all relevant candidates, I erred on the side of including his contribution data. Although he received no endorsements from the groups included in the models, removing this candidate does not substantively impact the results of my models. Two Republican candidates ran against Democrats who failed to collect donations. In South Carolina, Incumbent Jim DeMint ultimately won re-election against the surprise winner of a crowded Democratic primary, Alvin Greene, and Green Party candidate Tom Clements. Greene was ultimately mired in scandal, leading to an easy victory for DeMint (62%) in which non-Republican votes were split by Greene (28%) and Clements (9%). In Oklahoma, incumbent Tom Coburn (71%) easily won reelection against perennial Democratic candidate Jim Rogers (26%) who ran for Senate in 2002, 2004, 2008, 2010 and subsequently in 2014, failing to file FEC reports in each of these elections. Both DeMint and Coburn were endorsed by the NRA in 2010 and as such are included in the dataset.

Additionally, I include any serious independent and write-in candidates, defined as receiving at least 20% of general election vote. Only two candidates met this threshold- Republican Lisa Murkowski of Alaska who lost the nomination to Tea Party

Candidate Joe Miller, and narrowly won a write-in campaign (40%) beating Miller (36%) and Democratic candidate Scott McAdams (24%). In Florida, Governor Charlie Crist dropped out of the Republican primary and ran as an independent making this election an uncertain three-way race in which Republican Marco Rubio (49%) defeated both Crist (30%) and Democratic nominee Kendrick Meek (20%).

Table 4-1 provides a summary of the cumulative individual contributions for all candidates at week 95 which ends on Election Day. The total database includes 73 candidates, including 23 incumbents, 21 challengers and 29 open seat candidates for Senate. Among those, 34 are Democratic nominees, 37 are Republicans and two are "other" (Murkowski (Write-in Alaska) and Crist (Independent- Florida)). This summary tables provides some face validity for the dataset. Specifically, on average, senate candidates raised about $4 million in itemized individual contributions, with a median of about $3 million. At the one end of the range is Alabama Democratic nominee William Barnes who raised the paltry sum of $1,606 and was easily defeated by Incumbent Senator Richard Shelby, who raised over $3 million in itemized individual contributions. The other anchor is New York Democratic incumbent Chuck Schumer who raised over $13 million as compared to Republican challenger Jay Townsend's ~$90,000 in individual contributions. Likewise, this election was not remarkably competitive. On average, incumbents raised substantially more than challengers, while open seat candidates raised closer to incumbent totals. The major parties had relative parity in their fundraising in 2010, but averages for "other" are biased by the modest fundraising of Lisa Murkowski ($1.7 million) compared to Charlie Crist's impressive $12.2 million in individual contributions.

Table 4-1: Subgroup Analysis of 2010 U.S. Senate Cumulative Itemized Individual Contributions (Between January 7, 2009 and November 2, 2010)

	N	Mean	Median	St. Dev.	Min	Max
All Candidates	73	$3,867,296	$2,998,453	$3,460,831	$1,606	$13,360,231
By Status:						
Incumbents	23	$5,034,608	$3,585,486	$3,649,835	$996,940	$13,360,231
Challengers	21	$1,851,669	$796,485	$2,277,894	$1,606	$8,371,009
Open	29	$4,401,087	$3,302,936	$3,487,753	$7,440	$12,235,086
By Party:						
Democrats	34	$4,109,251	$3,198,438	$3,721,978	$1,606	$13,360,231
Republicans	37	$3,476,634	$2,995,285	$2,995,276	$89,293	$10,428,292
Other	2	$6,981,289	$6,981,289	$7,429,991	$1,727,49	$12,235,086

Table 4-2 provides the average first week for which I have contribution data by status and party. In 2010, as is likely the case in most election years, incumbents began fundraising for their re-elections early in the campaign season. On average, challengers began their campaigns in earnest in week 49, nearly a full year later. This is a much-overlooked source of incumbency advantage as the campaign for resources is nearly twice as long as for incumbents as it is for challengers. Open seat candidates began their campaigns somewhere in between the two. This number is likely influenced both by the timing of when incumbents ultimately announced their retirements, as well as the timing of vacancies leading to special elections. The latest special election began in the end of July 2010 (week 81 of 95) when long-serving Senator Robert Byrd died in office at the end of June and gubernatorial appointee Carte Goodwin announced his intention not to stand for election.

Table 4-2: Average First Week of Contributions by Subgroup

	N	Mean
All Candidates	73	26
By Status:		
Incumbents	23	2
Challengers	21	49
Open	29	28
By Party:		
Democrats	34	24
Republicans	37	29
Other	2	10

Figure 4-1 provides the average weekly contribution totals for candidates by status, including incumbents, challengers and candidates for vacant seats. A few things are worth noting about the time series. The first is the general shape of the data, regardless of class. Weekly contribution totals are generally increasing across the course of the election, and then accelerate between weeks 80 and 95. Furthermore the trend is accentuated by regularly spiked intervals related to FEC filing deadlines. Table 4-3 provides the list of filing deadlines shared by all candidates (regular quarterly and pre-general election deadlines). Candidates are also responsible for reporting their contribution data before primary elections and run-offs, but these are staggered by state based on the timing of elections. The spikes in Figure 4-1 correspond to quarterly filing deadlines in weeks 12, 25 39, 52, 65, 78, 91 and 93. Figure 4-1 also demonstrates the advantage incumbents have over challengers in the campaign for dollars. The open seat line in this graph is influenced by Charlie Crist's meteoric fundraising.

Figure 4-1. Mean Weekly Contribution Totals by Candidate Status

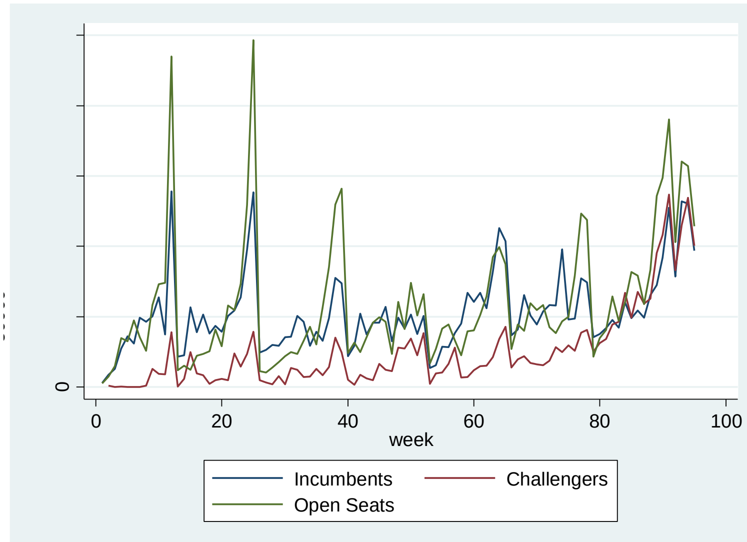


Table 4-3. Reporting deadlines and corresponding weeks

Report	Close of Books Date	Week
2009 Q1	March 31, 2009	12
2009 Q2	June 30, 2009	25
2009 Q3	September 30, 2009	39
2009 Q4	December 31, 2009	52
2010 Q1	March 31, 2010	65
2010 Q2	June 30, 2010	78
2010 Q3	September 30, 2010	91
2010 Pre-General*	October 13, 2010	93

* Pre-primary and Run-off Filing Deadlines Vary by State

Figure 4-2 provides the same information, separated by party. Again, we see Charlie Crist's influence on the time series graph for "other". Rather than focus on the outlier, Figure 4-3 provides mean contributions for just Democrats and Republicans, while Figure 4-4 examines the fundraising of (ultimately) non-partisan candidates Lisa Murkowski and Charlie Crist. Figure 4-3 demonstrates the relative parity of the major parties in 2010 senatorial fundraising. The two lines are in lock-step for the duration of the campaign. As with the graphs by class, a reporting deadline pattern is evident. Figure 4-4 provides an overview of fundraising for Murkowski and Crist. The time series is dominated by Crist who set an FEC record for campaign finance. Cirst earned over $4 million in individual contributions in his first quarter, $1.6m of which was received on the week ending on June 30, 2009 (a quarterly reporting deadline) (Sharockman, 2009). Needless to say, his campaign was one of the better financed in 2010.

Figure 4-2. Mean Weekly Contribution Totals by Candidate Party

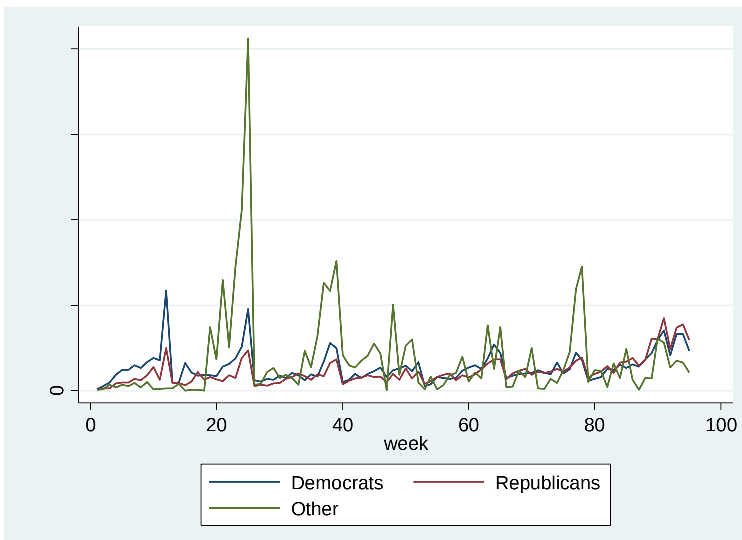


Figure 4-3. Mean Weekly Contribution Totals by Candidate Party (Excluding Independent/Write-in Candidates)

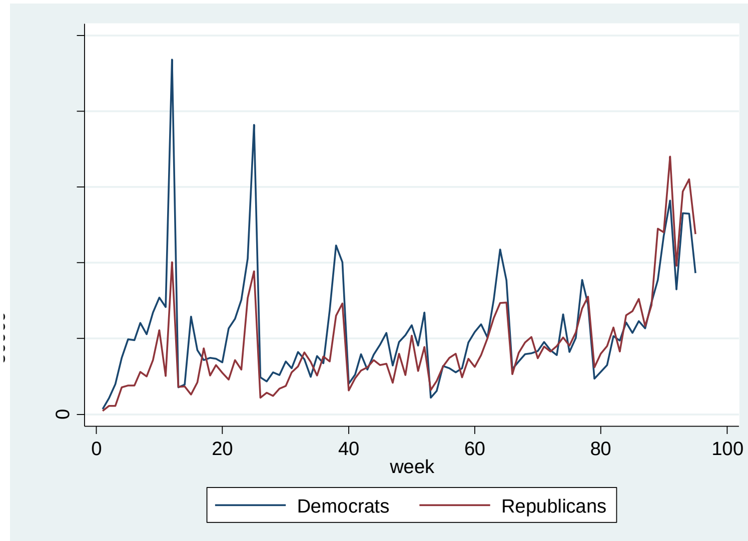
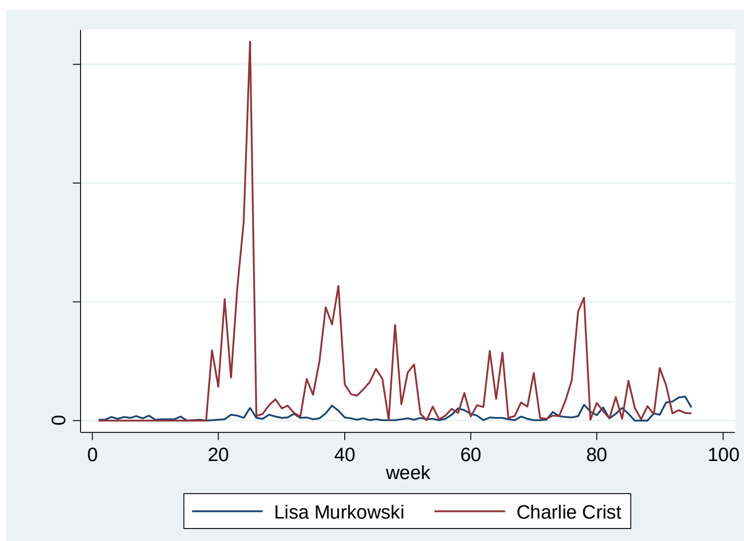


Figure 4-4. Weekly Contribution Totals for Independent/Write-in Candidates



Main Independent Variables

The main independent variables, interest group endorsements, were collected from press releases and news articles providing the exact date an organization pledged support for a U.S. Senate candidate. Determining which groups to include in the model was difficult, as I aimed to include a representative sample of groups supporting each political party for which I could locate a dated press release or article reporting the endorsement. While far from a systematic or methodological selection process, seven of the groups I selected are specifically named in Baker's (2015) web appendix as examples of "quality" endorsements.

From those groups endorsing the left side of aisle, I included Emily's list, NARAL Pro-Choice America and the League of Conservation voters. Among those groups which typically endorse Republicans, I include the U.S. Chamber Commerce, Club for Growth, Susan B. Anthony's List, and the National Rifle Association. Note that although they typically endorse Republican candidates, both the NRA and Chamber of Commerce endorsed Democratic Governor Joe Manchin for the special election in West Virginia. Further, the NRA endorsed Democrat Brad Ellsworth over Republican Dan Coats in Indiana as their final Senate endorsement of the cycle. In addition to these groups I also include endorsements made by Sarah Palin. I include Palin as a proxy for or representative of the Tea Party movement as no comprehensive, dated list for Tea Party endorsements was obtainable. I would also have liked to include endorsements by labor organizations or the leading newspaper in each state, but this information was disaggregated either among the various newspaper cites or AFL-CIO state chapter websites which were unreliably and unsystematically updated. Future research should aim to measure the impacts of these endorsements on donors. Table 4-4 provides the list of interest group endorsees, date of the endorsement and competitiveness of the seat at the time of endorsement (as coded by the Cook Political Report, 2010). In the models that follow, endorsement variables are coded '0' for all candidates not receiving an endorsement, '0' for endorsed candidates before the press release announcing their endorsement and "1' thereafter.

Table 4-4. 2010 U.S. Senate Candidate Endorsements

Candidate	Date	Week#	General Election Competitiveness (at time of endorsement)
Emily's List (7)			
Kirsten Gillibrand (D-NY)	1/28/2009	4	Solid Democratic
Robin Carnahan (D-MO)	1/28/2009	4	Toss-Up
Barbara Boxer (D-CA)	10/22/2009	42	Lean Democratic
Barbara Mikulski (D-MD)	10/22/2009	42	Solid Democratic
Patty Murray (D-WA)	10/22/2009	42	Solid Democratic
Elaine Marshall (D-NC)	6/25/2010	77	***Likely Republican***
Roxanne Conlin (D-IA)	6/25/2010	77	***Likely Republican***
NARAL Pro-Choice America (12)			
Kirsten Gillibrand (D-NY)	6/29/2009	25	Solid Democratic
Patty Murray (D-WA)	9/29/2009	38	Solid Democratic
Paul Hodes (D-NH)	10/2/2009	39	Toss-Up
Barbara Boxer (D-CA)	11/13/2009	45	Lean Democratic
Kendrick Meek (D-FL)	12/16/2009	50	Likely Republican
Russ Feingold (D-WI)	3/11/2010	62	Solid Democratic
Alexi Giannoulias (D-IL)	3/11/2010	62	***Toss-Up***
Joe Sestak (D-PA)	5/12/2010	71	Toss-Up
Chris Coons (D-DE)	7/10/2010	79	Likely Republican
Richard Blumenthal (D-CT)	8/11/2010	84	***Lean Democratic***
Michael Bennet (D-CO)	8/30/2010	86	***Toss-Up***
Scott McAdams (D-AK)	10/27/2010	95	***Likely Republican***
League of Conservation Voters (10)			
Alexi Giannoulias (D-IL)	1/24/2010	55	***Toss-Up***
Michael Bennett (D-CO)	1/30/2010	56	Toss-Up
Paul Hodes (D-NH)	2/12/2010	58	Toss-Up
Harry Reid (D-NV)	2/20/2010	59	Toss-Up
Joe Sestak (D-PA)	8/5/2010	83	***Toss-Up***
Elaine Marshall (D-NC)	8/19/2010	85	***Likely Republican***
Russ Feingold (D-WI)	9/20/2010	90	***Toss-Up***
Patty Murray (D-WA)	9/29/2010	91	***Toss-Up***
Richard Blumenthal (D-CT)	10/12/2010	93	***Toss-Up***
Chris Coons (D-DE)	10/20/2010	94	***Likely Democratic***

Table 4-4 (Cont.). 2010 U.S. Senate Candidate Endorsements

Candidate	Date	Week#	General Election Competitiveness (at time of endorsement)
U.S. Chamber of Commerce (5)			
Marco Rubio (R-FL)	7/23/2010	81	Toss-Up
Carly Fiorina (R-CA)	8/9/2010	83	***Toss-Up***
Roy Blunt (R-MO)	8/16/2010	84	***Toss-Up***
Rob Portman (R-OH)	8/30/2010	86	***Toss-Up***
Joe Manchin (D-WV)	9/20/2010	89	***Lean Democratic***
Club for Growth (10)			
Tom Coburn (R-OK)	4/15/2009	15	Likely Republican
Jim DeMint (R-SC)	4/15/2009	15	Solid Republican
Pat Toomey (R-PA)	4/16/2009	15	Lean Republican
Marco Rubio (R-FL)	11/9/2009	47	Likely Republican
Sharron Angle (R-NV)	5/19/2010	72	Toss-Up
Ron Johnson (R-WI)	7/14/2010	80	Lean Democratic
Mike Lee (R-UT)	7/14/2010	80	***Solid Republican***
Rand Paul (R-KY)	7/30/2010	82	***Toss-Up***
Ken Buck (R-CO)	8/17/2010	84	***Toss-Up***
Joe Miller (R-AK)	8/27/2010	86	***Solid Republican***
Susan B. Anthony's List (10)			
Carly Fiorina (R-CA)	4/26/ 2010	68	Lean Democratic
Sharron Angle (R-NV)	6/9/2010	75	***Toss-Up***
Roy Blunt (R-MO)	6/12/2010	75	Toss-Up
Dan Coates (R-IN)	7/7/2010	78	***Lean Republican***
Kelly Ayotte (R-NH)	7/14/2010	79	Toss-Up
Christine O'Donnell (R-DE)	7/15/2010	80	Likely Republican
John Boozman (R-AR)	7/20/2010	80	***Toss-Up***
Lisa Murkowski (WI- AK)	10/7/2010	92	***Toss-Up***
Dino Rossi (R-WA)	10/12/2010	92	***Toss-Up***
Chuck Grassley (R-IA)	10/12/2010	92	***Solid Republican***

Table 4-4 (Cont.). 2010 U.S. Senate Candidate Endorsements

Candidate	Date	Week#	General Election Competitiveness (at time of endorsement)
National Rifle Association (22)			
Murkowski (WI- AK)	7/28/2010	82	Solid Republican
Roy Blunt (R-MO)	9/3/2010	87	***Toss-Up***
Dino Rossi (R-WA)	9/8/2010	88	***Toss-Up***
Christine O'Donnell (R-DE)	9/10/2010	88	Likely Republican
Richard Shelby (R-AL)	9/10/2010	88	***Likely Republican***
Mike Crapo (R-ID)	9/13/2010	88	***Likely Republican***
Jerry Moran (R-KS)	9/13/2010	88	***Likely Republican***
David Vitter (R-LA)	9/13/2010	88	***Lean Republican***
John Hoeven (R-ND)	9/14/2010	88	***Solid Republican***
Richard Burr (R-NC)	9/14/2010	88	***Likely Republican***
Mike Lee (R-UT)	9/14/2010	88	***Solid Republican***
Johnny Isakson (R-GA)	9/15/2010	89	***Solid Republican***
Rob Portman (R-OH)	9/16/2010	89	***Lean Republican***
Ken Buck (R-CO)	9/17/2010	89	***Toss-Up***
Chuck Grassley (R-IA)	9/20/2010	89	***Solid Republican***
John McCain (R-AZ)	9/21/2010	89	***Solid Republican***
Joe Manchin (D-WV)	9/23/2010	90	***Lean Democratic***
John Boozman (R-AR)	9/24/2010	90	***Lean Republican***
Jim DeMint (R-SC)	9/24/2010	90	***Solid Republican***
Ron Johnson (R-WI)	9/28/2010	90	***Toss-Up***
Pat Toomey (R-PA)	9/28/2010	90	***Toss-Up***
Brad Ellsworth (D-IN)	9/30/2010	91	***Lean Republican***

Table 4-4 (Cont.). 2010 U.S. Senate Candidate Endorsements

Candidate	Date	Week#	General Election Competitiveness (at time of endorsement)
Sarah Palin (11)			
Rand Paul (R-KY)	2/1/2010	56	Toss-Up
John McCain (R-AZ)	3/26/ 2010	64	Solid Republican
Marco Rubio (R-FL)	4/13/ 2010	66	Likely Republican
Carly Fiorina (R-CA)	5/6/2010	70	Lean Democratic
Joe Miller (R-AK)	6/2/2010	74	Solid Republican
Kelly Ayotte (R-NH)	7/19/2010	80	Toss-Up
Sharron Angle (R-NV)	8/18/2010	85	***Toss-Up***
Christine O'Donnell (R-DE)	9/9/2010	88	Likely Republican
John Raese (R-WV)	10/11/2010	92	***Toss-Up***
Pat Toomey (R-PA)	10/19/2010	93	***Toss-Up***
John Boozman (R-AR)	10/19/2010	93	***Lean Republican***

Bold text represents endorsements made after primary election contests.

A potentially problematic consideration to the measurement of endorsement effects is if interest groups time their endorsements to coincide with FEC filing deadlines. If these two events overlap significantly, the effects would be difficult to parse. Table 4-5 provides a stem and leaf plot of endorsement weeks through the campaign season. This graph lists the weeks of each endorsement where the "stem" provides the first digit of each week (0-9) and the "leaves", separated by commas, provide the second digit. National FEC filing deadlines are denoted by asterisks.

In total, the study includes 87 individual endorsements from eight endorsers. Of these 87, only nine (10%) occur in the same week as a national or state specific filing deadline. Six of these occur during national FEC mandatory reporting deadlines, while three occur contemporaneously with state pre-primary filing deadlines. Overall these findings should give us confidence that we are able to meaningfully separate the effects of filing deadlines and endorsements.

One candidate, Christine O'Donnell (R-DE), was endorsed by both Sarah Palin and the NRA on back-to-back days in week 88. While this was not a FEC reporting deadline, these endorsements occurred less than seven days before the primary election and were captured in that same week. As such for week 88, Christine O'Donnell is coded as a '1' for NRA, Palin and Primary. This was the only instance in which a candidate received two or more endorsements in the same week. Only two other candidates received endorsements on the week coinciding with their primary contests.

Table 4-5: Stem and Leaf Plot of Endorsement Weeks

0	4, 4
1	5, 5, 5
2	5*
3	8, 9*
4	2, 2, 2, 5, 7
5	0, 0, 6, 6, 8, 9
6	2, 2, 4, 6, 8
7	0, 1, 2, 4, 4, 5, 7, 7, 8*, 9, 9
8	0, 0, 0, 0, 0, 1*, 2, 2, 3*, 3*, 4, 4, 4, 5, 5, 6, 6, 6, 7, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 9, 9, 9, 9, 9, 9, 9
9	0, 0, 0, 0, 0, 1, 1, 2, 2, 2, 2, 3, 3, 3, 4, 5

* Indicates FEC mandatory reporting deadlines (national)

The eight endorsing organizations included in this study offer some variety in terms of their stated goals and the types of candidates they endorse. Emily's list is an organization dedicated to electing pro-choice Democratic women. Although they provide a wealth of other services to candidates including training, research, and assistance with GOTV activities, Emily's list frequently endorses candidates early in the campaign season in hopes of providing early funding to female candidates. The group's name is an acronym for "Early Money is Like Yeast" suggesting *it makes dough rise*. Emily's List's political action committee spent over $27 million during the 2010 election cycle with a little over $6 million being contributed directly to federal candidates (OpenSecrets.org, n.d.-b). As of 2017, Emily's List claims to have helped elect "over 100 pro-choice Democratic women to the House, 23 to the Senate, 12 to governors' seats, and hundreds of women to state and local office" (Emily's List, 2017). While their Senate endorsements are generally accompanied by a small contribution from the organization's political action committee, Emily's list encourages members to donate directly to campaigns by providing links on their website to candidate donation pages.

While other work has tried to assess the electoral impact of Emily's List endorsements on winning elected office (see Hannagan, Pimlott, and Littvay 2010), I have found no research which directly tests whether an Emily's List endorsement, in isolation, increases campaign fundraising, as compared to non-endorsed candidates. Carson and Dietz (2010) investigate the impact of women's networks (including Emily's List, WISH List, Susan B. Anthony's List and other groups) on House campaign finance, finding that endorsed female candidates raise $128,000 more than male candidates and that unendorsed female candidates raise $102,300 less than men. Unfortunately, this research fails to control for the endorsement selection process and therefore likely overstates the impact of these endorsements. To be more specific, if women's networks select their candidates on the strength of their campaign organization or independent capacity for fundraising, then we are unable to tell whether these endorsements help candidates raise money or whether they simply choose candidates more capable of raising the necessary funds.

Table 4-4 provides the list of candidates endorsed by Emily's List, seven in total, along with when the candidates were endorsed and the competitiveness of the elections at the time of endorsement (Cook Political Report, 2010). As the table indicates, Emily's List endorsed two candidates early in the election season, appointed Senator Kirsten Gillbrand (D-NY) and open seat candidate Robin Carnahan (D-MO). These endorsements came in early 2009 and represent the earliest endorsements made by any of the included groups. Emily's list also made three other endorsements during the primary seasons to incumbents in relatively safe districts. In one of these races, Barbara Boxer (D-CA) was ultimately successful in fending off a strong general election challenge by former-HP CEO Carly Fiorina (R-CA). In June of 2010, after the primary election season, Emily's list endorsed two other candidates, both running against incumbent senators.

NARAL Pro-Choice America is another political organization dedicated to protecting a woman's right to choose. NARAL seeks to further the pro-choice agenda by lobbying Congress, organizing voters, disseminating information on issues or legislation pertaining to issues of choice, and electing pro-choice candidates (NARAL Pro-Choice America, n.d.). In 2010 NARAL Pro-Choice America's PAC raised over $1 million and spent $580,500 on federal candidates (OpenSecrets.org, n.d.-c). Unlike Emily's List, which is geared towards electing pro-choice women, NARAL endorses both male and female pro-choice candidates. In 2010, NARAL Pro-Choice America endorsed twelve candidates for U.S. Senate. Among their senate endorsements were nine men and three women, each of whom was also endorsed by Emily's list. According to Table 4-4, NARAL did most of their endorsing pre-primary, and endorsed a mix of safe/leaning Democratic districts as well as four toss-ups (Paul Hodes (D-NH), Alexi Giannoulias (D-IL), Joe Sestak (D-PA) Michael Bennet (D-CO)). Their endorsements included support for Joe Sestak in his successful primary battle against incumbent Senator Arlen Spector. The group also endorsed Democrat Scott McAdams in the final week of the three-way race in Alaska.

The League of Conservation Voters (LCV) is an environmentally-oriented interest group which seeks to influence public policy by "advocat[ing] for sound environmental laws and policies, hold[ing] elected officials accountable for their votes and actions, and elect[ing] pro-environmental candidates who will champion [their] priority issues"

(League of Conservation Voters, n.d.). In 2010, the League of Conservation Voter's Political Action Committee spent $1.8 million dollars, including contributing $390,000 to federal candidates (OpenSecrets.org, n.d.-d). . Their Super Pac spent an additional $988,518 in 2010 (OpenSecrets.org, n.d.-e). LCV endorsed 10 candidates in 2010, of which eight were classified as being in toss-up races. Of the eight toss-up contests, Democrats won in three states (CO, NV and WA). LCV also endorsed Elaine Marshall in her unsuccessful challenge to Incumbent Richard Burr in North Carolina and championed Chris Coons' victory in Delaware's special election against Tea Party candidate Christine O'Donnell. 70% of LCV endorsements were made post-primary.

The U.S. Chamber of Commerce is "the world's largest business organization representing the interests of over 3 million businesses…" (U.S. Chamber of Commerce, n.d.). They are also the leading lobbying organization in the country, spending over $1.4 billion between 1998 and 2018 (OpenSecrets.org, n.d.-f). Despite spending over $132 million in lobbying efforts in 2010 (OpenSecrets.org, n.d.-g), the group's Political action committee spend a mere $136,732 trying to influence the outcome of elections (OpenSecrets.org, n.d.-h). The Chamber of Commerce endorsed four Republican candidates for Senate in 2010 including Roy Blunt (MO), Carly Fiorina (CA), Rob Portman (OH), and Marco Rubio (FL). The Chamber also endorsed Democrat Joe Manchin over his Republican opponent Republican John Raese, citing Manchin's pro-business policies and strong performance as Governor of West Virginia (U.S. Chamber of Commerce, 2010). Of these five elections, the four Republican contests were toss-ups at the time of endorsement while Manchin's election in West Virginia was slightly more certain.

Club for Growth is a “network of over 250,000 pro-growth, limited government Americans who share in the belief that prosperity and opportunity come from economic freedom” (Club for Growth, n.d.-a). They seek to promote pro-growth policies through issue advocacy, research, training, and education. The political action committee for Club for Growth “endorses and raises money for candidates who stay true to the fundamental principles of limited government and economic freedom” (Club for Growth, n.d.-b). In 2010 Club for Growth spent $5,489,609 on elections of which nearly $5 million was in the form of independent expenditures (OpenSecrets.org, n.d.-i). The group spent nearly $2.7m in 2010 against Joe Sestak (D-PA) and nearly $1m against Michael Bennet (D-CO). They also spent around $300,000 in support of Joe Miller (R-AK) and Charlie Crist (I-AK) (OpenSecrets.org, n.d.-j).

In 2010, Club for Growth endorsed 10 Republican candidates. These include several Republican leaning/safe districts in primary contests and well as a few toss-up elections in the general election. The organization endorsed both lightly contested races in Oklahoma and South Carolina (in which the Democratic candidates did not raise funds) as well as rather competitive elections in Nevada (Sharron Angle), Kentucky (Rand Paul) and Colorado (Ken Buck). They also endorsed Pat Toomey (R-PA) early in 2009 and doubled down on this endorsement by waging a vigorous independent expenditure campaign.

Susan B. Anthony List’s goal “is to end abortion by electing national leaders and advocating for laws that save lives, with a special calling to promote pro-life women leaders” (Susan B. Anthony List, n.d.). In 2010, the group spent a total of $696,367 on elections, including $183,191 in contributions to federal candidates and $181,447 in independent expenditures (OpenSecrets.org, n.d.-k). Susan B. Anthony List endorsed ten Republican candidates in 2010, five men and five women. Six of these races were toss-ups at the time of endorsement. In three of these races they supported the opponents of Emily's List endorsed candidates (Carly Fiorina against Barbara Boxer in California, Sharron Angle against Harry Reid in Nevada and Chuck Grassley against Roxanne Conlin in Iowa). Several of their endorsements came late in the election season, with three occurring just three weeks before Election Day.

The National Rifle Association claims to be "America's longest-standing civil rights organization" (National Rifle Association, n.d.). With over five million members, they are staunch defenders of the Second Amendment. In 2010, the NRA's PAC spent nearly $14 million dollars on elections (OpenSecrets.org, n.d.-l). Of this, nearly $1.3 was contributed to federal candidates directly, of which 71% was given to Republicans. They also spent an additional $7 million in independent expenditures (OpenSecrets.org, n.d.-l). Among these independent expenditures, the NRA spent north of half a million dollars on behalf of Pat Toomey (R-PA), Roy Blunt (R-MO), Ken Buck (R-CO), Rob Portman (R-OH) and Ron Johnson (R-WI) (OpenSecrets.org, n.d.-m). They also spent over $500,000 against Joe Sestak (D-PA) and Robin Carnahan (D-MO). Kenny, McBurnett and Bordua (2004) examine the NRA's influence in House contests in 1994 and 1996, finding that the NRA's endorsement provided Republican challengers with a significant advantage in 1994, but that in 1996 endorsed candidates were no better off than unendorsed Republicans. To date no research that I am aware of attempts to measure the impact of NRA endorsements on campaign contributions.

In 2010, the NRA had the most endorsements of any group in the study. They endorsed 22 total candidates, 20 Republicans (including incumbent Lisa Murkowski of Alaska before she lost the Republican nomination) and Democrats Joe Manchin (WV) and Brand Ellsworth (IN). NRA endorsements came fairly late in the campaign season, with all but Murkowski's coming after September 3rd. In most of these elections the Republicans were already favored, but they did endorse in five toss-up races, endorsing Roy Blunt (R-MO), Dino Rossi (R-WA), Ken Buck (R-CO), Ron Johnson (R-WI) and Pat Toomey (R-PA).

Coming off her unsuccessful bid for the Vice Presidency, Sarah Palin was a key player, if not de-facto leader, of the Tea Party movement in 2010. She was an avid campaigner and endorser throughout the campaign season and is credited with raising over $10 million for Republican candidates and committees (Draper, 2010). As such, the Tea Party movement and Sarah Palin have gained significant attention of scholars. The findings from Karpwotz et al. (2011) suggest that of all the various Tea Party groups, only FreedomWorks endorsed strategically, pledging support for candidates in competitive races. Other groups, including Sarah Palin, appeared to endorse candidates whose fate was rather certain, either on winning the side of safe election or as a sacrificial lamb in a Democratic district. Despite this, they demonstrate that the movement had significant influence on Republican primaries, especially in the Senate primary victories for Ken Buck (R-CO) and Mike Lee (R-UT). Bullock and Hood (2012) examine the how Sarah Palin and the Tea Party make their endorsements, demonstrating that Sarah Plain was more likely to endorse in races where the Republican candidate was being outspent by their Democratic opponent.

In 2010 Sarah Plain endorsed 11 Republican candidates for Senate. Seven of her endorsements were made in districts where the Republican was viewed to be leading, while five were distributed to candidates in elections considered to be toss-ups. Only four of these endorsements came in the general election, including support for Sharron Angle (R-NV) against Harry Reid (D-NV) and John Raese (R-WV) against Joe Manchin (D-WV). She famously endorsed and campaigned for her former running mate John McCain (R-AZ) in what appeared to be a contentious primary in March of 2010.

Other Control Variables

As my aim is to explain the dynamics of individual campaign contributions, making comparisons between candidates and across the better part of two years, additional variables are necessary to control for factors which systematically influence donations. The first two controls, *Republican* and *Democrat,* control for the partisanship of the candidates at the end of the election cycle. To this end, the control group is "other" which includes Lisa Murkowsk (WI- AK) and Charlie Crist (I-FL). As ultimately there was another Republican in Alaska's election, I code Murkowki as "other" throughout the length of the campaign. Crist did not formally compete in a Republican primary and is similarly coded as other throughout the election. As Table 4-1 and Figure 4-3 do not indicate a substantial difference between political the major parties, I anticipate both of these variables will be negative as compared to the influence of Charlie Crist on the "other" candidates' fundraising levels.

I also include controls for *Incumbent* and *Open*, leaving challengers as the comparison group for status. Given Table 4-1 and Figure 4-1, it is reasonable to anticipate both of these measures being in the positive direction as on average challengers raised the least of the three groups. That said, other controls, such as those for competitiveness, may influence these findings in a multivariate context.

CPR Rating, CPR Rating^2 and Change in CPR Rating all relate to how Cook Political Report rated the general election prospects of the major political parties throughout the campaign (Cook, 2010). The Cook Report provided 60 updates on the competitiveness of Senate elections throughout the primary and general election campaign. They rated districts on a scale including seven points: Solid Democrat, Likely Democrat, Lean Democrat, Toss-Up, Lean Republican, Likely Republican and Solid Republican. I recode these qualitative evaluations into a seven-point scale ranging from 1- Likely Democrat to 7-Likely Republican. I then recoded these variables based on the candidates' party ranging from 1- Extremely Unlikely to Win through 7-Extremely Likely to Win. Only the "other" candidates posed an issue with this coding. In Florida, I assign the Republican values to Charlie Crist, suggesting the district is somewhat favorable to his candidacy early in the season while towards the end of the campaign it's rated as a toss-up. Given the ratings reflect the uncertainty of the three-candidate race I thought it was defensible to leave this coding untouched. In Alaska, I similarly assign both Lisa Murkowski and Joe Miller the Republican values until Murkowski announces her write-in campaign, at which point I manually code both candidates as a toss-up. Cook Political Report shows this district as a likely Republican victory (a 6 on the 7-point scale) up until Election Day. Given the amount of uncertainty in the poll numbers and Murkowski's unlikely win as a write-in candidate, it seemed reasonable to insert this uncertainty into the coding for these candidates. I left Scott McAdams's (D-AK) coding untouched, and therefore a “2’ at Election Day, as review of polling data from 2010 revealed that Scott was a distant third. Ultimately there was question about who would win, but in reality, it was a matter of which Republican candidate.

I transform the CPR ratings two ways. First, I include a squared term under the notion that campaign contributions should funnel to more competitive races. Specifically, I anticipate a parabolic relationship with toss-up races attracting the most contributions. Second, I include first difference of the competitiveness ratings, anticipating that as seats become more or less competitive the influx of dollars will adjust accordingly. Specifically, controlling for the absolute position on this scale, I anticipate that an increase in safety will be associated with a decrease in contributions.

I include the 2008 Presidential election vote totals as a proxy for the statewide partisan context. To calculate this variable, I take the Democratic share of the 2008 Presidential vote (the percent awarded to Barak Obama) in each state and subtract 50%. I then multiply by ‘-1’ if the candidate is Republican or “other”. I include a square of this variable in the model as well, allowing for the possibility that money flows to Senate elections in states with somewhat even partisan composition. It is also possible that this relationship is linear, that candidates in friendlier states can anticipate increase contributions. Including both terms in the model will enable us to assess whether this relationship is linear, parabolic or whether state partisanship is unrelated to campaign contributions.

There is debate in the literature as to what extent candidate ideology is related to campaign contributions (Barber et al. (2016), Bonica (2014), Ensley (2009); Hill and Huber, 2016; McCarty, Poole and Rosenthal, 200). To measure whether candidate ideology is related weekly campaign contributions for U.S. Senate candidates, I include Bonica's measure of candidate ideology (Bonica, 2016). I elected to use the measure which allows for candidates' ideology score to vary across the course of their careers, as several long-standing Senators were up for election in 2010 and donors likely update their ideological priors regularly.

Further, research suggests that controlling for ideological influences, at least a subset of donors may act as "investors" (Barber, et al., 2016; Gordon, Hafner and Landa, 2007). To control for the possibility that more money is contributed to incumbents in positions of power, I include a dichotomous measure *Committee/Party Leadership* which is coded '1' if the incumbent is the chair or ranking member on the Finance, Appropriations or Veterans Affairs committees, the Senate's three most important committees according to Edwards and Stewart (2006). Additionally, I code candidates as '1' if they are part of the Senate leadership structure by serving as a party leader or whip. All other candidates are coded as '0'. Ultimately this variable is coded as '1' for Chuck Grassley (R-IA, Ranking member of Finance), Richard Burr (R-NC- Ranking member of Veterans Affairs), Daniel Inouye (D-HI, Chair of Appropriations), and Harry Reid (D-NV, Majority Leader).

Candidate quality is a well-documented influence of electoral success (Abramowitz, 1991; Damore & Hansford, 1999; Gerber, 1998; Jacobson, 2000; Jacobson and Kernell, 1981; Lublin, 1949; Squire, 1989; Squire and Smith, 1986). While there are numerous ways in which to code quality, I operationalize this as a single dichotomous measure with candidates who have previously elected office being coded as '1'. All other candidates are coded as '0'. Information on previous elected office was gathered by reading multiple biographies of each candidate and assessing whether they previously held elected positions. The theory behind this control is that previous candidates have an existing database of donors they can tap in future election cycles. The counter to this argument and operationalization is that the possibility that previously unsuccessful candidates may also have a similar database of donors and that at this level of government all candidates are likely to have party fundraising lists at their disposal. Despite this, I anticipate that proven candidates will have, on average, higher weekly campaign contributions. In total, 54 of the 73 Senate candidates in 2010 had previously held electoral office, whether local, state or federal.

Given the earlier examination of the time series, I include several controls related week, primary elections and reporting deadlines. First, given the increasing flow of money over the course of the campaign, I include the week number (ranging from 1 to 95) in the model. Given the exponential increase in money towards the later weeks of the campaign cycle I also include the square and cube of week. As my goal is to measure the influence of endorsements which are by definition '0' in earlier weeks and '1' in later weeks, I would be remiss not to attempt to control for aggregate trend in the data. I also include a variable coded '1' for weeks with filing deadlines (those listed in Table 4-3, as well as state specific primary and run-off deadlines) and '0' for weeks without. Given the clear trend in the Figures 4-1 through 4-3, I would be surprised if there isn't a significant and substantive uptick in contributions on these weeks. Finally, I include a control for the week of the primary (and run-off) elections, similarly coded '1' on primary/run-off election weeks and '0' otherwise. Given a number of competitive primaries in the 2010 elections, I anticipate they are related to an increase in campaign contributions.

Analysis

Before diving into multivariate modeling, it is reasonable to take a step back and assess whether endorsements and donations are descriptively related. To examine this relationship, I calculate the total number of endorsements each candidate receives. Theoretically this number ranges from 0 to 8 (the number of endorsers included in this study) but a practical maximum would be five, given the limited overlap between groups. As Table 4-6 indicates, the true maximum is three, with eight candidates receiving endorsements from three of the included groups. Of the eight candidates endorsed three times, seven are Republican while Patty Murray (WA) is the lone Democrat. Table 4-6 provides the descriptive statistics for cumulative individual contributions at week 95 (ending on Election Day). While no statistical testing was conducted, it provides clear trend that implies, on average, candidates with more endorsements received more individual contributions. While Table 4-6 demonstrates correlation, we have further tests to run before approaching the question of causation.

Table 4-6: 2010 U.S. Senate Cumulative Itemized Individual Contributions By Number of Endorsements from Included Groups (Between January 7, 2009 and November 2, 2010)

Endorsements	N	Mean	Median	St. Dev.	Min	Max
0	25	$2,762,477	$663,545	$3,930,864	$1,606	$13,360,231
1	17	$3,337,807	$2,293,343	$2,851,973	$474,032	$11,761,323
2	23	$4,657,465	$3,585,486	$3,112,134	$3,112,134	$11,503,933
3	8	$6,173,276	$6,384,185	$2,831,657	$2,092,586	$9,823,551

Table 4-7 provides the initial test of the theory that interest group endorsements lead to donations. The dependent variable for this model is weekly individual contributions[3]. For all modeling, I narrow the total dataset of 6,935 entries (95 weeks for 73 candidates) to 5,135 by removing any weeks for which a campaign was not yet active. Specifically, according to Table 4-2, challengers and open seat candidate begin their campaigns later in the cycle, as do candidate for special elections. It would be inaccurate to include these weeks in the multivariate analyses as in reality the campaigns have not yet started fundraising, either because candidates have yet to declare or ramp up their campaign organizations or because the election has yet to materialize (in the event of a retirement or special election). Once a candidate enters the dataset by collecting their first itemized contribution of the cycle, they have continuous inclusion in the time series until Election Day.

I use multilevel analysis to accommodate cross-sectional time series data. Multilevel modeling corrects for violating the independence assumption of OLS and simultaneously controls for dependencies within groups (i.e. candidates and elections) (Shor et al. 2007). This multi-level mixed effects model groups entries (weeks) within candidates which are nested within elections. At first glance, Table 4-7 provides some interesting initial findings. First, controlling for the week of the election, neither political party nor status have significant impact on the weekly contribution totals for candidates.

[3] I recoded the dependent variable for three entries where candidates had negative weekly totals. In examining thousands of FEC entries, I can attest that negative individual contributions are not rare. Frequently candidates will issue refunds or reattribute large checks from individuals to their spouse, children or family members. In the vast majority of instances in which these negative contributions occur, they are simply overwhelmed by the weekly contributions and go unnoticed. These three entries are unique in that occur in weeks with little or no other fundraising and thus are not cancelled out. I recode these values to ‘0’ as in those particular weeks there is no incremental gain in contribution dollars.

Despite the evidence that, on average, incumbents and open seat candidates outraise challengers for congress (Herrnson, 2012; also see Table 4-1), once the model controls for other considerations such as competitiveness and endorsements, challengers do not appear financially disadvantaged.

Table 4-7. The Effect of Endorsements on U.S. Senate Weekly Contributions

	Coefficient	(SE)	p-value
Fixed Effects:			
Individual Contributions (Lagged)	.425	(.012)	<.001
Week	772.61	(387.64)	.046
$Week^2$	-26.93	(8.72)	.002
$Week^3$	.218	(.057)	<.001
Democrat	-13,255.57	(19,205.98)	.490
Republican	-26.384.19	(16,406.61)	.108
Incumbent	-2,603.81	(9,220.74)	.778
Open	-2,825.12	(7,019.77)	.687
Emily's List	12,117.89	(5,745.29)	.035
NARAL	18,881.35	(4,685.73)	<.001
League of Conservation Voters	24,919.80	(5,659.49)	<.001
Chamer of Commerce	26,742.18	(8,934.75)	.003
Club for Growth	36,974.66	(5,503.06)	<.001
Susan B Anthony's List	22,811.43	(6,307.32)	<.001
National Rifle Association	5,648.95	(5,482.72)	.303
Sarah Palin	37,460.44	(5,950.61)	<.001
Primary	35,214.94	(6,844.80)	<.001
Reporting Deadline	42,586.52	(2,693.46)	<.001
CPR Rating	24,218.09	(4,325.65)	<.001
CPR $Rating^2$	-2,602.64	(473.37)	<.001
Change in CPR Rating	-8,394.77	(3,931.63)	.033
2008 Presidential Vote	-55,070.20	(34,117.24)	.106
2008 Presidential Vote2	-107,368.80	(245,160.40)	.661
Candidate Ideology	3,318.11	(8,548.00)	.698
Candidate $Ideology^2$	-4,513.64	(4,378.31)	.303
Committee/Party Leadership	7,198.78`	(11,632.15)	.536
Candidate Quality	5,958.78	(6,639.16)	.373
Constant	-5,005.28	(19,023.884)	.792

Table 4-7. The Effect of Endorsements on U.S. Senate Weekly Contributions (cont.)

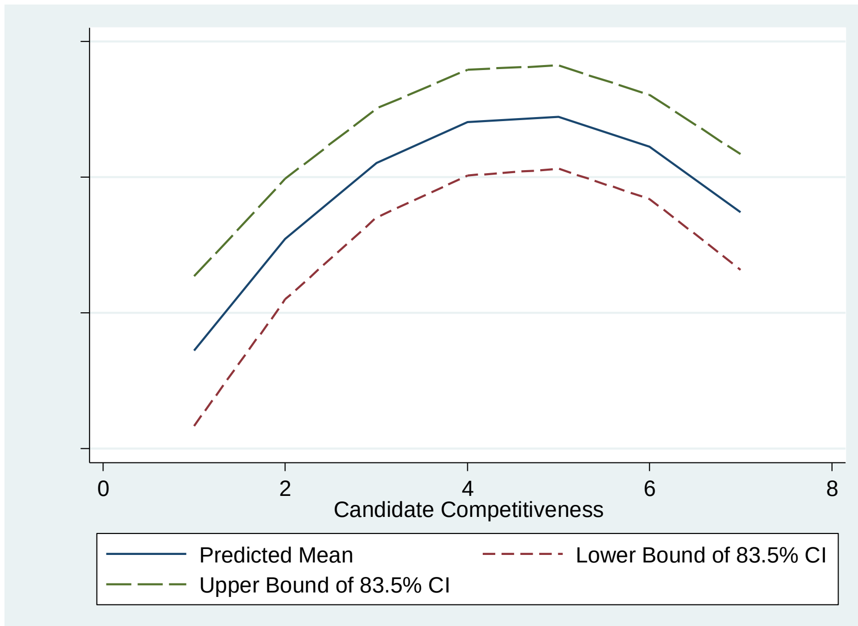
Random Effects:	SD Estimate	Std. Err.
Election-level Variance	15.24	52.18
Candidate-level Variance	19,292.64	2,037.50
Residual	57,830.97	576.10
Model Properties:		
N	5,135	
N (elections, candidates)	37, 73	
Log likelihood	-63,669.79	
BIC	127,604.4	
Wald$\chi 2$	3,122.69	

Multilevel models were calculated with the Stata 14 xtmixed command

Setting aside the endorsement variables momentarily, we note the statistically significant and substantively large impacts of both primary elections and reporting deadlines. On average, a week with a reporting deadline is associated with a $42,586 increase in weekly itemized individual contributions as opposed to a non-reporting week. Similarly, on average candidates receive a windfall of over $35,000 during the week including their primary contests. These totals are not trivial and are undoubtedly the product of increased fundraising activity surrounding important campaign milestones.

The electoral competitiveness variables, as amended from the Cook Political Report, provide some interesting insights. First, note that all three variables reach statistical significance simultaneously. The coefficients on the first two, *CPR Rating and CPR Rating*^{2}, suggest a parabolic relationship between race competitiveness and campaign contributions. Figure 4-5 displays predictions based on this relationship. The large coefficient on the base term, *CPR Rating*, manifests in the sharp increases as a candidate moves across the first half of the scale (from 1- Extremely unlikely to win to '5' where a candidate is slightly favored to win). The more modest negative squared term, *CPR Rating*^{2}, is ultimately responsible for its regression in the second half of the scale (from '5' to 7-Extremely Likely to Win). The apex of this relationship signals that a candidate who is slightly favored to win their election receives the most campaign contributions *ceteris paribus*. The 83.5% confidence interval surround the predicted means provide for significance testing. Using these lines as guides, we are confident that candidates with a competitiveness rating of '3' or better receive more contributions than candidates who are rated as a '1' or '2'. Further candidates in toss-up races ('4') or slightly favored to win (‘3’) receive significantly more contributions than those rated as a ‘2’. All other paired comparisons do not reach statistical significance.

Figure 4-5. Predicted Weekly Contributions by Candidate Competitiveness



The second competitiveness measure, *Change in CPR Rating*, reveals that controlling for the absolute point along the competitiveness scale, candidates can anticipate an $8,395 decrease in their contributions as their seat becomes one rating safer. Viewed collectively, the three variables underscore the importance of electoral competitiveness to campaign fundraising.

Interestingly, 2008 presidential vote totals, have no bearing on the financing of U.S. Senate races. Both the Presidential vote and the squared term fail to reach conventional standards for significance. Exploring this finding further, I attempted several other specifications of the models, such as removing all items related to seat competitiveness to see if they might be overpowering this metric. Under no circumstances were state wide presidential outcomes significantly related to weekly contributions for Senate. I suspect the reason presidential vote has no impact on Senate campaign fundraising is because they are discrete events. I included the presidential vote totals to approximate the partisan conditions in each state under the premise that a large cohort of partisans may lead to increased funding or that relative parity in partisanship would lead to the same. That said, just because a presidential candidate did well two years prior does not mean that a senate candidate from the same party has any meaningful advantage. Further, while political partisanship of a state may have bearing on the captured behavior of voters, in a world of monetary surrogacy (Gimpel, Lee and Pearson-Merkowitz, 2008), the financial implications of partisanship may be realized outside of that candidate's race or state. Simply said, state level partisanship is not significantly related campaign contributions for Senate.

Candidate Quality is also found to be unrelated to weekly contribution totals. A possibility for this finding is that the concept of candidate quality is captured by relative placement on the Cook Political Report scale. Models run without all three CPR rating variables (not shown) indicate this may be the case. When the three competitiveness ratings are excluded, quality candidates are shown to outraise non-quality candidates by approximately $13,000 per week ($p<.08$). Correlations between the two metrics (candidate quality which is time invariant and the base CPR rating which is adjusted across the course of elections) indicate they are significantly correlated at $r=.397$.

Committee/Party Leadership was included in the model to test the notion that incumbents in more powerful positions receive increased campaign contributions. Per the results in Table 4-7 this doesn't appear to be the case. Holding the chairmanship or being the ranking member of one of the more important committees or being part of the party leadership structure does not result in higher contribution totals once other factors are controlled for. There several reasons why this might be the case. First, it's possible that in aggregate, committee or party leadership doesn't impact contribution totals. Counter to this, it's possible that the strategic considerations of donors vary according their personal or business interests. For instance, one donor may have business in front of the committee on Energy and Natural Resources and therefore contribute to members or leaders of that committee. Others may have different business interests influenced by other committees. That said, at least in 2010, there doesn't seem to be a connection between these particular leadership roles and individual campaign donations, controlling for other influences.

Returning to the main independent variables, we see that of the eight endorsements included in the model, seven are associated with significant increases in weekly contribution totals, the NRA being the sole exception. The two largest effects are associated with endorsements from Sarah Palin and Club for Growth. In 2010, candidates endorsed by Sarah Palin received an additional $37,460 per week as compared to unendorsed candidates. Similarly, Club for Growth endorsements resulted in increased campaign contributions in the amount of $36,975. On the other end of the political spectrum, endorsements by Emily's List and NARAL have some of the more modest effects, leading to $12,119 and $18,881 in increased donations, respectively. The lack of effect among the NRA endorsees is interesting. While simply conjecture, I wonder to what extent the late timing of their endorsements prevented donors from acting upon this information.

Along with descriptive findings in Table 4-6, the results from Table 4-7 provide another data point to suggest that endorsements and contributions are related, the results from the NRA notwithstanding. The findings from Table 4-7 should give us greater confidence in this relationship, as compared to previous attempts by Carson and Dietz (2010) and Baker (2015), in that the disaggregated hazard model leverages the temporal relationship, meaning that these increases in donations occur *after* the endorsement. The temporal dimension afforded by measuring the contributions as weekly totals also enables us to use a regression discontinuity to visually assess the impact of endorsements among candidates who ultimately receive them.

Figure 4-6 provides a visual representation of the endorsement effects, among those candidates who receive each endorsement. The x-axis represents the number of weeks preceding or following the endorsement (with '0' representing the endorsement week) while the y-axis represents the average weekly contributions of endorsed candidates. The only endorsement not included in these graphs is NARAL's endorsement of Scott McAdam's (D-AK) which came in the final week of the election. As this occurred in week 95, I have no post-endorsement metrics for this candidate. Graphs were run using the rdplot command from the rdrobust package in Stata (Calonico et al., 2015a, 2015b). I include the complete set of covariates from the model in Table 4-7 and construct a fourth ordinal polynomial fit to the data before and after endorsements. These results do not compare candidates that are endorsed to those who aren't. Rather, they provide a within-subjects examination of the endorsement effects. As we review these graphs it is important to note that in addition to a true discontinuity effect, that is a significant change in intercept before and after endorsement, we are also interested in any slope change, allowing for the possibility that endorsement effects are lagged and that they may have increasing or decreasing functions.

Figure 4-6. Regression Discontinuity Results

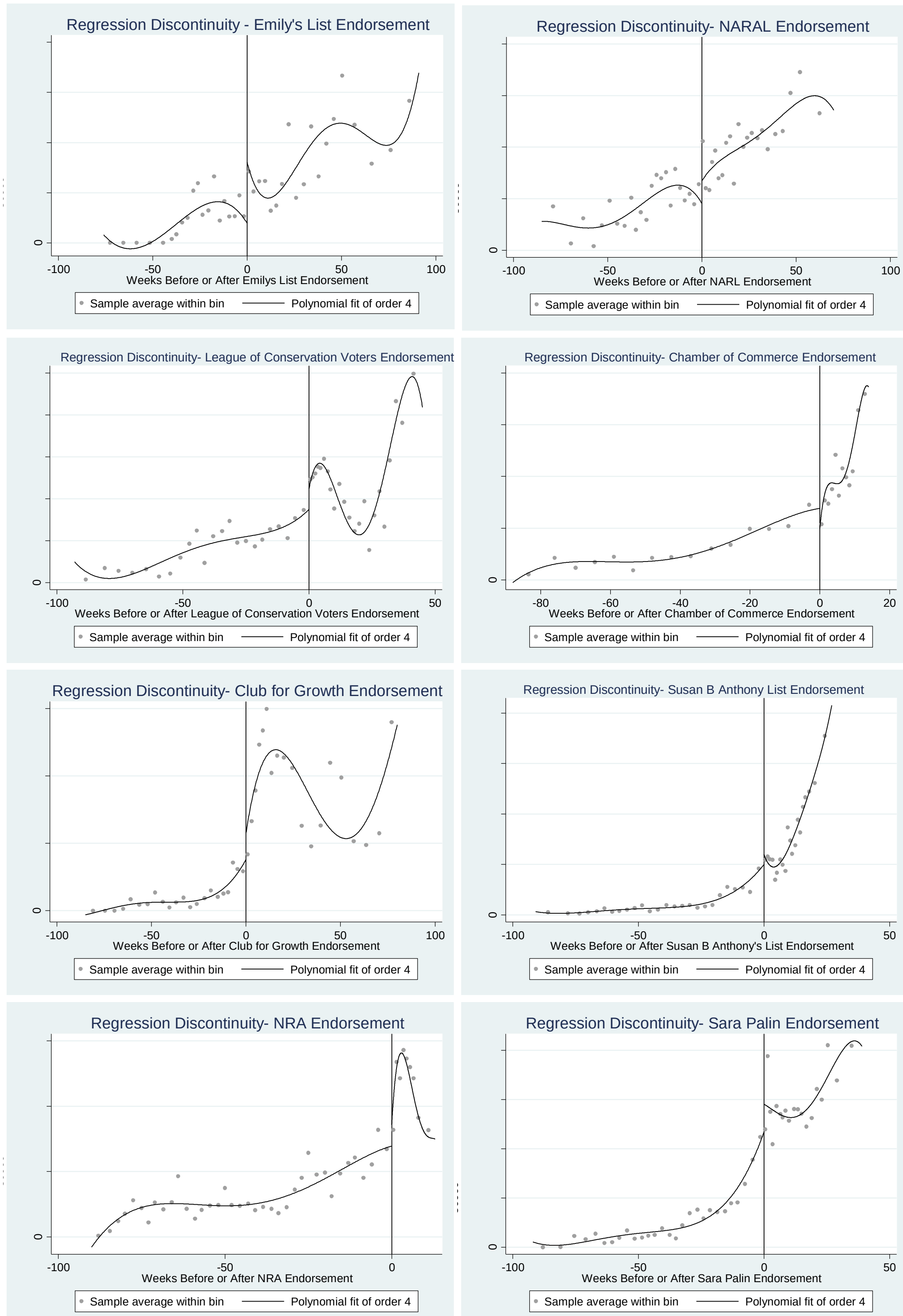


Figure 4-6 does not provide compelling evidence of endorsement effects across all groups included in this study. Specifically, as we look across the eight graphs, there is no evidence of an intercept change surrounding week 0 for any group. This suggests that if endorsements do impact the contribution patterns of donors, the response does not occur immediately. Looking at the difference in slopes from the pre- and post-endorsement periods, however, we begin to see some patterns that suggest endorsements may have a delayed and escalating effect on contributions. The graph for Susan B. Anthony's List, and to a lesser extent League of Conservation Voters, demonstrate a slope change post-endorsement. Especially among Susan B. Anthony's List this slope change is exponential, with contributions increasing as time advances. The graph for Chamber of Commerce similarly demonstrates a marked shift in slope, but because of the late timing of their endorsements we are left with few post-endorsement observations (as is the case for the NRA). The other graphs, those for Emily's List, NARAL, Club for Growth, the NRA and Sarah Palin, however, do not suggest a significant slope change. In summary, these graphs suggest that not every endorsement experiences a discontinuity, but for those that do there is a lagged slope discontinuity that leads to exponential growth.

While it's outside the scope of this work to explain why some endorsements do and other endorsements do not lead to a discontinuity, my suspicion is that it's related to the varying mobilization efforts of the groups as suggested by Baker (2015). This is a key area for future work to explore. Finding some way of operationalizing the campaign assistance or fundraising efforts each interest group provides to candidates may lead to a typology of endorsements that could better explain these varying patterns. Further, by extending this work to other election years or other races, such as House contests, one would be able to provide comparative discontinuities to demonstrate whether these effects are consistent across election years or whether they are specific to the electoral dynamics in 2010.

While the results of Table 4-7 demonstrate significant and rather substantive increases in funding after an endorsement for all groups but the NRA, the Regression Discontinuity provides some reasonable doubt that endorsements impact the weekly contributions of U.S. Senate candidates. While some groups appear to impact the financial trajectory of their candidates, others do not appear to alter existing patterns. Fortunately, we have an additional test that will further assess this relationship. One of the core difficulties in studying the impact of interest groups, whether on voters or donors, is the fact that endorsements are not distributed at random. Endorsing organizations select their candidates based on a number of ideological or practical considerations, some of which are likely included in the multi-level models. As such, even significant and positive relationships in previous models leave us unsure whether endorsers are financial king-makers or whether they are adept at picking candidates who otherwise would be successful in wooing donors. To help remedy some of these causal concerns, we now move to an analysis using nearest neighbor matching, the same procedure used in Chapter 3 to assess the impacts of repeat candidacy.

The aim of this analysis is to rerun the model from Table 4-7 among a subset of candidates differing only in their endorsement by various groups. As such, I use the same pre-processing solution outlined by Ho et al. (2007a) in which I narrow the population to a set of control cases (weeks for unendorsed candidates) and treatment cases (weeks for endorsed candidates). The ideal outcome is two identical groups differing only by whether they received an endorsement. As I did for Chapter 3, I implement the matching design in R using the MatchIt program (Ho et al., 2007b) and match candidates based on their party, status, whether they faced opposition, primary and reporting deadlines, seat competitiveness, their previous week's contributions and the week of the election. This matching was particularly successful as the solutions reduced distance between the control and treatment groups by over 85% for seven groups. The match for the NRA was a bit less successful, reducing distance between candidates by 61%. In implementing the match, the overall sample size of the models is significantly reduced, but the candidate set remaining provides pairs of similar candidates, half of which received each endorsement. The final models including matched cases are displayed in Table 4-8. As there are eight separate models with numerous covariates, I bolded the key independent variables regardless of significance. For ease of interpretation, Table 4-9 posts the coefficients related to endorsement effects for each of the eight endorsers, from their respective models.

Table 4-8. The Effect of Endorsements on U.S. Senate Weekly Contributions Using Pre-Processed Data

	Emily's List	NARAL	LCV	Chamber	Club for	SBA	NRA	Palin
Ind. Contributions (Lagged)	0.52*** (0.03)	0.58*** (0.03)	0.62*** (0.04)	0.46*** (0.09)	0.43*** (0.03)	0.53*** (0.05)	0.50*** (0.05)	0.50*** (0.04)
Week	-305.72 (1,307.68)	21,070.44*** (3,104.36)	31,233.99*** (6,614.23)	-2,520,382.80 (2,520,676.67)	2,812.54† (1,577.84)	-44,817.99 (190,176.85)	-175,668.10 (2,219,015.68)	61,939.70 (52,381.60)
$Week^2$	-13.87 (27.80)	-341.22*** (52.53)	-439.89*** (110.83)	29,107.37 (28,791.45)	-69.55* (32.13)	465.56 (2,340.11)	2,252.02 (24,963.50)	-901.04 (693.51)
$Week^3$	0.20 (0.18)	1.79*** (0.28)	2.08*** (0.59)	-111.54 (109.42)	0.51* (0.20)	-1.47 (9.55)	-9.45 (93.51)	4.29 (3.03)
Democrat				-37,731.97 (143,487.77)			17,499.96 (44,866.38)	
Republican						-14,206.34 (46,379.31)	17,416.67 (21,115.50)	
Incumbent	35,911.35* (15,905.98)	35,182.45 (46,498.78)	31,036.31 (24,934.59)		-32,541.15** (10,958.09)	-64,587.09† (34,079.92)	-28,954.12† (17,430.64)	-2,257.22 (18,958.45)
Open	14,320.94 (13,967.11)	26,703.35 (45,910.14)	17,491.40 (22,767.51)	-28,859.86 (27,548.75)	-24,889.94** (7,690.53)	-21,933.11† (11,606.18)	-22,856.09† (12,563.05)	-23,933.00* (10,191.08)
Emily's List	**10,271.33†** **(6,225.26)**	12,380.24† (7,070.68)	21,616.77 (14,211.50)	-74,072.09 (279,060.58)			2,443.33 (32,992.00)	
NARL	8,978.34 (7,232.08)	**12,373.98*** **(6,057.70)**	18,929.47 (11,726.47)	-85,354.86 (307,079.65)			60,504.90 (43,810.50)	
League of Conservation Voters	3,753.49 (10,474.25)	12,222.97 (7,792.48)	**6,058.28** **(12,441.12)**				23,236.11 (52,173.54)	
Chamber of Commerce	-17,419.55 (65,995.80)	72,236.21† (37,046.28)	14,911.80 (58,628.55)	**3,443.91** **(23,837.79)**	13,632.52 (12,420.54)	13,708.37 (15,180.55)	6,279.93 (15,170.18)	22,737.81 (14,069.49)
Club for Growth				15,638.57 (37,470.62)	**16,828.88**** **(5,490.95)**	27,855.78† (15,605.89)	35,631.79** (12,522.41)	28,419.12* (11,542.56)
Susan B. Anthony's List				5,420.04 (26,466.88)	-4,559.57 (9,135.05)	**1,297.63** **(11,773.58)**	-9,228.41 (11,867.45)	-3,631.87 (11,954.23)
National Rifle Association	97,306.76 (90,638.59)	-20,632.76 (29,530.52)	23,028.21 (54,235.74)	-9,195.34 (25,554.78)	19,289.66† (10,008.55)	12,370.39 (14,370.76)	**8,534.94** **(10,189.02)**	11,788.91 (12,784.86)

Table 4-8. The Effect of Endorsements on U.S. Senate Weekly Contributions Using Pre-Processed Data (Cont.)

	Emily's List	NARAL	LCV	Chamber	Club for	SBA	NRA	Palin
Sarah Palin				34,439.63	53,377.39***	35,562.63**	47,553.40***	**27,248.60***
				(28,660.62)	(8,390.35)	(13,166.23)	(13,255.96)	**(10,772.40)**
Primary	61,508.31**	78,308.18***	76,605.93**	128,140.30*	22,010.04	46,480.22†	30,271.09	49,140.95*
	(21,871.62)	(16,182.92)	(28,111.86)	(53,792.24)	(16,055.37)	(26,536.55)	(34,160.34)	(19,856.45)
Reporting Deadline	45,865.92***	36,721.64***	34,568.68**	53,243.90*	35,026.51***	61,274.25***	43,360.67***	54,884.30***
	(7,638.46)	(6,935.79)	(10,583.60)	(25,148.49)	(6,808.01)	(12,260.04)	(10,478.77)	(10,565.98)
CPR Rating	19,086.47†	24,888.68**	25,087.88†	124,942.48**	58,016.03***	46,866.85**	87,438.88***	67,244.81***
	(11,017.62)	(7,937.80)	(14,395.28)	(40,315.26)	(14,610.96)	(17,519.60)	(19,389.46)	(16,612.89)
CPR Rating^2	-2,401.84*	-2,648.64**	-3,034.22†	-12,660.66**	-5,657.13***	-5,152.96*	-9,103.09***	-6,927.74***
	(1,063.77)	(839.13)	(1,593.13)	(4,574.11)	(1,416.04)	(2,009.38)	(1,947.70)	(1,729.17)
Change in	-229.82	12,072.32	22,004.52	-36,962.16	-2,811.24	-75,962.13***	-61,896.83***	-43,380.46***
CPR Rating	(13,627.12)	(8,594.76)	(14,374.23)	(34,083.73)	(8,211.47)	(14,393.18)	(12,861.38)	(11,247.26)
2008 Presidential	63,031.80	23,511.70	70,518.88	-310,438.60†	-216,889.30***	-212,946.41**	-407,817.88***	-304,579.69***
Vote	(71,918.29)	(61,768.97)	(105,508.20)	(186,391.99)	(47,035.78)	(80,114.97)	(84,022.25)	(70,597.30)
2008 Presidential	-226,912.22	-170,549.43	547,580.17	1,828,866.01	393,210.76	-375,517.30	1,344,078.69*	422,939.67
Vote^2	(369,999.79)	(343,239.28)	(665,022.44)	(1,636,111.51)	(367,536.54)	(691,734.97)	(614,904.28)	(708,926.62)
Candidate Quality	-5,668.20	-14,691.20	-20,209.21	36,213.81	31,376.63***	22,445.98†	40,137.71**	21,981.17†
	(12,042.06)	(12,501.53)	(16,860.02)	(27,675.47)	(7,667.02)	(12,873.51)	(14,265.41)	(11,518.56)
Candidate Ideology	-313.19	18,517.10	146,229.70	-49,370.87	-86,156.61	-51,308.13	-5,724.68	-7,307.99
	(69,582.65)	(58,887.57)	(105,908.52)	(180,377.50)	(56,330.13)	(165,182.66)	(35,972.66)	(122,145.94)
Candidate Ideology^2	699.05	10,261.61	79,040.02	26,651.64	35,241.90	23,508.84	2,517.61	13,812.21
	(36,949.48)	(31,101.75)	(55,919.91)	(86,679.27)	(23,841.83)	(73,775.61)	(15,672.58)	(54,223.83)
Committee/Party	6,914.69	7,141.25	26,080.47		-16,380.90	-2,495.06	-23,825.54	-43,582.38
Leadership	(11,207.42)	(11,121.05)	(20,245.56)		(11,705.05)	(50,232.24)	(19,726.21)	(35,545.41)
Constant	-17,801.39	-469,978.18***	-734,771.23***	72,172,937.79	-100,245.20†	1,313,465.71	4,280,460.70	-1,533,082.54
	(45,457.32)	(83,481.29)	(145,210.50)	(73,420,060.83)	(56,399.50)	(5,130,999.00)	(65,681,937.74)	(1,306,780.34)
N	766	832	392	114	766	298	332	390
Adjusted R^2	.510	.562	.616	.567	.677	.654	.721	.644

Data pre-processed based on LaggedDV, week, party, status, unopposed, primary and reporting deadlines and seat competitiveness.
Data represent OLS regression coefficients run in Stata 14. Standard error in parentheses.
Bolded text highlights the main independent variable in each model.
† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Table 4-9. Endorsement Effects from Matched Models

	Coefficient	(SE)	p-value	N
Emily's List	10,271.33	(6,225.26)	.099	766
NARAL	12,373.98	6,057.70)	.041	832
League of Conservation Voters	6,058.28	(12,441.12)	.627	392
Chamber of Commerce	3,443.91	(23,837.79)	.885	114
Club for Growth	16,828.88	(5,490.95)	.002	766
Susan B. Anthony's List	1,297.63	(11,773.58)	.912	298
National Rifle Association	8,534.94	(10,189.02)	.403	332
Sarah Palin	27,248.60	(10,772.40)	.012	390

The results from Table 4-9 render a mixed verdict on the influence of interest group endorsements on campaign contributions. Of the eight endorsers in the study, three reach conventional standards of statistical significance while Emily's List is significant at the $p<.10$ level. The results suggest that endorsements by four interest groups did not significantly impact the financial trajectory of their candidates. As was the case in Baker's (2015) study, we find that the matched analysis provides more modest estimates of endorsement effects as compared to unmatched models. This is likely the case because of selection bias. These final estimates provide the closest approximation of endorsement effects we can hope for with this data, without the possibility of a true experiment. As we are comparing candidates in similar political environments, the quasi-experimental design helps control for some of the decision criteria associated with endorsements, but it is certainly the case that some considerations are omitted. While these results are a best effort at measuring the impact of endorsements on contributions, they are far from perfect and hopefully future research will improve upon the identification scheme presented in this paper.

The substantive impact of the significant findings in Table 4-9 may be a bit understated. The matched models find that an endorsement by NARAL is associated with a $12,734 increase in campaign contributions while an endorsement by Club for Growth leads to a $16,829 increase. It is important to note that these are *weekly* contribution totals, meaning the cumulative impact is a product of both the average effects and timing of an endorsement. On average, NARAL endorsed candidates in week 61 (with 34 weeks remaining) while the average Club for Growth endorsement occurred in week 58 (37 weeks remaining). Over the course of an election, a candidate endorsed by these groups during the average week would receive $420,715 (NARAL) and $622,669 (Club for Growth) *more* than unendorsed candidates. When the average candidates in 2010 raised just shy of $3 million (Table 4-1), this suggests endorsements by these groups may help inspire nearly 14-20% of a candidates' campaign resources. A similar analysis of Emily's List suggests they may aid candidates to the tune of $554,651 ($10,271.33 per week with an average endorsement occurring in week 41).

The most impressive findings from the matched models comes from an endorsement made by Sarah Palin. On average, her endorsed candidates received an additional $27,249 per week as compared to other unendorsed candidates. Her endorsements came later in the election cycle, occurring in week 78 on average. That said, with 17 weeks remaining in the election, an endorsed candidate would expect $463,226 more than other, unendorsed candidates. This amounts to over 15% of the average campaign fundraising totals in 2010. While there is much debate about the impact of Sarah Palin's endorsement on electoral outcomes in 2010, one frequently overlooked dimension of her political activity in that cycle was the financial windfall that followed her endorsement.

Discussion

This chapter's goal was to test the relationship between interest group endorsements and campaign fundraising. While previous research suggests that contributions and endorsements are related (Baker, 2015; Crespin and Dietz, 2010), this paper aimed to further our understanding by improving upon the identification scheme, adding a temporal dimension to the analysis and assessing individual endorsements as opposed to average effects across all groups. The results of this analysis suggest that while some interest group endorsements are related to increased contributions, some are not, and there is sizable variation across group effects. These findings leave many areas for future research.

Admittedly, this analysis is limited in scope. Specifically, I look at endorsements made in a single election, among U.S. Senate candidates only. This provides a relatively small sample with which to assess the impact of endorsements. Fortunately, in addition to approximately one-third of the Senate, each federal election cycle includes 435 House elections (440 including non-voting members). An obvious next step is to extend this work to other election years, House races and other interest groups. Given the frequency with which interest group websites are updated and the difficulty in collecting time-stamped endorsement information after-the-fact, a database of endorsements including when they are announced would be a remarkable asset in this endeavor. Unfortunately, such a database does not currently exist.

Further, the notion that some endorsements are associated with increased contributions while others don't leaves one to wonder what differs about these groups or their members. For instance, groups vary in membership size and composition, financial resources and levels of political activity. Further, Baker (2015) finds that the resources provided to endorsed candidates varies greatly by group. While some groups provide an announcement and mention on their website or newsletters, she notes that other groups provide more substantial financial and campaign assistance to their candidates. These findings alone beg for a typology of interest group endorsements based on the characteristics of the group, the nature of their advocacy and intensity of their mobilization efforts. I suspect a better understanding of the groups themselves would provide a much more nuanced understanding of the findings from this paper.

Another avenue for improvement comes from the selection bias related to the endorsement decision. Little is known about the specific criteria used by each group to determine which candidates receive their endorsement. If we are better able to understand the dimensions or characteristics assessed, we may be better equipped to model the selection process. Specifically, if we know that groups use the results of experienced candidates' previous elections, their historical fundraising capacity or some assessment of their campaign organization, we can build these into future models. More qualitative research is needed to understand the decision-making of interest groups.

Finally, we know very little about if and how endorsement information is received and processed by donors. Specifically, we do not have a thorough understanding of where donors come across this information (i.e., on group websites, in newsletters or on other news or political websites) and whether they actively monitor endorsements or use them to aid in their contribution decisions. Further research should aim to better understand the causal mechanisms through which endorsements inspire contributions.

The study of interest groups and their impact on American campaigns is likely in its infancy. While we are starting to understand their impact on voter and donor decision-making, we know little about a great many things. Hopefully future research will propel this literature forward by filling in some of blanks on groups, endorsements and donors.

CHAPTER 5

CONCLUSION

The aim of this dissertation was to further our understanding of legislative elections through studies of repeat candidacy and interest group endorsements. While these chapters have important implications for the specific phenomenon studied, they also have consequences for democratic elections more broadly.

The first empirical chapter aimed to increase our understanding of candidate emergence by examining the entrance decisions of a subset of political actors, losing state legislative candidates. By predicting when candidates who unsuccessfully ran for office run again, my aim was to measure whether these candidates made their decisions rationally, based on the costs and opportunity structures associated with changing electoral conditions. The results suggest that losing candidates do respond to these changing contexts. Specifically, repeat candidacies are increasingly likely the better the candidate performed in their initial election and as the status of the seat shifts in their favor. Repeats are less likely as the costs of elections increase and as electoral conditions move in an unfavorable direction. Counter to these findings, however, models suggest that lower chamber repeat candidacies are less likely as national economic conditions improve. Further, new variables included in this study suggest that repeat candidacies are more likely among ideologically extreme candidates and less likely in districts with favorable partisan compositions.

A few of these findings are particularly interesting and deserve further inquiry. Specifically, the fact that repeat candidates are less likely to appear on the successive ballot when national economic conditions improve and within more friendly partisan districts suggest that other actors may have some role in these outcomes. If repeat candidates are unable to reach the successive general election ballot because other, more qualified candidates stand for election as a result of the factors, then this outcome is efficient. Repeat candidates fill a need in districts in which incumbents would otherwise go unchallenged.

The second chapter suggests that when repeat candidates do run, lower chamber candidates who received a respectable share of initial vote fare better in the subsequent election. Perhaps unsuccessful but close elections brand challengers as competent or qualified in the eyes of voters. In terms of elections more broadly, the finding suggests that lower chamber state legislative incumbents face increased electoral challenges as a product of repeat candidacy. This means that compared to facing a new challenger, the incumbent may be required to actively campaign, pay attention to constituent needs or to model their legislative voting behavior on constituent preferences. If this is the case, the fact that some losing candidates run again furthers the democratic ideal.

The final empirical chapter measures the importance of interest group endorsements on campaign finance for U.S. Senate candidates. Existing research suggests not only that interest group endorsements are useful heuristics for low information voters, but that in aggregate candidates with endorsements receive higher amounts of campaign contributions. This project suggests that not all endorsements are alike and that some group endorsements leads to increased contributions while others do not. This final chapter has some mixed implications as it pertains to democratic elections. On the one hand, if interest groups serve as a surrogate for the party infrastructure and funnel money to competitive candidates in need, then they likely increase the competitiveness of elections and the health of the democratic elections. On the other hand, if in aggregate these groups cater to specific or unrepresentative preferences and push the electoral landscape away from the preferences of constituents, then their influence on elections likely works against notions of democracy.

Collectively, these articles provide incremental contributions to two existing bodies of research. That said, they have practical implications for candidates and improve the field's understanding of candidate and donor decision-making within the broader framework of legislative elections.

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