

**THE STRUCTURE OF ELECTORAL SUCCESS:  
DETERMINING VICTORY OR DEFEAT FROM CONTRIBUTION DISPERSION IN  
STATE LEGISLATIVE RACES**

by

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Kristen Coopie Allen, Ph.D.

University of Pittsburgh, 2013

ABSTRACT: How does the distribution of contributors to a candidate relate to a candidate's potential for electoral success? Rather than assume that electoral politics in the United States is a plutocratic exercise, I argue that diversity, or dispersion, in a donor pool is just as valuable to candidate as being well-financed. The candidates who are able to achieve diverse contributor pools are just as likely to win as those with fewer, large donors, due to their increased representational potential. Democratic governance, then, can be supported by candidates with broad sets of contributors; these candidates should be just as likely to win their elections because of the heterogeneity of their contributor bases as the candidates who are funded by a few, wealthy citizens. Hypotheses are tested using a unique data set of 2010 state legislative election contributions and results. Two aspects of dispersion theory, including the geographic spread of contributors across a candidate's district and early giving, are found to significantly increase candidate vote shares.

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## PREFACE

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*For Regina and Catherine*  
*because I miss my grandmas*

**I**f it is primarily money that wins elections, then public office is for sale to the highest spender, and people with the most wealth can dominate the political process. If such a condition generally prevails, it is the antithesis of popular government, and it will not be very long until our democratic institutions are undermined by plutocracy.

- Owens and Olson, 1977



## 1.0 INTRODUCTION

How does the distribution of contributors to a candidate relate to a candidate's potential for electoral success? This dissertation provides an avenue for addressing this and other questions integral to the study of elections and campaign financing. Most importantly, this work is an examination of two major relationships: constituents and contributions, and contributions and electoral outcomes. The second association depends heavily on the first. The focus of this study centers on the confluence of three characteristics of donors to political campaigns: how many subsidize a given candidate, the times at which they choose to donate, and their geographic locations – whether they are located within or outside of the candidate's district. I argue that assessing these factors, which together I term *donor dispersion*, can provide insight into the electoral successes (or failures) of political candidates.

I look to the American states – “engines of democracy” (Rosenthal 2009) with “great similarities... [and] important differences” (Niemi et al. 2006) – to help test the significance of these connections. Hypotheses are tested to test each aspect of dispersion's effects on candidate electoral outcomes in 2010 state legislative elections, revealing that the timing of contributions to a campaign as well as the spread of contributors across a district can significantly increase vote shares. These effects are significant even when controlling for total campaign contributions received from individual and PAC contributors. The results of this analysis carry important implications for both the campaign finance and representation literatures. This work reaffirms

the significance of total contribution figures to electoral races, as it is shown here and in other research that money has an important effect on election results. Money may not outright buy a candidate's way into elective office, but it may help a great deal. If, as I argue, it is not as much about the money as it is the diversity of the sources of donations coming into a campaign, then this may signal that elections are not being bought outright. Elections become about something other than the war chest; they become about the relationship between the people and the candidates whose bids they are funding and supporting. The democratic ideal, whether direct or representative, valued by both ancient and modern philosophers – Pericles, Aristotle, Montesquieu, Rousseau, Hume, Mill, Dewey, Rawls, to name a few – espouses large-scale participation by citizens: but is this what we actually see when it comes to political donations?

## **1.1 CALIFORNIA'S 2010 ELECTIONS: AN ELECTORAL EXAMPLE**

Across the United States, the 2010 state election cycle boasted contribution totals of roughly \$628 million for all House/Assembly candidates and \$383 million for Senate candidates, bringing the total dollars contributed to over \$1 billion. Yet these huge sums of money are not being raised for races featuring tough intra- and inter-party competition. As Rosenthal (2009) notes, “most districts at the state legislative level... are relatively safe for one party or another (‘safe’ meaning that the district was won by 55 percent or more of the vote in the prior election). Depending on the state, generally from two out of five to four out of five legislative districts can be characterized as safe” (111). Masket (2009) corroborates these findings for the state of California: while the Assembly offers a decently high number of open seat races in any given

election, the competition for said seats is lacking. And, he states, since the 1970s, California has seen a decline in the equality of spending by major party candidates in legislative races.

For illustrative purposes, it is useful to examine a few races of note from California's 2010 legislative elections, beginning with that of District 58. Charles Calderon [D] has served as a member of the California State Legislature, spending time in both the Assembly and Senate as a voice for the citizens of the City of Industry, as well as the California Health Care Commissioner. In his thirty years of service, he has amassed a number of achievements and honors, including becoming the first legislator to serve as the Majority Leader of both the Senate and Assembly, currently holding the position in the lower chamber. In the 2010 election cycle, after running unopposed in the Democratic primary, Calderon faced a general election challenge from Republican Garrett May. The numeric results of the race, however, do not seem to reflect an actual challenge to Calderon at all. Calderon easily won reelection, earning 61,375 votes – 68.89% of the total votes cast – to May's 27,717 votes. The most shocking differential comes not from the ballots but rather from dollars raised throughout the campaign. According to data from the National Institute of Money in State Politics (2012), Calderon raised a total of \$850,245 during the 2010 election cycle. May reportedly received a meager \$1,544 dollars, about 0.2% of Calderon's total, and apparently not enough to pose a significant threat to the long-tenured legislator.

This may lead to the belief that Calderon is well-liked and highly valued by the constituents, if tens of thousands of district residents are turning out to vote, as well as shelling out three-quarters of a million dollars to reelect this incumbent. However, a closer look at Calderon's contribution sources reveals a different story. From January 2007 to March 2010, or about one and a half election cycles, the non-profit research organization MapLight (2012)

reports that Calderon received over \$1.1 million in total contributions, with over 94% coming from *outside* of District 58. In other words, a total of \$1,056,644 was donated to Calderon by individuals or interests that could not legally cast a ballot for him to be elected.

Elsewhere in California, one of the few candidates who did not raise the most funds in a race but managed an electoral victory is Republican Tim Donnelly [District 59]. Competing for the seat formerly held by Republican Anthony Adams, Donnelly faced a tough primary race against six other candidates, including Christopher Lancaster, who outraised Donnelly by almost \$100,000 during the primary campaign. The vast majority of this difference, and just over 40% of his total contributions, was from self-financing; Lancaster donated \$92,000 to his own campaign. Donnelly managed a primary win over his more financially well-off opponent, and eventually clinched a victory in November over Democratic opponent Darcel Woods. Woods, unopposed in his primary, raised only about \$64,000 total for his electoral effort.

Overall, the total contributions raised by California State Legislative candidates in 2010 was \$100,450,300; an average of \$297,190 for each of the 338 candidates. Yet from the aforementioned examples, it is clear that not all candidates gather such large war chests for their campaigns; and as is the case with Calderon, a number of the candidates receive the vast majority of their contributions from outside of their districts, or even their state. Out of 275 Assembly candidates, the 151 candidates who raised less than \$110,000 did not record a single electoral victory. The lowest level of campaign contributions for a victorious candidate was collected by Republican newcomer Chris Norby of the 72<sup>nd</sup> District, who totaled almost \$115,000 in receipts.<sup>1</sup> In the Senate, the lowest contribution level for a winner was Jenny Oropeza, a Democratic incumbent who raised \$217,000 for her reelection effort. In fact, most

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<sup>1</sup> Norby won a special election in 2009 to fill the seat of Michael Duvall, who suddenly resigned his seat after he was caught on tape admitting to two extramarital affairs, including one with a lobbyist.

candidates in either chamber who earned less than \$200,000 in contributions lost their electoral races. Conversely, most, if not all, of the candidates at the higher end of the monetary spectrum found themselves in the legislature the following year. One notable exception is the top earning Senate candidate Anna Caballero, who collected just over \$3 million but was defeated by Anthony Cannella. The top grossing Assembly candidate, incumbent Assemblywoman Alyson Huber, raked in \$3.4 million and easily won reelection. Additionally, out of the 119 returning members to the legislature, each incumbent received *at least half* of his or her contributions from outside of the district.<sup>2</sup>

## 1.2 THE UNITED STATES: PLUTOCRATIC DEMOCRACY?

In studies of electoral politics, and in the cases discussed above, money is a key driver of electoral success. California, a populous state with a professionalized legislature, is not a unique case. The positive relationship between the amount of money spent by a candidate and her vote share is demonstrated in a variety of contexts, including congressional elections<sup>3</sup> (Abramowitz 1988; Green and Krasno 1988; Jacobson 1990), gubernatorial elections (Partin 2002), state legislative elections (Caldeira and Patterson 1982; Gierzynski and Breaux 1993; Giles and Pritchard 1985), and state judicial elections (Bonneau 2007, Dubois 1986). Yet in *Federalist 10*, Madison (2003) argues that the primary goal of government is to protect the “diversity in the faculties of men,” the causes of which are “sown” into their very nature. The proliferation of a

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<sup>2</sup> The most contributions coming from within a California district was 40% for Sacramento Democrat Dave Jones.

<sup>3</sup> See, however, Levitt (1994).

wide variety of interests is essential for democracy. Groups are free to compete for influence in government, and these groups may compromise and create equilibrium in the system (Salisbury 1969); thus, pluralism serves as the basis of democratic government. While this may not seem immediately problematic, the true concern lies in the evidence that individual contributors to such campaigns are mostly unrepresentative of the American electorate (Francia et. al. 2003; Grant and Rudolph 2002). Donations flourish from a small subset of citizens “who display unusual levels of political activity, information, and involvement” and, in most cases, wealth (Souraf 1992, 42).

These findings may leave students of democratic representation confused. If electoral success is driven by money from elite campaign donors, then Madison’s ideal of democracy is not realized. Success driven by money may demonstrate that representation of diverse interests is a moot concern to legislators – they are being put into office by those few who can afford to do so. Researchers see the electorate as having the view of campaign contributions being “investments in a political marketplace, where a return on that investment is expected” (Ansolabehere, de Figueiredo, and Snyder 2003). Lynda Powell’s (2012) work on the influence of campaign contributions on state legislative policy making refers to the growing incongruences in political influence due to economic and political inequality of constituents. Citing work by Bartels (2008) that finds candidates increasingly rely on donors that can provide them with financial support, Powell reiterates the point being made here – that “normatively, great disparities of influence run counter to the principles of democratic governance” (2012, 4). At the Congressional level, subconstituencies that make large contributions to a candidate are nearly 30 percentage points more likely to gain an audience with a legislator once in office compared to a subconstituency that did not contribute to that legislator’s campaign (Miler 2010). If, as some

argue, there is some level of congruence between a legislator's actions once she is in office and the money that helped earn her the seat (Ansolabehere, de Figueiredo, and Snyder 2003; Hall and Wayman 1990; Stratmann 1998, 2005), then policies – and more importantly, representation – may effectively be skewed towards these same advantaged groups (see Schattschneider 1960). The accountability of these legislators may shift to those who help put them in office, rather than to the constituents they should be representing (Jewell and Cassie 1998). To truly achieve democratic representation in the states, governance must involve all citizens, not just those who can afford to involve themselves.

In most cases, researchers have addressed the amount of money spent in a campaign, leaving the question of who is donating as observationally equivalent: small contributions from many people may reach funding levels equal to large contributions from few people. Absent from prior research, and the aim of this work, is an explicit consideration of the makeup of the individual contributors to a campaign. This leads to the question: how does the distribution of contributors to a candidate relate to a candidate's potential for electoral success? Rather than assume the United States is plutocratic at heart, I argue that *dispersion* in a donor pool is just as valuable to candidate as being well-financed and can lead to electoral victory. Dispersion as defined here is *a function of the number of donors, the time at which donors choose to give, and the geographic range*. By examining the contributions to a campaign prior to election, it is possible to address more fully the role of money in determining the slate of candidates from which voters may choose. Consequently, if the distribution of donors is influencing electoral outcomes, then representation may not be based solely on affluent interests. These candidates who are able to achieve diverse contributor pools may be just as likely to win as those with

fewer, large donors, due to their increased representational potential.<sup>4</sup> Democratic governance, then, may be supported by candidates with broad sets of contributors. If there are more cases out there like that of Anna Caballero and Senator Cannella, the underlying characteristics of the donors may explain why the candidate in a race with the most contributions was unsuccessful in her electoral bid.

The question raised above is especially relevant when considering the case of state legislators, who – in races possibly more driven by money because of their low salience – are tasked with representing the interests of their geographically-bounded constituencies. Such races tend to be less salient than Congressional elections (Caldeira and Patterson 1982; Hogan 2005). Voters tend to know less about state legislators than about their Congressional counterparts (Serra and Pinney 2004), especially in terms of what they are doing in office and how they are voting on issues (Jewell 1982; Squire 1993). Some argue this is related to meager or even negative coverage of state politics by media outlets (Gierzynski and Breaux 1996; Layton and Walton 1998; Rosenthal 2009). Due to this lack of information on the part of the electorate, campaign funds become even more important in enabling candidates to disseminate information and garner name recognition in the electorate (Gierzynski and Breaux 1991).

The focus on individual contributors is a slight departure from the standard literature on campaign finance and its relation to electoral success or failure. An established body of research studying the influence of PAC money in state elections often is focused toward – and highly beneficial to – incumbents, chamber leaders, and other high-ranking or powerful members of the lawmaking bodies (Cassie and Thompson 1998; Herrnson 1992; Snyder 1990; Stratmann 1992;

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<sup>4</sup> The reverse of this relationship may not be true, however. If it is money driving elections, then an increased probability of winning does not necessarily indicate that a candidate will be representative of the citizens of her district.



Thielemann and Dixon 1994; Thompson, Cassie, and Jewell 1994), candidates who already have a higher likelihood of being reelected. The difference between PACs and individuals, however, stems from the goals of their donation. PACs are often thought to donate in order to gain access to the legislators once they are in office (Austen-Smith 1995; Gopoian 1984; Hansen 1991; Jacobson 1985; McCarty and Rothenberg 1993; Romer and Snyder 1994; Snyder 1990). Yet when considering the potential motivations behind donor contributions, there is mixed evidence as to what drives individuals to give. Whillock (1991) argues that individual donors are less desirous of gaining access and are driven by purposes such as demonstrations of power, social fulfillment, civic duty, and ideological biases. Powell (2012) also posits that donations result from donors believing that one candidate will represent their views better than the other candidate(s), or simply because a friend asks them to contribute. Contributing to a campaign is arguably more expensive for an individual than a corporation or committee, and this evidence suggests more altruistic or self-motivated reasons for giving.

This more self-interested approach to individual contributions discussed here makes the relationship between contributor dispersion and electoral success much more palpable. Citizens may believe that one candidate will represent their views better than the other candidate(s), reflecting the idea put forth in *Voting with Dollars: A New Paradigm for Campaign Finance* (2002). Authors Bruce Ackerman and Ian Ayers view campaign contributions as a metaphor akin to voting. By making a contribution to a candidate, a donor is essentially pledging his or her support to a candidate, much like a voter does when casting a ballot. Donors will give to those candidates with whom they most agree in order to help to ensure their electoral success (Bronars & Lott, 1997). When contributors from within a district are choosing to fund a candidate's campaign, regardless of whether they are donating early or later, it forces candidates to be taken

seriously in the electoral competition (Read 2008). More and earlier contributions from within the district indicate higher levels of support for the candidate, which can in turn attract later support, contributions, and (hopefully) victory at the polls.

Increased dispersion in a candidate's donor base should indicate a wider base of electoral support, which may be reflective of a greater propensity for the substantive interests of constituents to be represented (Pitkin 1972). These candidates would be more representative of the broad "geographic" constituency Fenno describes, encompassing all constituents within a district's geographic bounds that rely on a legislator for representation in the legislature. In essence, the more donors giving to a candidate, the more support a candidate builds, thus the more likelihood of electoral success, and the higher potential for these broadly supported candidates to benefit the citizens of their districts.<sup>5</sup>

If state citizens are organized in ways reflective of Schattschneider's "pluralist heaven," with a chorus of individuals singing with a "strong upper-class accent" (1960, 34-35), we would expect to see few, large donors residing in wealthy neighborhoods directing much of the flow of money into campaigns. Such donors could be considered to be part of what Fenno (1977) terms "reelection," "primary," and "personal" constituencies – those who are concerned with electing or reelecting a legislator into office. On the other hand, if candidates are truly interested in vote-

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<sup>5</sup> Moreover, the legislators elected to office are often unrepresentative of their constituents. State legislatures are often cited for failing to promote descriptive representation (Pitkin 1972), since they often do not reflect the diversity of backgrounds and interests in our society. The underrepresentation of certain minority groups, such as younger people, ethnicities, racial groups, women, and even partisans within a district can lead to the feeling that equal representation is not valued by the state (Rosenthal 2009). According to the National Conference of State Legislatures (2012), 76% of legislative members are males, and almost 90% of all legislators are Caucasian. Asians (1%), Native Americans (1%), and Latinos (3%) account for 5% of the total; African Americans comprise 9% of the membership. Legislators also tend to be older, more well educated, and have higher socioeconomic statuses than the constituents they represent (Rosenthal 2006).

While members of Congress traditionally share the same characteristics, the majority in the 113<sup>th</sup> House of Representatives is now made up of women and minorities (Homan 2012). A record number of female Senators (20) have been elected to the Senate; there are now 31 Latinos in Congress, along with the first Hindu Representative [Tulsi Gabbard (D-HI)] and openly gay Senator [Tammy Baldwin (D-WI)]. There are now at least 6 openly gay members in the 113<sup>th</sup> Congress (Izadi 2012).

maximizing as Mayhew (1974) suggests, they should try to secure the largest pool of funding from the most diverse set of contributors they can in order to increase their odds of victory. Candidates with smaller donors spanning the district may be indicative of a more populist appeal of a campaign.

Think, for example, of candidates as being (among other things) one of two types: One type of candidate (Type A) has a concentrated contributor base, formed by a few, large donors; the other type (Type B) receives donations from a large, wide-ranging group of donors. If Type A candidates are more electorally successful than Type B, this is potentially problematic for democracy. Winning legislative candidates who receive money from an elite core of wealthy donors may leave citizens less well-represented than if the candidate is funded by a large, diverse contributor base (that is, contingent on their geographic location). Yet here, I argue that the probability of a Type B candidate winning should be just as likely as a Type A candidate winning.<sup>6</sup> The number of donors and the spread of donors across the geographic area of the district are positively related to the quality of representation a legislative candidate may provide; because of this, they will increase the candidate's chance of being elected to office. On the other hand, the timing of contribution has mixed effects. Below I describe the established benefit of early money on electoral success. Yet in terms of representation, early money may actually be negatively correlated with quality representation, due to known trends in the characteristics of donors who donate in the early stages of a campaign. While early money may predict electoral success, it may have the potential to diminish the representation provided by the winner once she enters office.

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<sup>6</sup> This does not mean, however, that Type B Candidates are not without their potential problems. If the majority of a candidate's donor base extends too heavily past the bounds of her district, this could spell trouble for in-district representation.

### **1.3 OUTLINE OF THE DISSERTATION**

The rest of this dissertation highlights how the relationship between the three factors of donor distributions and dollars can predict electoral outcomes. Chapter 2 explores the theoretical approach used to explain how diversity in campaign contributors can significantly increase a state legislative candidate's probability of electoral success. Inspired by Madison's vision of the United States as a pluralist nation, representing many diverse and competing interests, I devise an argument that one must look beyond the aggregated contribution totals achieved by a candidate to focus more specifically on the varying characteristics of the donors themselves. Relying on both political science and campaign strategy research, I bridge together three factors that are a common focus of political campaigns when developing financing plans. Dispersion theory posits that characteristics of the donor base, including quantity, geographic location, and the time at which they choose to give have the potential to increase a candidate's vote share, ultimately increasing the likelihood of victory. Four testable hypotheses are derived to be tested using the data and methodology described in Chapter 3. Each of these factors can, in turn, enhance or suppress the potential for more systemic patterns of representation by a legislator for her constituency.

Chapter 3 outlines the research design used to test the hypotheses presented in Chapter 2, with explanations of the data sources, cases, and variables, methodologies and models. The 2010 election cycle is as the focus of the analysis for two reasons. First, elections occurred in most states, providing a plethora of cases to study. Second, 2010 is the most recent election cycle for

which (mostly) complete contributor information is readily available. This dissertation features a unique data set compiled to integrate two categories of information about each candidate: electoral characteristics, such as state and district information, party affiliation, candidacy status; and data on contributors including addresses, dollar amounts of donations, and the dates on which donations are made. In order to test for geographic contributor effects, I use geographic information systems (GIS) to geolocate donors and match them to their state legislative districts. I analyze over 800,000 contributions to determine whether the donations are made by donors residing within a candidate's district. All geocoded information is then matched to individual candidates. In addition, complete descriptions of the main independent variables and control variables are discussed.

In Chapter 4, linear regression is used to estimate a variety of models to test the role that dispersion characteristics, as well as other variables, have on electoral outcomes. Results of the regression analyses are presented, focusing on the quantities of donors, donations, and contribution timing. The chapter begins with a brief look at summary statistics of important independent variables and the conclusions that can be drawn from them. Two main models are estimated, and the robustness of the results is checked by running alternative variations. Moderate support is found for dispersion theory. Under certain circumstances, geographic dispersion and the timing of contributions is found to increase a candidate's General Election vote share; however, contrary to expectations the number of donors giving to a campaign is consistently found to significantly decrease expected vote shares. The findings are more fully interpreted in the chapter, and potential reasons for the unexpected findings regarding in-district donors are offered.

Finally, Chapter 5 begins with a recap of the basic argument and outcomes of the research presented here. Broader implications of the theory and findings are then discussed, lamenting on the interdependence between contributor bases and the potential impact this can have not only on electoral success, but also for the representation that is provided once successful candidates are in office. Various directions for future research are also discussed.

## 2.0 A THEORY OF DONOR DISPERSION

### 2.1 DONOR DISPERSION

To identify the connection between contributors and success, this chapter advances a theory of contributor dispersion to distinguish three factors related to campaign donors that have been largely ignored. *Dispersion* as defined here is a function of the number of donors, the time at which donors choose to give, and the geographic range. This theory implicitly assumes diversity in a donor base to be a positive attribute that increases the chance of victory on Election Day; this, however, does *not* devalue the potential for a small, homogenous contributor base to be instrumental for victory. The candidates who attain diverse contributor pools should be just as likely to win as those with fewer, large donors, regardless of how much they raise, due to their increased representational potential.<sup>7</sup> Democratic governance, then, can be supported by candidates with broad sets of contributors; these candidates should be just as likely to win elections because of the heterogeneity of their contributor bases as the candidates who are funded by a few, wealthy citizens. By examining the size, number, and locations of donors prior to an election, it is possible to address more fully the role of money in determining the slate of

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<sup>7</sup> The reverse of this relationship may not be true, however. If it is money driving elections, then an increased probability of winning does not necessarily indicate that a candidate will be representative of the citizens of her district. In other words, the importance of the representational linkage between constituents and citizens may be diminished if elections are being won by the highest fundraiser.

candidates from which voters may choose. Consequently, if the distribution of donors is influencing electoral outcomes, then representation may not be based solely on affluent interests.

Political science literature has been cited as ignoring the valuable insight that campaign professionals can lend to more rigorous academic studies of elections (Craig 2006; Johnson 2012; Thurber 1998).<sup>8</sup> Often, academics focus on the outcomes of electoral campaigns while negating the campaign professionals that orchestrate these massive undertakings. This theory builds upon the strategies followed by campaign managers and organizers, tried and true approaches to running a campaign, in order to enrich its usefulness and application. I draw from lines of political campaign and political communication literature focusing on campaign craft to provide a more “boots-on-the-ground” view of electoral strategies. The body of research focusing specifically on state legislative campaigns is very limited, but there is a great deal written on Congressional campaigns. State legislative campaigns are increasingly mirroring those run at the Congressional level, with large staffs, media outreach, and intense fundraising efforts. In states with more highly professionalized legislatures, the campaigns themselves begin to mimic Congressional campaigns, with nearly half of 1997-1998 state candidates surveyed in one study reporting using campaign professionals (Abbe and Herrnson 2003). As with Congressional contests, an increasing trend in the costliness of legislative campaign at the state level has developed, beginning over two decades ago (Thompson and Moncrief 1998; Tucker and Weber 1987). This is not surprising given the growing professionalization – or, as some (Salmore and Salmore 1996) call it, the “congressionalization” – of state legislative campaigns during this time (Abbe and Herrnson 2003), potentially to address the handicaps that these candidates face.

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<sup>8</sup> The reverse, however, is changing, as the Obama campaigns in 2008 and 2012 have widely acknowledged their use of academics in the campaign planning process (Carey 2012; Issenberg 2013).



The following sections highlight how the relationship between these three factors of donor distributions and dollars can predict electoral outcomes. In short, more donors and donations originating from within a candidate's district, coupled with increased levels of early campaign funds, should provide a formula for success. First, I address the role of geographic location as considered in this analysis. The proportion of donations coming from within the district versus outside of the district should indicate the likelihood of a candidate's electoral success; anyone can make a contribution to a candidate, regardless if they are a constituent or not, but only citizens within a district may turn out on Election Day.

One item considered is the commonly overlooked factor of the number of contributors to a candidate in terms of the propensity for electoral success and ultimately representation. If a candidate is able to solicit the support of a large number of individual contributors from within her district, these contributors should be more likely to support the candidate not only financially, but also at the polls in November. This strong financial foundation can serve to signal to both small and large donors that this may be a candidate worth investing in. Additionally, a candidate should benefit greatly from extending their support base across the geographic span of her district. The more geographically diverse a support base is, the greater the likelihood that 1) a candidate's influence is spread across the district, and 2) a candidate is likely to represent her diverse body of constituents. Taken together, considering trends in the number and locations of donors can inform both campaigns and researchers about the potential for a candidate to be electorally successful – and whether or not there is a chance for substantive representation in a district. Finally, a discussion of the importance of early money to campaigns frames the debate of the effects of contribution timing on success. As Leal (2003) points out, “[m]any politicians and political activists believe that the timing of raising and spending money,

and not just the total amount at a candidate's disposal, can affect election outcomes." While the importance of early money in electoral campaigns is known to be positively correlated with electoral success, its impact on representation may not be as constructive.

## **2.2 GEOGRAPHIC DISPERSION: PLOTTING THE DONORS**

The presence of contributors in (or out of) a district can have an impact on the prospects of success for a candidate. Understanding the distribution of political preferences across geographic areas is imperative for researchers trying to assess more normative questions about democratic representation, Rodden (2010) concludes. By its very nature, legislative representation in the United States is subject to geographical constraints. Districts are drawn based on population characteristics as determined by the Census conducted every decade.<sup>9</sup> Fenno (1977) describes the legislative district as the "broadest" of a legislator's multiple constituencies, since it encompasses all citizens in the (geographic) area that a representative becomes electorally accountable to. This district serves to both define who may vote for a candidate and also the locales in which a candidate should be focusing the attention of his or her campaign. "Every year, candidates and parties pour enormous time and energy into arranging

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<sup>9</sup> According to the Brennan Center for Justice (2011), 37 states allow the state legislature to redraw district lines every ten years (five of these states are supported by an advisory committee). Seven states take redistricting out of the hands of the legislature and place it in the hands of a political commission; elected officials may serve on these committees. The remaining six states redistrict through independent commissions.

travel and meetings, efforts that would be a poor investment if campaign donations were primarily a matter of context-free, individual volition” (Gimpel, Lee, and Kaminski 2006: 638).

State legislative districts are smaller in size and potentially more homogeneous than Congressional districts (Gierzynski and Breaux 1991). Though they are designed to encompass fewer citizens, state legislators are still tasked with representing a significant portion of their state’s citizens – ideally anywhere between 3,291 citizens for a New Hampshire representative to 931,349 citizens represented by a California state senator (2010 figures).<sup>10</sup> The continued growth of the electoral base is occurring for parties and candidates across state and national elections (Cho and Gimpel 2007) and is vital for legislators to be electorally successful. This is especially true of first time candidates, or legislators early in their careers, who are in what Fenno (1978) calls the “expansionist” phase of base-building. Some argue that early changes in state campaign finance laws cause candidates to focus on a large number of small donors, rather than a few larger-dollar contributors (Theilmann and Wilhite 1989), making these financing restrictions a constraining factor that further serves to enhance the representational capabilities of representatives, as well as the need for higher numbers of donors to campaigns (Trent, Friedenber, and Denton 2011).

While citizens are restricted in one form of political activity – their choices at the polling booth are determined by the address at which they are registered to vote – the same is not true for making political contributions. As long as individuals adhere to the campaign finance limitations set forth by each state, citizens can donate as much or as little as they like to whomever they choose. There are rather limited restrictions on cross-district or cross-state giving, save for

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<sup>10</sup> State Senators in California, Texas, and Florida have larger constituencies than members of the U.S. House of Representatives. California’s 40 senators are responsible for 931,349 citizens, followed closely by Texas’ 31 senators, each responsible for 811,147 citizens. The population represented by each of the 40 senators in Florida is approximately 470,000, or half that of Californians.

Alaska, which restricts the aggregate amount of money that state legislative candidates may receive (National Conference 2011), though it does not completely prevent outside donors from giving. In fact, in Congressional races, more than two-thirds of a candidate's campaign funds are supplied by out-of-state donors and groups (Gimpel, Lee, and Pearson-Merkowitz 2008). Unfortunately for the candidates, out-of-district donations can serve to help run a campaign machine to entice others to vote, but does not mean that the sources of such donations will be turning out on Election Day.

In federal races that garner more attention, it is not uncommon for candidates to plan campaign events for major donors outside of their district boundaries. State candidates are often not complicit in such strategies because of potential repercussions from district citizens. One candidate was disturbed when a friend in the legislature suggested that he hold a “lobbying breakfast” as his first fundraiser. He says:

What immediately troubled me was that... my very first fund-raising event would be held out of district and draw money from people who were not my prospective constituents. That seemed like bad symbolism, and the opposition could easily use it against me.... I decided instead to hold my first fund-raiser in the district... [in] the town where I lived and worked.... The timing and location of the event signified that my fund-raising base would be made up of ... people with whom I worked... and our friends and neighbors (Read 2008).

Candidates recognize the need to build a strong financial base, but may not be willing to do so at the risk of alienating their constituents. Strategists also note that seeking support outside of the district rarely works, based on the idea that donors tend to be more attracted to candidates that they share proximity with – candidates they are actually able to vote for (Trent, Friedenber, and Denton 2011). Altogether, money and donors coming from within a district have a substantial influence on campaign strategizing, and potentially on campaign success; the following sections detail why this is the case.

### 2.2.1 Contributor Counts

The number of contributors from within a candidate's district that choose to donate to a political candidate should increase the probability of her electoral success, even when accounting for his or her contribution totals. While equality in numeric representation in legislative districts has long been a subject of concern for citizens and government alike, the same cannot be said for the balance and strength of the representation provided to those who seek it. Legislators themselves have become increasingly concerned with the partisan distribution of districts in chambers, in order to maximize composition in favor of one ruling party and to enhance the safety of incumbents already in office. Redistricting battles have plagued both legislative and judicial branches in recent decades, both at the federal and state levels. State legislatures themselves have the power to draw the lines of state legislative districts, and in most of these states, the governor has veto power over the plans (Brennan Center 2011). If the legislature is unable to come up with an acceptable plan by a constitutionally proscribed deadline, a federal or state court, a backup commission, or the governor can step in. The other thirteen states use political or independent commissions to draw boundaries.<sup>11</sup> Even though many incumbents try to use the redistricting process to ensure their survival in office, many incumbents do not keep their office after the redistricting occurs, either because of lost elections or strategic retirements (Gelman and King 1994).

In the early 1960s, voters in the state of Alabama challenged the extreme malapportionment of citizens to legislative districts in the state. In some cases, districts

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<sup>11</sup> The seven states with politician commissions are Arkansas, Colorado, Hawaii, Missouri, New Jersey, Ohio, and Pennsylvania. Six states - Alaska, Arizona, California, Idaho, Montana, and Washington – use independent commissions, in which none of the members can be a legislator or public official of any kind.

contained as many as fourteen times the number of voters as other districts (hypothetically, this equates to districts in sizes ranging from 10,000 voters to 140,000 voters). Citizens argued that their right to equal protection under the law was being violated by such drastic disparities in district sizes. This matter was taken up by the United States Supreme Court in November 1963, handing down a ruling the following year that declared such serious inequalities as being unconstitutional, in violation of the Fourteenth Amendment (*Reynolds v. Sims* 1964). Based on the idea of “one person, one vote,” Chief Justice Earl Warren states in the majority opinion that the Fourteenth Amendment demands:

... no less than substantially equal state legislative representation for all citizens.... [I]f a State should provide that the votes of citizens in one part of the State should be given two times, or five times, or ten times the weight of votes of citizens in another part of the State, it could hardly be contended that the right to vote of those residing in the disfavored areas had not been effectively diluted.... Weighting the votes of citizens differently, by any method or means, merely because of where they happen to reside, hardly seems justifiable.... A citizen, a qualified voter, is no more nor no less so because he lives in the city or on the farm (1964).

Implicit in the Court’s concern for (roughly) equal district sizes is a desire to ensure that a person is receiving as much representation as any other citizen of her district or, more broadly, her state. Thus, the ideal of “one person, one vote” assures that each voter is neither over- or under-represented in either chamber of a state’s legislature. In the dissent in the same case, Williams (1998) notes Justice John Marshall Harlan’s thoughts concerning representation: that “legislators represent their constituents only by advocating for their interests and that those interests may correspond closely to a geographically defined area” (72).

Efforts to equalize representation on a racial basis were bolstered with the passage of the 1965 Voting Rights Act, which aimed to cut down on discrimination against African Americans. Despite research highlighting the importance of descriptive representation for minority groups

(see, for example, Cameron, Epstein, and O'Halloran 1996; Canon 1999), the U.S. Supreme Court outlawed the use of minority characteristics in redistricting plans in the 1990s, though it does allow states to be "race-conscious" (*Shaw v. Reno* 1993). In a slight divergence from this decision two years later, the Court in *Miller v. Johnson* (1995) ruled that the state of Georgia cannot show "racial predominance" in its redistricting plans. If, however, a state can prove a compelling interest that would justify racial considerations in gerrymandering, the Court would consider accepting such a plan (*Shaw v. Hunt* 1995).

Systematic research is lacking on the lasting effects of gerrymandering at the state level, possibly because 1) it only happens every decade, 2) the data to study the phenomena are hard to come by (Niemi and Jackman 1991) and 3) the institutional and contextual differences across states makes it difficult for comparative study. In one study, Gelman and King (1994) find evidence of increased legislative responsiveness and reduced partisan bias in redistricted states, compared to an electoral system without redistricting; however, the differences in the partisan nature of the plan (Republican, Democrat, or bipartisan) can have political significance. Another study more directly relevant to this research is recent work by Kirkland (2013) on wealth concentrations in majority party districts. He finds evidence that parties – especially those who have control over legislative redistricting – consider alternative electoral resources, such as the distribution of wealth in a district, when redrawing boundaries in two states (California and North Carolina). The concentration of wealth in certain districts, mainly those with majority party incumbents, provides significant benefits, both in terms of fundraising and electoral outcomes.

The importance of the 2010 election results are apparent in the redistricting efforts that began in the new legislative sessions of 2011. Texas faced a fierce legal battle in the form of

three separate cases challenging the Republican-drawn legislative redistricting plans – one in the state house (*Perry v. Perez*), one in the state senate (*Perry v. Davis*), and the other in the U.S. House of Representatives (*Perry v. Perez*).<sup>12</sup> The cases were joined together and heard by United States Supreme Court in 2012. A *per curiam* opinion was issued, ruling that the implementation of new district maps can be prevented if there is a substantial question as to whether the redistricting violates the Voting Rights Act of 1965 (*Perry v. Perez* 2012) . Also, in January 2013, an attempt by Republicans in the Virginia Senate to dramatically alter already agreed-upon redistricting maps caused Democrats to “raise hell,” mainly because the GOP pushed through the unannounced legislation while Democratic State Senator (and civil rights lawyer) Harry Marsh attended President Barack Obama’s second inauguration in Washington, DC (Huffington Post 2013). The plan maximized the number of safe Republican seats in the state, and would take effect before the next round of Senate elections. Virginia Democrats are vowing to challenge the legislation.

Restrictions ensuring the equality of these types of electoral representation (such as districting concerns) are much more salient to the High Court than other issues such as equality in monetary contributions or expenditures, an issue the Court has taken varying stances on.<sup>13</sup> Yet in an analysis of contributions to state legislative races in 2007-2008, the National Institute

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<sup>12</sup> See Lyle Denniston’s (2012) post on SCOTUblog for an excellent overview of the nuances of the legal issues involved in these cases.

<sup>13</sup> The Court has varied in its interpretation of the influence of campaign contributions by individuals. Subsequent to *Reynolds*, the Court held in *Buckley v. Valeo* (1976) that, despite opening the door to unlimited independent expenditures, individual campaign contributions can be limited, and that such restrictions may enhance the “integrity of our system of representative democracy” by keeping corrupt donation practices at bay. In 2006, *Buckley* was revisited by the Court in the case *Randall v. Sorrell*, with the Court finding that the restrictively low contributions limits enforced by the state of Vermont violated the First Amendment right to free speech. This is the first case in which the Supreme Court has struck down a limit as being unconstitutionally low. More recently, controversy in the state of Arizona regarding its fund-matching program led the Court to decide that, similar to *Randall*, speech may be restricted if candidates are encouraged to restrict their personal spending in order to receive state funds for a race (*Arizona Free Enterprise Club v. Bennett*).



of Money in State Politics (Barber 2010) reports extreme variation in campaign revenues across candidates. Approximately 14,000 candidates raised, for the first time, over \$1 billion while vying for both House/Assembly and Senate seats. Receipts varied greatly across states as well, with assembly races in California general-election averaging \$888,491 in contributions, while New Hampshire's house races averaged \$4,472.

Not surprisingly, one factor that immediately comes to mind to explain this disparity is the difference in populations in each of these states. According to the U.S. Census, the estimated population of New Hampshire in 2008 was 1,315,809. On average, a New Hampshire State Senator is responsive to 54,853 constituents; Representatives are charged with around 3,000 constituents. Comparatively, a California State Senator is responsible for representing 931,349 constituents, and an Assembly member 465,674 constituents. Researchers have accounted for the importance of spending in relation to both voter turnout and electoral success, as noted in the introduction.<sup>14</sup> In terms of individual influence, spending by candidates in state legislative races can range from \$0.40 to about \$2 per eligible voter (Hogan 2000), based on factors such as state campaign finance regulations, district characteristics, and campaign competitiveness.

With so much focus on the equality of representation, there has been relatively little attention paid to ensuring equality in the electoral process. A complement to the above mentioned research is to examine a variant of this causal mechanism: investigating the number of donors and how this figure can impact electoral success. In terms of representation, it follows that an increased proportion of contributions from district constituents should indicate greater acceptance of the representation that a given candidate may provide. Ideally, the most equal distribution of representation and support in terms of vote choice would be all citizens selecting

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<sup>14</sup> Campaign expenditures are significant predictors of success for state legislative candidate (Gierzynski and Breaux 1991), but these numbers are total figures, not estimated per capita or by eligible voter.

the same candidate as their agent; in terms of donations it would be each eligible citizen of a district contributing the same amount to the same candidate.<sup>15</sup> This means that each contributor has the same ability to donate and chose to support the same candidate with the same amount of money, not contingent on contextual effects. No contribution/contributor would stand out over another because they are numerically equal, and one candidate would be the clear choice to serve her constituents. Note, however, that this is a *highly* idealized example that tends not to be the case in real life. It is when we begin to factor in the disproportionate influence of money that representation may begin to skew.

Campaign strategists are the first to recognize the significant differences between individual contributors within and outside of the district. One strategist says:

If a campaign gets a gift from a voter in the district, the candidate can feel confident that he or she also has at least one vote. In one survey, done by the U.S. Chamber of Commerce, one contribution translated into ten votes because that contributor was likely to become a very active and vocal opinion leader on behalf of the campaign (Himes 1995).

Campaign staffs see donations from contributors within the district as more useful than those coming from “outsiders,” since they tend to associate a pledge to vote with the monetary contribution. The benefits from outsiders are not felt as strongly; not only are outside contributors ineligible to vote for candidates, but many may have motives to give to both candidates in the same race, in effect canceling each other out (Himes 1995). State and national party organizations, including the Democratic and Republican National Committees, use the ability to raise money within a candidate’s own district as a factor to determine financial support (Trent, Friedenber, and Denton 2011). Not only can a lack of in-district funding keep a

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<sup>15</sup> This is at least true in terms of vote choice in a single-member district plurality system. Proponents of multi-member districts or systems with proportional representation will obviously tout the benefits of these systems in terms of representational benefits. Single members districts will be the focus of this study to eliminate any potential problems with disentangling donor effects on probabilities of electoral success, further discussed in Chapter 3.

candidate from bringing in other funding, but it may also hurt her representational potential for the district.

If we think strictly in terms of *contributor* numbers, one could expect that a candidate who solicits a high number of within-district contributions – in terms of quantity, not necessarily quality (donation amount) – should be more accepted by voters in the district, and thus have a higher probability of winning her election. Additional to serving as a signal of support, higher number of donors can signal to other potential donors that a given candidate is worthy of being supported simply because of the number of people who already choose to support her; in short, donors can beget other donors (Leal 2003). Since state legislative races often suffer from the lack of, or even worse, nonexistence of any type of systematic public opinion polling, donations are one of the few metrics that can be used to assess the public’s opinion of a candidate before an actual election occurs.

This leads to the first hypothesis:

*Hypothesis 1: The more donors contributing to a candidate from her district, the higher the probability of the candidate achieving electoral success.*

The number of donors will relate to the next two factors considered in donation distributions – geographic distribution and time; the former is the subject of the next section, which addresses the importance of the geographic distribution of contributors in relation to prospects of electoral success in campaigns.

## 2.2.2 Locating Campaign Donors

Waldo Tobler's "first law of geography" (1970) claims that "everything is related to everything else, but near things are more related than distant things" (236). Political behaviors and preferences are similar to, and reinforced by, those we are closest to. The likelihood of two randomly chosen individual voters exhibiting similar voting behavior is a function of their geographic closeness; in other words, people that live close by are more likely to vote the same way than two people who are geographically distant from each other (Chen and Rodden 2009). In the case of campaign contributions, research has demonstrated that contributing to campaigns is contextually conditioned (Cho 2003; Cho and Gimpel 2010; Gimpel, Lee, and Kaminski 2006). This makes sense, given that "[d]onors are not atomistic agents acting in response only to individual resources and incentives, but parts of social networks that are contextualized by geographic distance" (Gimpel, Lee, and Kaminski 2006: 638). Multiple other studies have reported the influence of social relations based on geographic proximity to other actors (Agnew 1987; Cho 2003; Johnston 1992; McClurg 2006; Verba, Schlozman, and Brady 1995, chap. 5).<sup>16</sup> These contextual effects are independent from standard influences on participation, such as socio-economic status and other demographic characteristics (Cho, Gimpel, and Dyck 2005).

Being asked to donate by a close, trusted source can often elicit donations from individuals (Brown, Powell, and Wilcox 1995; Claggett and Pollock 2004; Francia et al. 2003); on the other hand, Brady and his coauthors (1999) also find that though wealthy potential contributors are frequently asked to make donations by campaigns, they can and often choose not

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<sup>16</sup> There is ample evidence in the sociology and political science literatures that networks can influence individual behaviors (Entwisle et al. 2007; Gould 1991; Hedström 1994; Opp and Gern 1993). Network characteristics also can have strong effects on individual decision-making (Gould 1993): the patterns of connections between actors (Centola and Macy 2007; Chwe 1999) and an individual's location within the network (Borgatti and Everett 1992) can shape the choices individuals make.

to. Despite these differences, it does seem that “geographic proximity affects each of the motives that lead people to participate in politics generally and, in particular, to contribute to campaigns” (Gimpel, Lee, and Kaminski 2006). Geography also leads to endogeneity between giving and solicitation. Fundraisers recognize the importance of continuing money raising efforts in areas that have already proven to be fruitful for a campaign (Gerber, Green, and Shachar 2003; Green and Shachar 2000; Cho and Gimpel 2007; Smith 2005; Ware 1992).

We can see how this is the case based on the close ties between geography and demographic characteristics. Voter contact, whether high (face-to-face activities) or low (literature distributions, yard signs) impact, is key for moving a candidate’s message out to potential supporters (Robinson 1995). Campaign strategists include a number of geographically-targeted components in fund-raising plans. Events, telemarketing calls, direct mailings, and to some extent personal solicitations are all planned based on location, often using contact lists compiled from state party organizations or state boards of elections (Sabato 1989; Shea and Burton 2001). Campaigns recognize the variances in districts and direct their attention toward those areas that will be most beneficial to them. Brady, Schlozman, and Verba (1999) have characterized campaign finance fundraisers as “rational prospectors” who look to the areas with the highest potential for donations – especially in terms of income, education, and age. For example, Gimpel, Lee, and Pearson-Merkowitz (2008) find that significant levels of contributions come from geographic areas (subdivided by zip codes) that have higher levels of wealth and education. Certain groups such as minorities (Cho 2003) and the wealthy (Florida 2002; Massey 1996; Massey and Eggers 1993; Massey and Fischer 2003) tend to live in close local clusters. The former of these groups tend to be less politically active; the latter, more so. Because of the homophilous nature of close geographies (Cho and Gimpel 2007; Lott 2006),

controls for district characteristics such as age, income, education level, poverty and minority rates, and population levels are commonly included in analyses of political participation (Ansolabehere, de Figueiredo and Snyder 2003; Florida 2006; Francia et al. 2003; Rosenstone and Hansen 1993; Theilmann and Wilhite 1989; Verba, Schlozman and Brady 1995). For these reasons, it makes sense to consider the location at which donors reside in order to make additional claims about success and representation.

If most contributions originate from a few areas within a district, this lends credence to the idea that only certain parts of a district are being represented – in this case, it may be the areas that demonstrate higher levels of contributing based on increased levels of socio-economic status (Brady, Verba, and Schlozman 1994). If, however, contribution sources are well-distributed across the geographic span of a district, this can indicate a few things. First, the district as a whole may be well off, or citizens may be more able and willing to participate. Second, campaigns may focus their efforts not on specific portions of the district from which they expect their prospecting to pay off, but rather there has been significant access to the entirety of the geographic span of the electoral zone. And finally, if a large number of the citizens in the district support a certain candidate, this may be indicative of their beliefs about his or her potential to represent the district well. Because of the nature of campaigns, candidates may not be able to travel to and extract resources from a wide geographic area. Given that the highest dollar amounts of campaign contributions are solicited from face-to-face meetings and events (Ansolabehere, deFigueiredo, and Snyder 2003; Jones and Hopkins 1985), there may be a decreased likelihood of seeing contributions from a diverse geographic area.

This leads to a hypothesis based on district size and donation distribution. We should expect that candidates who receive contributions from a high number of zip codes should be

gathering funds from more widespread areas within the district than a candidate who receives contributions from only a few zip codes. More dispersion in the geographic outlay of contributors should indicate a higher propensity for electability, since it indicates more citizens who are likely to support the candidate. Similar to Hypothesis 1, electoral success is conditioned on the distribution of contributors in a district. Here, instead of the number of contributors to a candidate, geographical context of the contributions is considered.

*Hypothesis 2: The greater the percentage of zip codes in a district from which contributions originate, the higher the likelihood for electoral success.*

This hypothesis, however, may be conditioned on the size of the district, which can be controlled for in the regression equation by looking at both the percentages of zip codes in a district that donate as well as the percentage of contribution money that comes from citizens of the district. I describe more about the details of these data in Chapter 3.

### **2.3 WHY (EARLY) MONEY MATTERS**

The timing of campaign contributions is also important for explaining the potential for electoral success. Candidates and campaign committees recognize the importance of establishing strong financial strategies from day one, even before any sort of formal campaign is announced. In fact, researchers find that, along with perceptions of success (Maisel and Stone 1997), financial viability is often one of the first considerations examined by a campaign (Fox and Lawless 2005; Lawless and Fox 2010) as part of the overall campaign strategy. As one former state legislative candidate recalls:

...I was very nervous about whether I could raise enough money. Our fund-raising target of \$20,000 looked daunting at a time when my annual income from teaching was just over \$30,000. And I especially needed to raise *early* money from individual contributors living in the district... (Raising a significant amount) would demonstrate that I was a stronger candidate than people thought... A weak start with fund-raising would have reinforced the skepticism and finished me off before the campaign even began. A strong early fund-raising performance would force people to take me seriously (Read 2008).

The ideal campaign plan should set up a detailed timeline of events to “match dollars, strategy, timeline, and cash flow” (Allen 1996, 51), or to at least plan forward from the resources available at the onset (or that they can reasonably expect to receive at later times) (Burton and Shea 2010). In order to be electorally successful, according to Whillock (1991), the initial formation of a strong financial plan is especially crucial for candidates in state and regional elections. Strategist David Himes (1995) argues that it is the first \$20,000 to \$30,000 in seed money raised in the earliest stages to initiate a campaign’s development. Seed money helps to guide internal operations – funding to hire a manager, conduct initial surveys, etc – and also “inspire confidence among potential supporters” (Burton and Shea 2010). Ancillary costs of campaigns will depend on the contexts of the race: costs vary across media markets, competitiveness between candidates will differ, and the size of the district will influence how much candidates will need to spend on travel and mailings (Johnson 2007).

Multiple studies have demonstrated the benefits of early money on campaign and electoral success for candidates in legislative elections (Biersack, Herrnson, and Wilcox 1993; Herrnson 1992; Leal 2003; Wilcox 1988). As bakers and political candidates are both concerned with making dough rise, the simile “early money is like yeast” implies the significance of donations in the inchoate stages of campaigns. In fact, the EMILY’s List organization was established over two decades ago to elect pro-choice Democratic women to political offices at



various governmental levels (2011; Shea and Burton 2001). This political action committee was formed because of the difficulties faced by female candidates at every level in their electoral battles, which often involved minimal resources and tough competition (Emily's List 2011) – conditions also faced by state candidates. In 1992, Republicans countered with The WISH List to support the campaigns of conservative, pro-life “Women in the House and Senate”. By connecting interested contributors with worthy candidates, EMILY's List and The Wish List help candidates to raise money to keep their campaigns viable.

The need for up-front capital to cover everything from media ads, travel expenses, and salaries, to basic amenities such as phone lines and a campaign headquarters makes early money donations especially important for the electoral success of state candidates. The major difference from their congressional counterparts is that “few candidates in local elections know how to close a deal with a contributor” (Whillock 1991, 203). It is one thing to have donors pledge money to a candidate; it is another to receive a check from said donor. Candidates may be overwhelmed at the amount of money they must request, leading them to “hate the job long before they even learn how to do it properly...” (Allen 2003, 248). Fundraising is a learned skill, not one that comes easily to most candidates (Krasno, Green, and Cowden 1994). “All too often candidates pick up poor habits in phoning in for donations,” potentially because they are not aided properly by campaign managers and are often left with “a phone book, a telephone and an ultimatum to raise \$100,000” (Allen 2003, 249). Robert Kaplan (2000) nicknames this phenomenon “fund-raising fear,” and cites unwillingness to solicit contributions the part of the candidate as one of the hardest problems for professional fundraisers to deal with.

Additionally, a number of state candidates have reported not finding party assistance to be helpful for their campaigns, though this attitude varies widely depending on the context and

competitiveness of their election (Hogan 2002), a somewhat drastic difference between federal and state-level candidates.<sup>17</sup> Candidates tend to rely on finance committees and fund-raising specialists who can start bringing in money in the early months of a campaign. On the other hand, some scholars argue that party structures play a key role in the nomination and election of candidates, even more so than the networks of friends and neighbors that candidates tend to rely on. This expanded party view goes beyond the formal party structure to include “party activists, campaign professionals, consultants, and the staffs of elected officials” as important components of any campaign machine (Bernstein and Dominguez 2003). Masket (2009) argues that such informal party organizations are vital for controlling the nomination of state candidates, and candidates need such organizations in order to win election. It may be the case that party structure is directing contributors to the campaign, or vice versa. Regardless of the source, those who face primary elections are especially concerned with this early capital, as it can help them to overcome the first electoral hurdle they will face.

For state candidates who do have some experience with fundraising – namely incumbents – money can serve to both pay for campaign expenses, and to keep others from entering the race against them. State legislative incumbents may find that starting a campaign with a substantial amount in a “war chest” can help deter potential challengers (Hogan 2001).<sup>18</sup> Incumbent war chests can do more than discourage challengers [who often need to raise substantial amounts of early money to compete against these incumbents (Mann and Wolfinger 1981)]: they can also entice more donors to contribute to a candidate. Conversely, challengers

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<sup>18</sup> The finding, however, is conditioned on the level of legislative professionalism in a state. As legislative professionalism increases, Hogan finds that the influence of the size of an incumbent’s war chest is diminished. These incumbents are relying on their “reelection” constituencies to support them in their races (Fenno 1977). More about incumbency is discussed later.

facing vulnerable incumbents are more likely to have quick starts in fundraising from all types of sources, including PACs, other candidates, and individuals (Biersack, Herrnson, and Wilcox 1993). More generally, early individual contributions can lead to later money from all types of sources (Biersack, Herrnson, and Wilcox 1993). If funds are being provided by economic elites early in a campaign, the occurrence of such donations may entice lower-status individuals to contribute to the same candidate at a later time (Kumru and Vesterlund, forthcoming).<sup>19</sup> This effect is can be exploited by informing of the lower-status donors of the larger donations from the higher-status individuals.

In this research, early money can be defined in two ways: first, as the total contributions received before the date of the filing deadline for a state legislative candidate; second, the total contributions received prior to the primary election date. Both of these specifications will be evaluated. While these dates vary by state, all candidates within a given state are subject to the same filing deadlines. Thus, the next hypotheses relates to how contributor timing can impact candidate campaigns. Contributor count is incorporated into this hypothesis as sub-hypothesis (3b).

*Hypothesis 3a: The more early money a legislative candidate receives, the higher the likelihood of electoral success in the general election.*

*Hypothesis 3b: The more contributors that give early money contributions to candidates, the higher the likelihood of electoral success in the general election.*

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<sup>19</sup> The authors explore the acts of donations in the realm of philanthropy, but the same principles could apply in the political arena.

In most states, there is a span of a few months between the filing deadline and the state's primary election. Donations received in this time period can be examined as one subset of later money coming into a campaign. The other natural time period that exists is between the dates of the primary and general elections. By this time, the primaries (should) have determined the contestants in the general elections. During this period, the distinction between incumbent and challenger (or participants in an open seat election) becomes vital in terms of the need for capital. Gierzynski and Breaux (1991) find that money spent by challengers tends to have more of an impact on electoral success during this time, whereas money spent by incumbents does not seem to matter as much: yet "[u]nquestionably, a person hopeful of winning a legislative seat needs to spend significant amounts of money in order to attain a level of competitiveness that will allow him (or her) to win," regardless of status (213). Reactive spending on the account of incumbents may be noted during this period, since the incumbent now has clear notion of who his or her opponent may be, and a better idea of the likelihood of being reelected. When money needs to be spent – during the run-up to the actual election dates – candidates need to have the assets to keep their campaigns running.

Regardless of the stage of the campaign, the viability of a candidate does influence a potential contributor's decision whether to donate or not (Theilmann and Wilhite 1989). Thus, even the appearance of viability – especially in the initial stages of a race – is important for candidates to maintain in order to keep the money flowing in. Assuming that a candidate remains active throughout the entire electoral period, higher levels of contribution receipts during the early phase of the electoral cycle should, holding all else constant, attract increased levels of campaign contributions during later segments of the campaign.

In terms of representation, and contrary to the effects of donor quantity and geographic distribution, increased levels of early money donations may actually be indicative of decreased propensity for overall representativeness on the part of the candidate. For state candidates, networking among friends and acquaintances proves to be the most effective way to fundraise. This indicates that contributors, especially early ones, are recruited in more personal ways by campaigns, which in turn implies that campaigns may know certain people to turn to when first starting out. Aside from friends of candidates (Fenno's "personal" constituency base), these people may be individuals who have contributed large sums of money to the party group or other campaigns in the district in the past, or wealthy individuals able to make large donations, members of the "reelection" and "primary" constituencies. Members of the broader "geographic" constituency may be harder to initially attract to the race, given the lack of direct tie to a candidate. This may potentially mean that there is a delay in recruitment of contributions from these citizens, situating their contributions outside of the early money period.

Noting the exception of the personal constituencies, participants in primary elections tend to be much more ideologically extreme than those who participate in the general election (Stewart 2011): this can be understood in comparison to the electorate in general, and in comparison to other members of the same party. Mayhew (1974) states: "[i]n all his calculations the [legislator] must keep in mind that he is serving two electorates rather than one – a November electoral and a primary electorate nested inside it but not a representative sample of it" (44-45). It is well established that "voters in Democratic primaries tend to be more liberal than Democrats generally; Republicans who vote in primaries tend to be more conservative than Republicans generally" (Stewart 2011, 196: see also Geer 1988; Norrander 1986, 1989; Ranney 1968). If these are the same groups of citizens that are increasingly inclined to vote in the early

stages of the race and also to contribute in this same early phase, then money may be funneled towards the more ideologically extreme candidates, thus skewing the ideological representation of the district. Thus, representation may be more likely in instances where money comes in later phases of the campaign, although this may not lead to favorable electoral outcomes for the candidate.

## **2.4 CONCLUSION**

In sum, I argue that a diverse contributor base increases the potential representativeness of legislative candidates, thus giving such candidates a higher proclivity to be electorally successful in their races. A high number of donors from a district and the more diverse the geographic locations of contributors in a district all should indicate that a candidate is viewed by the electorate as having a heightened propensity for representation, thus making her a more electorally desirable candidate. In contrast, early money contributions may indicate an increased responsiveness to the close/ ideologically extreme donors who choose to donate to a candidate in the formative stages of the campaign. In the next chapter, I explain the research design used to test the four hypotheses proposed that capture these concepts.

### **3.0 RESEARCH DESIGN**

Dispersion theory posits that candidates will electorally benefit from a more diverse contributor base. The empirical analysis is based on qualitative data on election returns and campaign financing. In this chapter, I explain the data collection process and describe how the sample for this study is populated. I begin with a description of the state legislatures and case selection, defining the states that are included (or excluded) from analysis. The bulk of the chapter is devoted to explanation of the data collection effort to construct the numerous variables needed for estimation, beginning with a discussion of the geocoding process and results that provide much of the data needed to test Hypotheses 1 and 2. Over 800,000 individual campaign contributions are analyzed and geolocated using a geographic information system (GIS) to determine whether contributors are donating to candidates running in the districts in which they reside. Aside from these original data, other standard control variables are included and discussed, such as total campaign contribution amounts and candidate/race characteristics. Finally, the regression models are listed, and a brief summary is included in the conclusion.

### 3.1 CASE SELECTION

The choice to examine the 2010 election cycle is based on the fact that it is the most recent electoral cycle that full data is available for. Due to the intensive data collection and cleaning that must take place for analysis (detailed below), I examine only one year for this dissertation. Future variants of this work may include a multi-year analysis, which will allow for comparison of individual candidates across election cycles, as well as new candidates and challengers.

State legislatures across the country vary greatly in size, composition, and structure (Erickson 2012), allowing researchers far more “empirical leverage” when studying questions of money and democracy (Mooney 2001; Ramsden 2002). Forty-nine of the legislatures are bicameral, with Nebraska housing the only unicameral body. In total, there are 7,328 state legislative seats in the U.S., but chamber size can range anywhere between 20 to 424 members. Factors such as pay, time spent on the job, and staff capacities also vary widely (see discussion on legislative professionalization below).

In 2010, 88 out of the 99 state legislative chambers held elections, rendering a total of 6,125 seats up for election on November 2, 2010.<sup>20</sup> This was the last election to occur before redrawing of district boundaries based on the 2010 Census data and, holding true to projections, a majority of chambers were overtaken by the Republican Party, which gained at least 660 total seats on Election Day. This is the largest gain by either party since the 1960s, and it comes at a valuable time for the GOP because of redistricting that occurred after the completion of the 2010 Census. Table 1 lists the 65 chambers included in the analysis.

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<sup>20</sup> Nebraska has a unicameral legislature, which makes the total number of chambers ninety-nine. Louisiana, Mississippi, New Jersey, Vermont, Virginia, and West Virginia did not hold elections and are not included in the analysis.



**Table 1.** Chambers Included in the Analysis [65 Total]

<b>Upper and Lower Chambers</b>	<b>Upper Chamber Only</b>	<b>Lower Chamber Only</b>
Alabama	Arizona	Kansas
Alaska	Idaho	Nevada
Arkansas	Maryland	New Mexico
California	Minnesota	South Carolina
Colorado	Washington	<b>Total   4 Chambers</b>
Connecticut	<b>Total   5 Chambers</b>	
Delaware		
Florida		
Georgia		
Hawaii		
Illinois		
Indiana		
Iowa		
Kentucky		
Maine		
Michigan		
Missouri		
Montana		
New York		
North Carolina		
Ohio		
Oklahoma		
Oregon		
Pennsylvania		
Rhode Island		
Tennessee		
Utah		
Wyoming		
<b>Total   56 Chambers</b>		

### 3.2 DATA COLLECTION

The first step in the data collection process involved populating list of state legislative candidates for the 2010 electoral cycle. To do so, my research assistants and I referred to both Ballotpedia and the Secretary of State sites for each individual state to compile a list of all candidates participating in both primary and general elections. In sum, we gathered information on over 11 thousand candidates, including their name, state, chamber, district, party affiliation, incumbency/challenger status, and whether they won a primary or general election. These data were also supplemented with data on general election results collected by Carl Klarner and his team (Klarner et al. 2013).

The next step in data collection focused on gathering information on individual contributions, such as donation amounts, chosen recipients, and contributor location. The primary source for contribution data is the National Institute of Money in State Politics (NIMSP). Transparency Data (now called Influence Explorer), a project of the Sunlight Foundation, has made this data publicly available in bulk for each election cycle.<sup>21</sup> Included in the data are three types of information: contribution variables, contributor variables, and recipient variables. Contribution variables include the dollar amount and the date the donation was made, which allows for determining which time period the donation was made in regards to the election cycle. The contributor variables, which include name, address, and zip code, are used to determine the location where the donor of a certain contribution lives: these will allow for identification of which district the donor resides in. Recipient variables indicate the candidate to whom the money was given, along with his or her state district and party affiliation.

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<sup>21</sup> The data may be accessed at: <http://data.influenceexplorer.com/docs/>.

Contributions are also coded as being from either individuals or PACs – only individual contributions are analyzed here.

A great deal of cleaning is required to format this data for analysis. The first task involves removing data from the states and chambers not included in this analysis. Six states (Louisiana, Mississippi, New Jersey, Vermont, Virginia, and West Virginia) did not hold legislative elections in 2010, so they are not included; additionally, chambers that elect members using multi-member legislative districts were eliminated. Multi-member districts<sup>22</sup> (MMDs) are omitted from analysis because of the potential problem of disentangling the effects of the multi-member election on everything from campaign tactics, fundraising, and especially election results (Carey, Niemi, and Powell 2000a; Cox and Morgenstern 1995; Cox and Katz 1996). Constituents are less likely to “identify with and know their legislators in MMDs, making it less likely that they will... recognize their names on a ballot” (Cooper 2008). Candidates in MMDs also face varying electoral circumstances; namely, candidates only need a plurality of votes to win, and competition for incumbents often takes the form of other incumbents, who often enjoy a substantial advantage over non-incumbents (Cox and Morgenstern 1995). They are excluded from this analysis.

This brings the total to 24 excluded chambers based on electoral factors. Because of significant problems with data availability, Massachusetts, Nebraska, New Hampshire, North Dakota, South Dakota, Texas and Wisconsin are also excluded.<sup>23</sup> Once the contribution data is

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<sup>22</sup> Thirteen of the 99 legislative chambers elect representatives and senators from multi-member districts (MMD). One chamber, the New Jersey House, did not have elections in 2010, leaving 12 chambers with MMDs holding elections. They are: Arizona House, Idaho House, Maryland House, New Hampshire House, North Dakota House, South Dakota House, Washington House; the Nevada Senate; and both chambers in Vermont and West Virginia. These chambers are not included in the analysis.

<sup>23</sup> The data on Massachusetts contained a number of problems due to differences in the way districts are labeled by different data sources. A very small number of contribution observations were reported for Nebraska, New Hampshire, North Dakota, and South Dakota, so they were excluded. The contribution data for Texas did not

clean, it is merged with the candidate list. Candidates without contribution filings, as well as individuals with reported contributions who are not 2010 cycle candidates (for instance, an incumbent legislator collecting funds for his 2012 campaign), are removed from the data set here. This is a crucial step in that it removes 2,901 individuals from the contribution data. This leaves a total of 7,685 primary and general election candidates from 35 states represented in the final data set. Complete information on donor contributions is available for 6,079 candidates (roughly half of all candidates running for election in this cycle).<sup>24</sup>

### 3.3 GEOCODING OF DATA

One of the more important data tasks for this project involves the matching of each individual contributor's address into the corresponding legislative district(s). In order to evaluate Hypotheses 1 and 2, it is imperative to know the legislative districts that each contributor lives in. I examine 900,844 contributions made to candidates. The address data for each is uploaded into a geographic information system (or GIS; in this case, ArcGIS 10 is used) for geo-coding. A GIS is "a computer-based system that stores geographically referenced data, links it with non-graphic attributes (data in tables) allowing for a wide range of information processing including manipulation, analysis and modeling" (University of Maryland 2012). ArcGIS provides a base

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include the postal address for the vast majority of contributors, which makes geocoding virtually impossible, so Texas is also left out of the analysis. There were also a number of problems with the geocoding of contributors into legislative districts in Wisconsin, in that ArcGIS was unable to correctly geocode contributor information correctly for approximately 90% of the candidates. Therefore, Wisconsin is also removed from the data.

<sup>24</sup> While this seems like a small number in terms of the total number of races held across the U.S., it is important to remember that I am only able to include races where there is complete information for the range of factors necessary to test the hypotheses proposed here. Data is available on an additional 2,005 candidates who lost in a primary; more on this is discussed later.

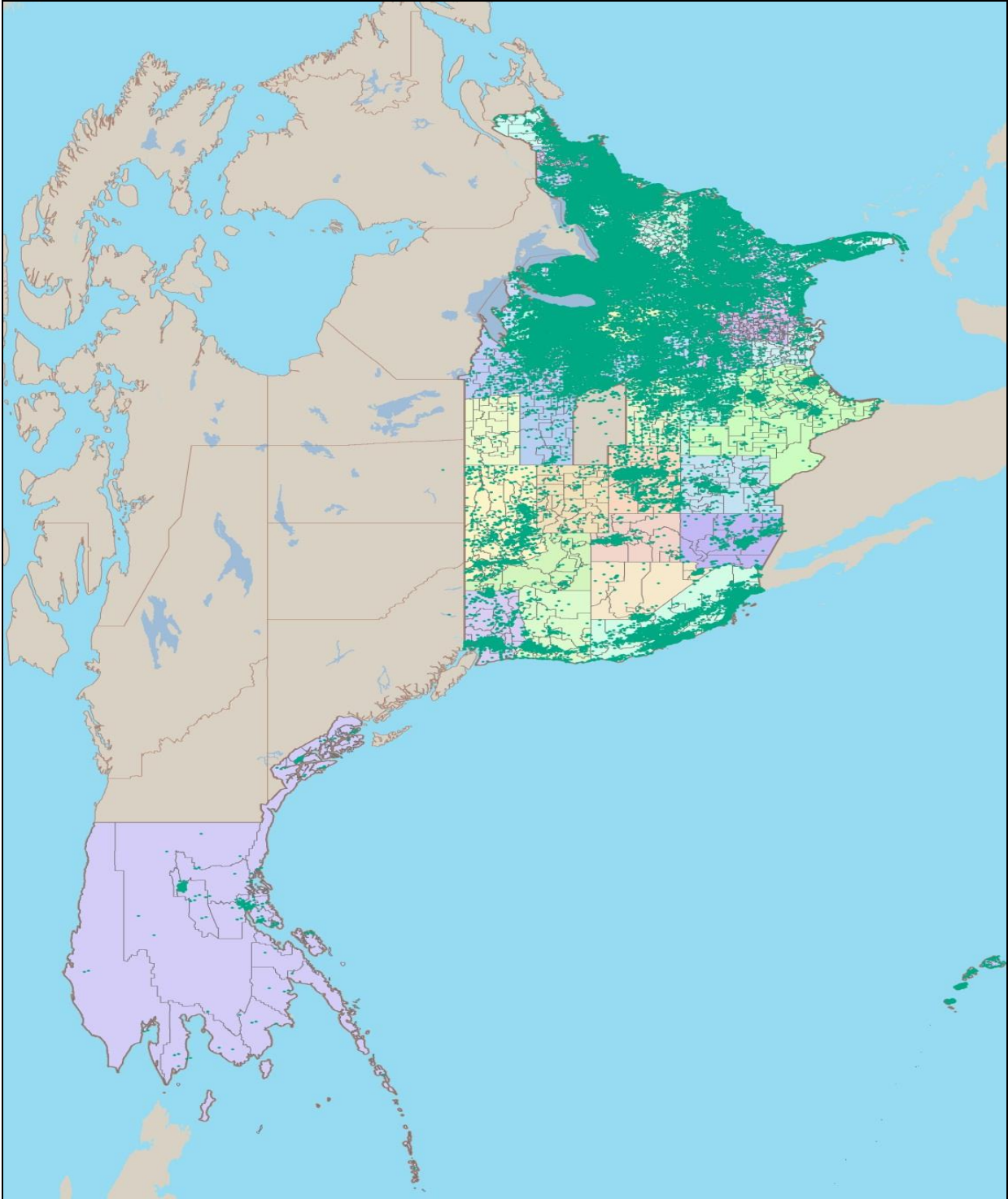
map of North American Street Addresses that is used in this study as the reference for geo-location.

A table listing each contribution observation with address information is loaded into ArcGIS for geo-coding. ArcGIS takes this information and checks it against an address locator, the tool that the program uses to map the address. Accurate address information is vital, as the caveat to using zip codes as a measure is that they are not restricted to being contained wholly by one legislative district. In fact, zip codes can be spread across as many as ten legislative districts; districts can be composed of as few as one zip code, but are usually comprised of many. For example, the city of Providence, RI, is broken down into 7 separate zip codes, 02903-02909. Zip code 02903 is part of 5 state Senate and 6 state House districts; zip code 02904 is spread across 5 state Senate and 8 state House districts. Therefore, it is of the highest importance that I match each donor to his or her correct home districts using something more than zip code; this is achieved with the geo-coding process.

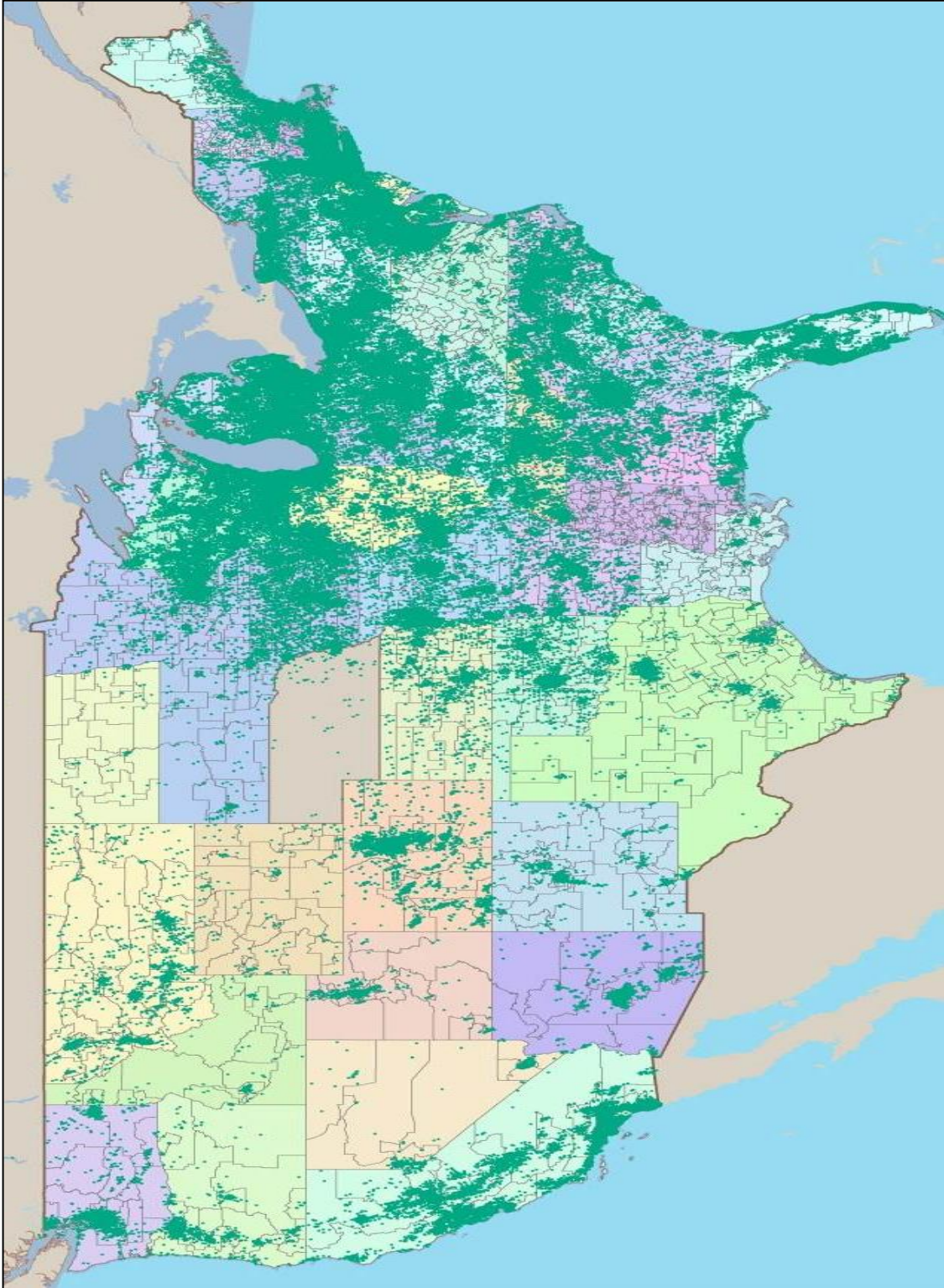
When complete, the program produces two useful items: one, a map of the observations, and more importantly, an attribute table detailing geographic information for each observation. Next, each contributor is matched to his or her corresponding legislative districts through a process called selection. These features are added as an attribute of each observation, creating a complete table of information in ArcGIS that can be exported to Microsoft Excel.

Of all contributions, approximately 880,000 (or 98%) were matched within the GIS. Figure 1 is a map created in ArcGIS of all geocoded observations across the fifty states. Each point on the map is an individual contributor's reported location. Figures 2 through 5 are map images focused on different areas in the United States, to show closer images of what ArcGIS produces. Two patterns emerge from the visualizations. First is the heavy concentration of

contributions in states east of the Mississippi, and also along the West coast. Even in Western states that held elections, such as Utah, Montana, Idaho, and Nevada, contributions are not widely dispersed. Second, it is noted above that Louisiana, Mississippi, New Jersey, Vermont, Virginia, and West Virginia did not hold elections in 2010, yet a great deal of contributions have originated from these states, indicating that citizens made donations to candidates competing in races in other states.

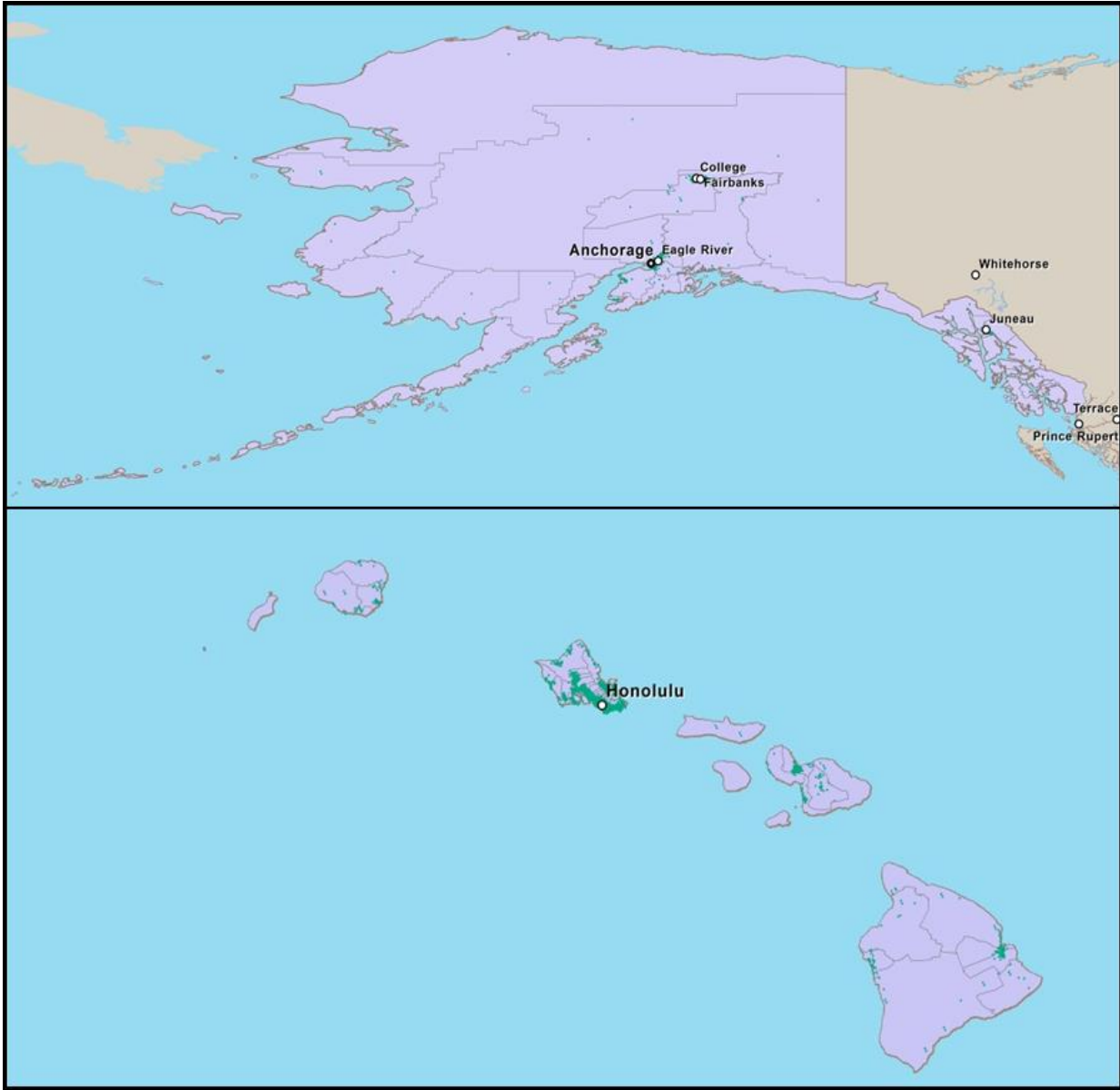


**Figure 1.** All Contributions from the United States, Lower Legislative Chamber Districts Shown

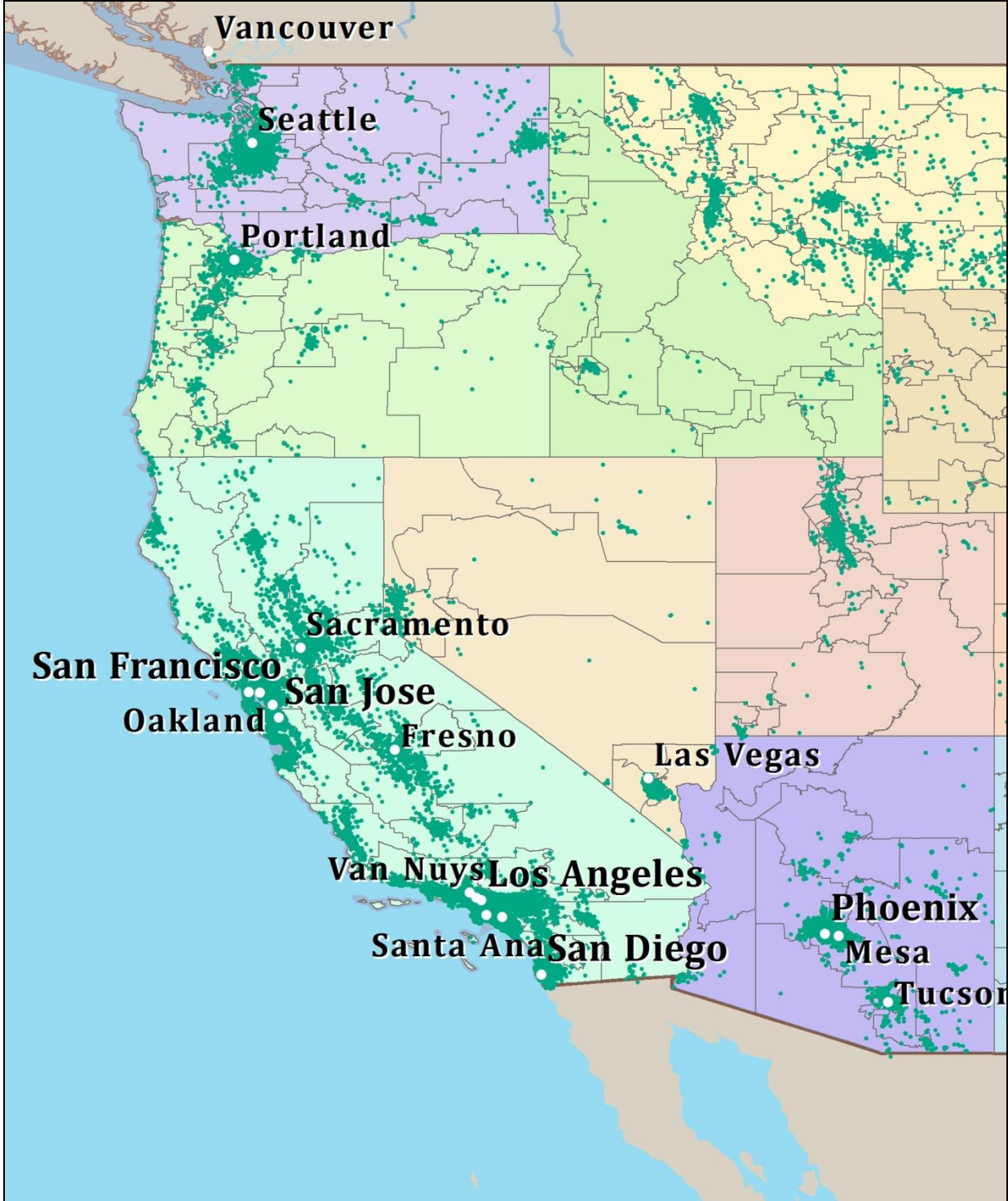


**Figure 2.** All Contributions from the 48 Continental States, Lower Legislative Chamber Districts Shown

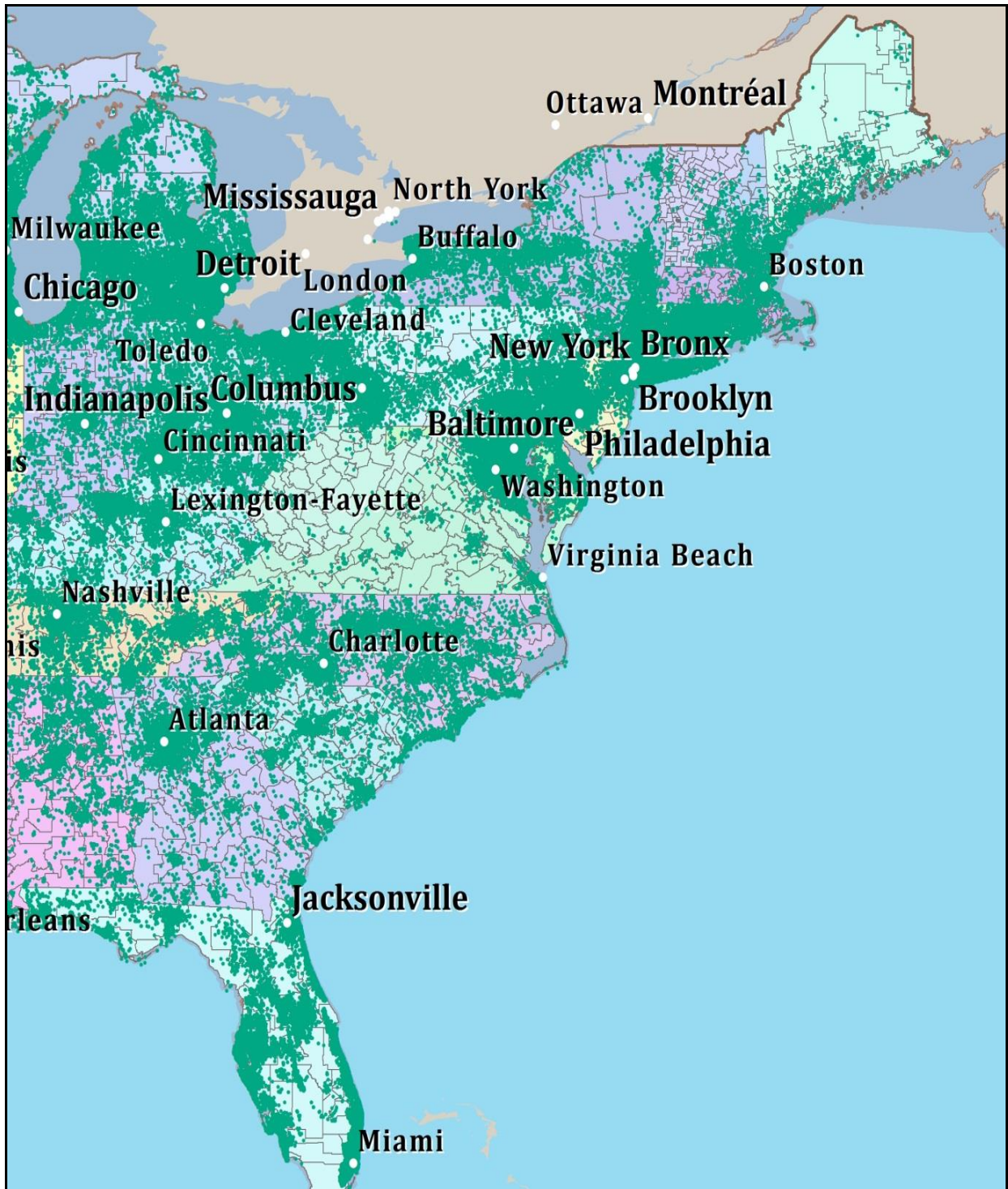




**Figure 3.** Contributions from Alaska (top) and Hawaii (bottom), Lower Legislative Chamber Districts Shown



**Figure 4.** Contributions from the Western United States, Lower Legislative Chamber Districts Shown



**Figure 5.** Contributions from the Eastern United States, Lower Legislative Chamber Districts Shown

Because reporting requirements are not standard across the states, postal address information is missing in certain states and incomplete in others.<sup>25</sup> When certain address information, such as house number, street, or zip code is missing, ArcGIS may not be able to precisely locate the observation on a map, and will count the observation as “unmatched.” Observations with missing zip code information comprise 4,014 of the unmatched contributions. ArcGIS is unable to accurately match these contributions based on other information, such as a street address or city. There are 2,015 zip codes in which at least one observation cannot be matched. Of the top 20 zip codes (as ranked by number of unmatched observations) listed in Table 2, nine are located in Washington, DC, and five in Minnesota. Since the District of Columbia does not hold state legislative elections, these observations can all be considered out-of-district contributions for the candidates receiving them.

**Table 2.** Top 20 Zip Codes with Unmatched Contribution Observations

	<b>Zip Code</b>	<b>Number of Unmatched Obs.</b>	<b>Location</b>		<b>Zip Code</b>	<b>Number of Unmatched Obs.</b>	<b>Location</b>
1	00000	4014	No Zip Code	11	20001	62	District of Columbia
2	20009	153	District of Columbia	12	99801	58	Juneau, Alaska
3	20003	105	District of Columbia	13	94608	57	Emeryville, California
4	55436	94	Edina, Minnesota	14	55051	50	Mora, Minnesota
5	20002	90	District of Columbia	15	99516	50	Anchorage, Alaska
6	20007	89	District of Columbia	16	55433	46	Coon Rapids, Minnesota
7	55391	86	Orono, Minnesota	17	04401	45	Bangor, Maine
8	20008	80	District of Columbia	18	55105	45	St. Paul, Minnesota
9	20005	73	District of Columbia	19	20036	42	District of Columbia
10	20016	66	District of Columbia	20	04444	40	Hampden, Maine

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<sup>25</sup> According to a 2011 report by NIMSP (Quist 2011), at least 45 states require information about some contributors (not all), and the depth of the reporting varies.

Regardless, a 98% match rate is substantial. Since it is not feasible to look at every unmatched observation, I randomly sampled 200 observations (about 1% of the unmatched) and checked whether or not a true address match was possible for the observation. This involved going back to the data imputed into ArcGIS, checking the unmatched observations line by line, and attempting to rematch the observation by hand. A majority (80%) of the sample was comprised of observations with no/missing address data; for those observations that did have some incomplete data (about 20%), I was unable to individually match any of them to a valid street address (even by using Google Maps or an internet search for the address). The remaining unmatched contributor addresses mostly were the result of either incomplete address information, or P.O. Boxes and Rural Route locations for which GIS could not find a valid address range (similar to the problem encountered by Cho and Gimpel 2007 in their attempts to geocode campaign contributions in Texas; see also Bolstad 2008). Overall, the geo-location of addresses by ArcGIS is highly reliable.

Based on the ArcGIS data, complete information is available for 6,079 candidates. Table 3 displays the breakdown of candidate type by state.

**Table 3. Data Breakdown by Candidate Type and State**

STATE	Incumbent			Challenger			Open Seat			TOTALS	
	Primary Election	General Election	% Primary Winners	Primary Election	General Election	% Primary Winners	Primary Election	General Election	% Primary Winners	Primary Election	General Election
AK	38	38	100%	19	15	79%	23	15	65%	80	68
AL	107	96	90%	79	42	53%	77	44	57%	263	182
AR	58	56	97%	15	10	67%	127	77	61%	200	143
AZ	14	14	100%	20	13	65%	34	22	65%	68	49
CA	57	56	98%	47	37	79%	151	70	46%	255	163
CO	56	54	96%	51	49	96%	66	52	79%	173	155
CT	144	143	99%	103	91	88%	46	40	87%	293	274
DE	43	42	98%	36	28	78%	20	15	75%	99	85
FL	84	81	96%	68	49	72%	111	80	72%	263	210
GA	174	169	97%	73	41	56%	126	71	56%	373	281
HI	57	55	96%	71	46	65%	35	16	46%	163	117
IA	103	101	98%	61	49	80%	51	38	75%	215	188
IL	118	114	97%	62	41	66%	64	34	53%	244	189
IN	110	109	99%	101	75	74%	41	27	66%	252	211
KS	90	88	98%	64	50	78%	37	26	70%	191	164
KY	100	100	100%	73	55	75%	42	27	64%	215	182
MD	37	34	92%	36	19	53%	19	13	68%	92	66
ME	100	99	99%	88	75	85%	128	99	77%	316	273
MI	68	64	94%	86	47	55%	325	139	43%	479	250
MN	44	44	100%	29	29	100%	28	28	100%	101	101
MO	87	83	95%	39	28	72%	156	102	65%	282	213
MT	13	12	92%	2	2	100%	28	24	86%	43	38
NC	79	78	99%	44	33	75%	74	46	62%	197	157
NM	60	59	98%	48	28	58%	14	9	64%	122	96
NV	22	22	100%	30	19	63%	67	34	51%	119	75
NY	175	173	99%	108	99	92%	68	65	96%	351	337
OH	72	71	99%	93	68	73%	83	53	64%	248	192
OK	101	100	99%	36	35	97%	66	37	56%	203	172
OR	58	57	98%	53	47	89%	33	27	82%	144	131
PA	193	192	99%	100	75	75%	92	48	52%	385	315
RI	86	80	93%	73	55	75%	59	37	63%	218	172
SC	103	101	98%	60	36	60%	45	27	60%	208	164
TN	98	97	99%	70	53	76%	47	30	64%	215	180
UT	72	68	94%	79	58	73%	45	30	67%	196	156
WA	19	19	100%	18	13	72%	12	10	83%	49	42
WI	91	90	99%	96	69	72%	98	48	49%	285	207
WY	39	39	100%	12	10	83%	33	32	97%	84	81
<b>TOTAL</b>	<b>2970</b>	<b>2898</b>		<b>2143</b>	<b>1589</b>		<b>2571</b>	<b>1592</b>		<b>7684</b>	<b>6079</b>

### 3.4 UNDELIVERABLE ZIP CODES

According to the United States Postal Service (2013), there are currently over 42,000 zip codes in use in the United States. “Zip” is an acronym for zone improvement plan, a system put into place in the 1960s to render mail delivery more efficient. Each digit is significant:

The first digit of a five-digit ZIP Code divides the United States into 10 large groups of states numbered from 0 in the Northeast to 9 in the far West. Within these areas, each state is divided into an average of 10 smaller geographical areas, identified by the second and third digits. These digits, in conjunction with the first digit, represent a sectional center facility or a mail processing facility area. The fourth and fifth digits identify a post office, station, branch or local delivery area (ArcGIS 2013).

Across the country, there are approximately 9,000 zip codes considered to be “undeliverable” by the USPS. These may include zip codes created to be used for Post Office box addresses, or to designate areas that the Postal Service will not deliver to (though the Postal Service does not list specific reasons for non-delivery). Figures 6, 7, and 8 show plots of these zip codes.<sup>26</sup> Undeliverable zip codes may fall outside of the delivery limits of a postal office, yet mail can still be sent to recipients in these postal codes, and, more importantly, these zip codes often listed as part of a mailing address by campaign contributors.

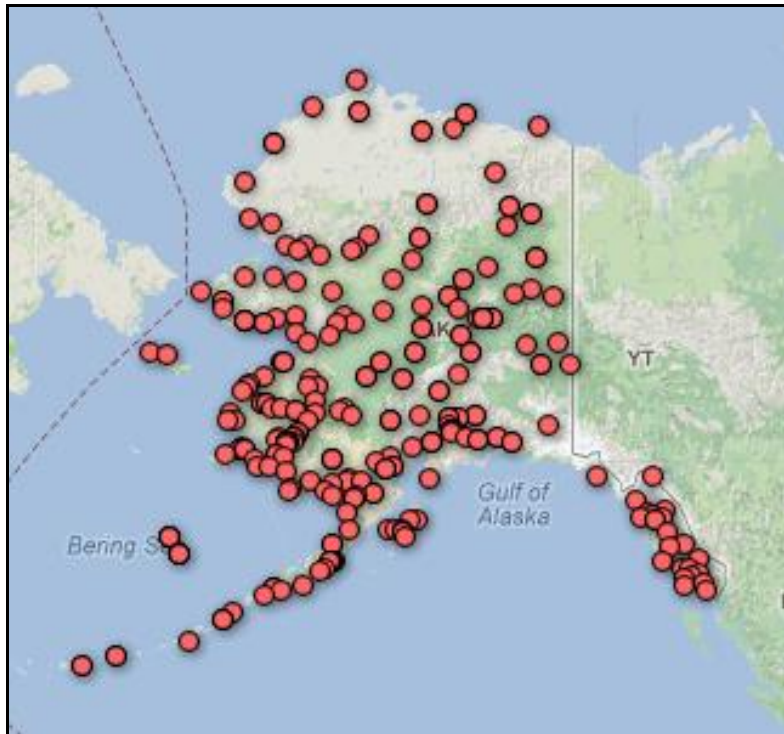
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<sup>26</sup> Maps in Figures 6, 7, and 8 created with Google Maps, using data provided by Christian Hochfilzer and Jeffrey Duncan (2013).

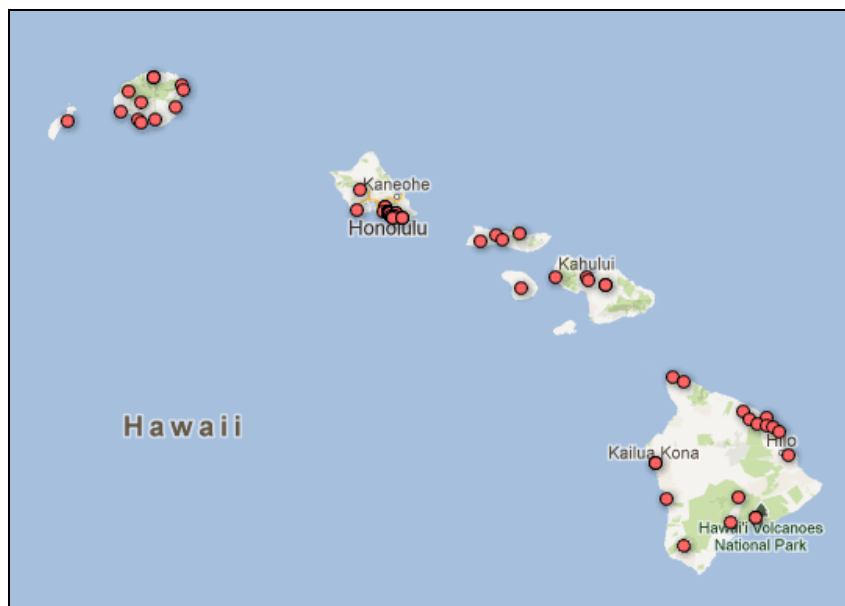


Figure 6. Undeliverable Zip Codes across the Continental United States





**Figure 7.** Undeliverable Zip Codes in Alaska



**Figure 8.** Undeliverable Zip Codes in Hawaii

Undeliverable zip codes are not the same as undeliverable mail, which includes items not delivered to the sender because they do not comply with the requirements for shipment outlined by the USPS (United States 2013). Reasons for undeliverable mail (in USPS lingo, UAA – undeliverable as addressed) include incomplete, inaccurate, or illegible address information, no mail receptacle present to place mail in, or insufficient postage.

In an initial effort to delineate the total number of zip codes within a district, data were obtained from the U.S. Census Bureau, and the number of zip codes in each district counted. Unfortunately, the Census data does not contain information on the undeliverable zip codes that exist. In order to create the most accurate count of the total number of zip codes in a district, I obtained a list of over 9,000 undeliverable zip codes online (see footnote 31) and geocoded them into the upper and lower state legislative districts, much like the procedure used to geocode addresses. I was able to match 100% of the zip codes into the correct districts. These new additions were then added to the existing list of zip codes by district, providing a complete count of zip codes per district. Including the undeliverable zip codes significantly improved the accuracy of the zip code data; without this information, counts of zip codes per district were incorrect for over 5,000 of the 7,685 candidates. This count of total zip codes per district is used as the denominator to calculate the percentage of zip codes donating per district in Hypothesis 2.

## 3.5 VARIABLE DESCRIPTIONS

### 3.5.1 Main Independent Variables

Once each donor is matched to her districts, the information produced by ArcGIS is then aggregated at the individual candidate level, and several variables are generated calculating different characteristics. To better compare values across states, each of the three main IVs is measured as a percentage rather than raw numbers. Having 50 donors give to a campaign in California is much different than the same number of donors giving to a candidate in Montana; similarly, \$5,000 has a different value to each of these candidates. A variable capturing the percentage of a candidate's individual contributors located within his or her electoral district is included (*% Donors Within District*). This variable is created by dividing the number of geocoded donors located within a candidate's district by the total number of geocoded donors. Consistent with Hypothesis 1, I expect that the more donors a candidate has from his or her district, the higher the likelihood of winning the general election.

In order to evaluate how widespread the donors are in a district, as a test of Hypothesis 2, I create a variable to capture the *Percentage of Zip Codes within District* from which contributions originate. If a candidate receives money from more zip codes, then by definition she has received more from a more widespread area. By calculating a ratio of "zip codes with donors" to total "zip codes in a district", variance in the number of zip codes across districts and states is controlled for. This variable ranges from 0 (0% contributing) to 1 (100% of zip codes hold at least one contributor). The higher the percentages of zip codes from which donations originate, the higher the probability of electoral success, given the distribution of support across the legislative district.

Early money contributions and contributors are also expected to increase the probability of victory, as stated in Hypothesis 3. What constitutes the “early” period of a campaign has been debated in the literature, with some (Biersack, Herrnson, and Wilcox 1993) counting any money raised before the primary election as early; others consider money raised 8 to 9 months before the primary as early [as Leal (2003) does with early money in Senate primary elections]. Box-Steffensmeier and Lin (1995) use filing periods as a way to divide up time, which is the approach I follow here. I will use two measures of early money and donors. First, the main measure is the the totals for contributions and donors during the initial phase of the campaign, as determined by the initial filing deadline in each state. This should be a conservative measure of early contributions and donors, as it is capturing the preliminary foundations of support for a campaign. The second measure includes all initial fundraising and donors, but extends past the initial filing deadline to the date of the primary election. This approach takes into account the variation between deadlines across states.

Similar to the individual contribution total variable, each of these variables are also transformed into percentages of the total money and donors in a race. For example, the early donor total for a candidate may be 25; if he has 125 total donors, his *Percentage (%) Early Donors* is 20%. For *Percentage (%) Early Money*, if this candidate raises \$1000 in the early stage of the campaign, it works out to be 20% of a \$5000 contribution total. Both of these variables should positively impact electoral success, as described at length above in Hypotheses 3 and 3b. Summary statistics for the main independent variables are presented in Table 4. All percentages are scaled from 0-100 for ease of interpretation. The dispersion characteristics share similar means (around 36%), save for in-district donors. An average candidate receives 50% of her contributions from donors that reside in her district.

**Table 4.** Summary Statistics of Main Independent Variables

	<b>Variable</b>	<b>Description</b>	<b>Expected Relationship</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Min</b>	<b>Max</b>
<b>DV</b>	<b>General Election %</b>	The percentage earned by a candidate in the general election on November 2, 2010.		46.00	33.31	0	100
<b>H1</b>	% Donors within District	Equal to the number of geocoded donors that live inside a candidate's district divided by the total number of geocoded donors.	+	50.92	29.70	0	100
<b>H2</b>	% Zip Codes within District	Equal to the number of zip codes located within a candidate's district from which donations originate divided by the total number of zip codes that fall within the district.	+	37.66	28.78	0	100
<b>H3a</b>	% Early Contributions	Equal to the amount of contributions given prior the filing deadline divided by the total number of contributions received.	+	36.40	34.76	0	100
<b>H3b</b>	% Early Donors	Equal to the number of donors that gave to a campaign prior to the filing deadline divided by the total number of donors.	+	35.90	34.39	0	100

NOTE: Percentages are measured on a 0-100 scale for ease of interpretation.

### 3.5.2 Control Variables

Table 5 lists the control variables and their expected relationship with the dependent variable.

Three count variables are included, measuring the *total individual donor count*, the *number of unique in-district zip codes*, and the *total number of zip codes* in a candidate's district. Each of these variables should have a positive relationship with vote share, as they are components of the dispersion variables discussed above.

Two variables are calculated from the complete database of donor information. It is important that they are calculated from this data set instead of from the data once it is geocoded due to the difference in observations. Because of the nuances of the geocoding process (described above), the geocoded donation totals may not accurately reflect the overall reported totals.<sup>27</sup> The sum of donations received by each candidate from individual donors over the complete electoral cycle is captured in an *individual contribution total* variable, which is examined in both real dollars and the natural log form. Standard in other research, the natural log transformation is used for analysis because it gives a more normal distribution to the data (see Partin 2002). To capture the impact of PAC contributions, a variable is created tallying *PAC contribution totals* for each candidate. PAC totals are calculated in the same way as individual contribution totals. The logged variables, denoted as *ln(Total Individual Contributions)* and *ln(Total PAC Contributions)* are used in the analysis.

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<sup>27</sup> The correlation between the original reported contribution totals and the geocoded contribution totals is 0.9656.

**Table 5.** Summary Statistics of Control Variables

<b>Variable</b>	<b>Description</b>	<b>Expected Relationship</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Min</b>	<b>Max</b>
Total Individual Donor Count	The total count of individual donors that give to a candidate.	+	104.80	178.82	1	3318
Unique In-District Zip Code Count	The number of zip codes located within a candidate's district from which donations originate.	+	5.30	6.05	0	91
Total Zip Codes in District	The number of zip codes located within a district.	+	16.97	15.85	1	164
ln(Total Individual Contributions)	The natural log of the total amount of individual contributions.	+	8.77	1.76	0.718	13.976
ln(Total PAC Contributions)	The natural log of the total amount of PAC contributions.	+	8.04	3.62	-2.813	15.310
Chamber	Coded 1 if the race is for an upper house seat.	n/a	0.22	0.42	0	1
Republican	Coded 1 if the candidate is a Republican.	n/a	0.49	0.50	0	1
Unopposed	Coded 1 if the candidate is running unopposed.	+	0.12	0.33	0	1
Challenger	Coded 1 if the candidate is a challenger (facing an incumbent).	-	0.28	0.45	0	1
Open Seat	Coded 1 if the candidate is running in an open seat election.	-	0.33	0.47	0	1
Prior Race % (Incumbent Only)	The percentage earned in the most recent election an incumbent competed in (same seat).	+	28.57	38.98	0	100
Legislative Professionalism	Squire's (2007) index of legislative professionalization.	-	0.21	0.13	0.054	0.626
Campaign Finance Stringency	Witko's (2005) index of contribution limit stringency.	+	3.91	1.72	0	6
<b>Total N = 7684</b>						

Characteristics standard in other studies of electoral politics are also included. The *chamber* (upper or lower) that the candidate is running for is also included to control for whether a candidate is running for a seat in the state House or Senate. The dichotomous chamber variable is coded 1 for upper house races. Since state senators may have larger geographic districts to represent, it is important to control for this factor, though I have no expectation about the chamber's effect on electoral success. In terms of party affiliation, Republicans made sweeping gains at the polls in 2010, just as they were predicted to do (Klarner 2010). I include a dichotomous variable coded 1 if a candidate is a *Republican*, with the expectation of a positive relationship with vote share.

Candidacy status must also be taken into consideration. Legislators are, by nature, single-minded seekers of reelection (Mayhew 1974) and must maintain their position in order to achieve other goals, such as affecting public policy or achieving status in the chamber (Fenno 1978). *Incumbents*, then are traditionally expected to receive higher vote shares than their challengers and candidates competing in open seat races (Jewell and Breaux 1988; Garand 1991).<sup>28</sup> As with national incumbents, state-level legislative incumbents enjoy name recognition, as well as a resource advantage over challengers (Cox and Morgenstern 1993; Holbrook and Tidmarch 1991; King 1991; Weber, Tucker, and Brace 1991). Building up a war chest during their time in office can also help legislators ward off opponents in subsequent elections (Hogan 2001). Giles and Pritchard (1985), in their analysis of campaign expenditures in legislative elections in Florida, find that while money is an important factor, other things such as incumbency and party are more important in determining the outcomes. A total of 5,750

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<sup>28</sup> Incumbency effects have found a place in the literature all their own, as the question of incumbency advantage is one of the most thoroughly studied electoral phenomena in the U.S. (see, for example, Abramowitz, Alexander, and Gunning 2006; Box-Steffensmeier, Radcliffe, and Bartels 2005; Carson, Engstrom, and Roberts 2007; Carson et. al. 2010; Cox and Katz 1996; Jacobson 1987, etc.).



incumbents were legally eligible to run in the 2010 election cycle (those who did not face term limits). Out of these incumbents, 4,895 chose to run for their seat again. Of these, 3,852 (77.3%) running for re-election in 2010 had *no* primary challenger.

The expectation about *challengers*, on the other hand, can be argued in two different ways. First, challengers may be expected to need high levels of contributions when facing incumbents because they are going up against known and established political figures, who have many resources and established name recognition. To successfully contend against such a rival, high levels of contributions may be needed. Jacobson (1980) shows evidence that the amount spent by challengers significantly affects how well they will do in an election. He concludes that “the marginal gains in political support from a given expenditure are much greater for challengers and other disadvantaged candidates than for incumbents” (41). Gierzynski and Breaux (1991) also find that challenger spending has a larger effect than does incumbent spending. While many (including Cassie and Thompson 1998; Gierzynski and Breaux 1998; Jones and Borris 1985; Thompson and Cassie 1992; Thompson, Cassie and Jewell 1994) find that challengers are more likely to receive money from party organizations than political action committees (PACs), there is little research on the focus of individual contributions in this regard.

Second, in comparison to candidates running for *open seats*, challengers may not demand such high levels of funding. Open seat candidates have the benefit of facing another person (or multiple competitors) that may be relatively unknown to the population, yet in terms of costs the candidate will still need to spend money to get his or her name out there. Incidentally:

...it may be easier for candidates for open seats to raise... money compared to a challenger to an incumbent based on the incumbents' likelihood of reelection (Jacobson 1980, 1985, 1997; Green and Krasno 1988). An open seat raises the stakes for both candidates and donors, and spending can be expected to rise with the uncertainty of the electoral outcome. Indeed, both Sorauf (1988) and Hogan (2000) found that state legislative open-seat races are more expensive than incumbent-challenger contests (Bonneau 2005, 110).

To find information on candidate type, I refer to information from both Ballotpedia and Follow the Money (NIMSP). In the *incumbent* variable, challengers as well as open seat candidates are coded as 0, with incumbents as 1. Since incumbents are excluded as the baseline, I expect that both the challenger and open seat variables will have negative relationships with vote share. A dummy variable is also used to note whether or not a candidate ran *unopposed* (since it should be safe to assume that these candidates will receive a significant portion, if not all, of the vote share). I expect this variable to have a positive and significant effect on candidate vote share.

Additionally, a measure of *legislative professionalism* is included. More professionalized legislatures, often found in states with higher populations, are run similar to the U.S. Congress: they have larger staff levels, longer term lengths, and higher pay rates than their less professional counterparts. Additionally, more professionalized legislatures also require a larger time commitment from their members. So much of a legislator's time is devoted to legislative activities that it is unfeasible and/or unnecessary for members to hold other jobs. In a survey of legislators, Carey, Niemi and Powell (2000a, 2000b) report that members of legislatures with higher pay rates are indeed less likely to hold an outside job; instead, they use this time to conduct legislative activities, including campaigning. Taken together, these components can lead to a more experienced body that attracts more qualified members who have increased amounts of time to focus energy on the tasks at hand (Squire 2007). More populous states are more likely to have highly professionalized legislatures, as they have "larger budgets and more

complex policy agendas” to manage (Powell 2012, 41). On the other hand, less professional legislatures offer low levels of compensation, provide small staffs for members, and often meet for only a short time during a year (or every other year in the cases of Montana, Nebraska, North Dakota, and Texas). In less professional bodies, citizens may have less desire to run for office, creating lower levels of competition. Therefore, the professionalism of the institution may play a role in attracting candidates.

I use Peverill Squire’s measure of legislative professionalism in this analysis (1992; 2007). As Squire (2007) himself notes, there are a number of other metrics that aim to measure professionalization in state legislatures (see, for example: Berkman 1993; Berry, Berkman, and Schneiderman 2000; Bowman and Kearney 1988; Carey, Niemi, and Powell 2000, 694–7; King 2000; Moncrief 1988; Morehouse 1983); Squire’s measure is commonly used in the literature and is easily replicable across time (Mooney 1994). Using federal institutions as a relative baseline by which to assess the attributes of state organizations, Squire’s index provides a score for each legislature based on legislator pay, staff per legislator, and the length of legislative session. The higher the score (ranging from 0.064 to 0.626), the more professionalized the legislature is. I expect professionalism to have a significant negative relationship to vote share in these elections. Races for seats in more professional institutional bodies should be more competitive than races for less institutionalized organizations, thus reducing the possible vote share of each candidate (Niemi et al. 2006).

One other important factor to control for is the level of campaign finance regulations in each state. Therefore I include a subset of Christopher Witko’s (2005) measure of the stringency of state campaign finance regulations in the analysis to capture the “dramatic variation in campaign finance regulation among the American states” (295). He examines the presence or

absence of 22 different provisions of state regulations, including the stringency of campaign contribution limits. Since I am most concerned with limits on individual contributions in this micro-institutional context, I use his index of *contribution limit stringency*, which ranges from 0 to 6 (for states with the most stringent contribution limits).

Research has demonstrated that stringent finance regulations have mediating effects for electoral outcomes. In an analysis of lower house legislative elections in 1994, 1996, and 1998, Hamm and Hogan (2008) find that more restrictive campaign finance laws significantly increases the likelihood of challenger emergence across a number of states. The difference in the probability of emergence in states with the least and the most restrictive limit is about 6%. Additionally, they find filing requirements to be especially detrimental to the emergence of independent and third party candidates, with candidates in the least restrictive states found to be 8% more likely to run compared to candidates in the most restrictive states. A second consequence of contribution limits is closer margins of victory in races, benefitting challengers more so than incumbents (Eom and Gross 2006; Milyo, Primo and Groseclose 2006; Stratmann and Aparicio-Castillo 2006). As stringency increases, the lower the contribution limit (the more stringent the regulation), the less each contributor is able to give. When more restrictions are placed on contributions, a candidate will in fact try to expand their contributor base to gather more money, thus increasing the number of contributors to a campaign. Based on this evidence, I expect higher levels of contribution limit stringency to be negatively related to vote share.

### 3.5.3 Endogeneity Concern

I should note a potential endogeneity problem in this work regarding electoral performance and fundraising. As noted in the introduction, money is a key driver of electoral outcomes, with higher levels of contributions and spending leading to increased vote shares in the general election (see Caldeira and Patterson 1982; Gierzynski and Breaux 1993; Giles and Pritchard 1985). But what leads donors to give? Contributors may take a candidate's likelihood of winning into account when making donation decisions (Jacobson 1981), just as voters will when selecting a candidate to vote for. Individual donors are found to be more likely to donate when they expect a race to be competitive, potentially because of poor past performance by a legislator (Francia et al. 2003; Morton and Cameron 1992; Snyder 1990, 1993). Thus, the expectations of a candidate's performance can affect the amount of money he or she earns in the campaign (Gierzynski and Breaux 1991). Causality becomes questionable: does money wins votes, or does potential electoral success bring in money?<sup>29</sup>

This is certainly a valid concern, but one that can be controlled for in this analysis. We should think of contributions and votes in a given election as simultaneously being affected by perceptions of electability. Since contributions are causally prior to votes – or rather, vote shares

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<sup>29</sup> Similar concerns have been expressed in the state judicial elections literature (Bonneau 2007) :

The argument is as follows: Challengers thought to have a legitimate shot at winning are likely to attract more contributions than those thought to have little chance at victory. Thus, the better the candidate's chances, the more money she will receive (and consequently be able to spend). The relationship between challenger spending and their percentage of the vote is potentially reciprocal: money may help win votes, but the expectation that a candidate will receive votes also helps to bring in money (494).

Bonneau compensates for this problem by including expectations of the closeness of a race as a factor that can affect expenditures and votes, following in suit with Gierzynski and Breaux (1991) in their analysis of state legislative elections. This expectation is measured using prior electoral performance.

occur after contributions are given – they cannot be the *cause* of contributions.<sup>30</sup> Instead, one common way of controlling for vulnerability is to include data on an incumbent’s *prior* electoral vote. Since election results are public record, they are one of the most readily available signals of strength to parties, challengers, and donors. A small margin of victory in a recent election can make an incumbent look weak in her next race, increasing the likelihood of a strong challenger (Gierzynski and Breaux 1991) that may receive significant levels of early money from individuals and PACs (Biersack, Herrnson, and Wilcox 1993). In terms of contributor activity, prior vote share can significantly affect both individual (as well as PAC) contributions to Congressional incumbents (Snyder 1992; see also Stratmann 1995 for similar findings for PACs). This indicator is also used by legislative party campaign committees to determine resource allocation in current state-level races (Gierzynski 1992; Gierzynski and Jewell 1989).

Vulnerability can be controlled for in one of two ways, either by measuring an incumbent’s prior vote share (Berkman and Eistenstein 1999; Gierzynski and Breaux 1991; Hogan 2004; Johnson 2010; Kroszner and Stratmann 2005; Snyder 1992; Van Dunk 1997)<sup>31</sup> or prior electoral margin (Bond, Covington, and Fleisher 1985; Stratmann 1995).<sup>32</sup> I follow by using the incumbent’s most recent winning vote share (*prior race*) as my main vulnerability

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<sup>30</sup> Oddly, in trying to assess influences on individual contributions, Johnson (2010) includes measures of an incumbent’s total campaign receipts and her percentage of vote in the general election. He argues that candidates will base fundraising calculations on expected competition and estimates of how much they believe they will need to run a successful campaign. Specifically, he notes that “the incumbent’s percentage of the vote in the general election has no significant effect on whether funds come from individual or nonindividual sources” (901). In Footnote 7, Johnson attempts to justify this decision: “One objection to this approach might be that in including variables measured after the fundraising takes place, I inappropriately include causal variables that “occur” after my dependent variable occurs. In alternative models (not reported), I substituted lagged vote percentages and logged campaign expenditures from the previous election cycle. The substantive results in these models were the same as in the models reported here. Lagging variables results in a loss of a significant number of cases, however, so I report results from the unlagged models.”

<sup>31</sup> Another measure used specifically to predict candidate fundraising is a variant on vote share: Biersack, Herrnson, and Wilcox (1993) measure vulnerability by subtracting an incumbent’s prior vote share from 100.

<sup>32</sup> Other research may not control for this (see, for example, Gerber 1998 or Leal 2003) in explanations of the incumbency advantage, even though Hall (2013) finds that money explains at least half of it.

measure in regressions that include incumbent candidates. It is in these races, Powell (2012) concludes, that the most money is raised and spent by candidates. As a robustness check, I also try an alternative measure: a dichotomous variable coded 1 if the incumbent's most recent proceeding race was won with less than 55% of the vote (the results yield similar results and are not reported here). I expect that this variable will have a positive relationship with vote percentage.

Future research should examine other variants of viability/vulnerability that are unavailable for this analysis. Giles and Pritchard (1985) measure the strength of the candidate's party in a given district using the party's vote share in the last election, however they note that "Jacobson (1980, pp. 39-40) indicates that the results of his analysis for congressional elections did not vary, whether party strength was operationalized as the vote share in the previous election or as the party's percentage of registered voters in the district" (79). In their analysis of Florida State House elections, district party strength accounts for increases of anywhere between 0.1% to 7% of a candidates' vote share, leading them to conclude that district partisanship may affect state elections differently than those at the Congressional level. Though not a direct measure of district partisanship, control for an incumbent's prior election percentage does somewhat indicate district partisanship. In future analysis, district partisan could also be accounted for to give a more complete idea of district leanings. Also at the national level, Steger, Dowdle, and Adkins (2004) show that media coverage, candidate finances, poll results, and support from party insiders are found to affect viability in the early stages of a campaign. One could look at support in the polls (see Dowdle, Adkins, and Steger 2009), but complete, systemic polling or media analysis of campaigns at the state level is non-existent (or, at least to this author, unknown).

### 3.6 REGRESSION MODELS

The unit of analysis in the empirical tests is the individual candidate. Regression analysis will be conducted in order to test the hypotheses concerning the effects of contributor distribution on electoral success. OLS regressions using *vote share* as the dependent variable is estimated to capture electoral success. Only candidates that won their primary election or participated in the general election are included. Because of high correlations between the contribution variables and donor variables, separate models are run to test Hypotheses 3a and 3b.<sup>33</sup> Because I cannot assume independence of observations between candidates who are running in the same election, all analyses are clustered by race (there are 3,999 separate races represented total, most models will have 3,929 clusters due to omitted observations).<sup>34</sup> I analyze the data using the following regression models, listed by model number according to hypothesis:

#### **Model 1: H3a**

$$\text{Vote Share} = a + \beta_1(\% \text{ Donors within District}) + \beta_2(\% \text{ Zip Codes within District}) + \beta_3(\% \text{ Early Contributions}) + \beta_4(\text{Total Individual Donor Count}) + \beta_5(\text{Unique In-District Zip Code Count}) + \beta_6(\text{Total Zip Codes in District}) + \beta_7[\ln(\text{Total Individual Contributions})] + \beta_8[\ln(\text{Total PAC Contributions})] + \beta_9(\text{Chamber}) + \beta_{10}(\text{Republican}) + \beta_{11}(\text{Unopposed}) + \beta_{12}(\text{Challenger}) + \beta_{13}(\text{Open Seat}) + \beta_{14}(\text{Prior Close Race}) + \beta_{15}(\text{Legislative Professionalism}) + \beta_{16}(\text{Campaign Finance Stringency})$$

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<sup>33</sup> Because of concerns based on the high levels of correlation between the key independent variables of interest, I run separate models to test the independent effects of each.

<sup>34</sup> Another potential violation of the independence assumption stems from races taking place in the same state. Therefore, I run the analysis with dummy variables for each of the states included to control for state effects.



### Model 2: H3b

$$\begin{aligned} \text{Vote Share} = & a + \beta_1(\% \text{ Donors within District}) + \beta_2(\% \text{ Zip Codes within District}) + \\ & \beta_3(\% \text{ Early Donors}) + \beta_4(\text{Total Individual Donor Count}) + \beta_5(\text{Unique In-District Zip} \\ & \text{Code Count}) + \beta_6(\text{Total Zip Codes in District}) + \beta_7[\ln(\text{Total Individual Contributions})] \\ & + \beta_8[\ln(\text{Total PAC Contributions})] + \beta_9(\text{Chamber}) + \beta_{10}(\text{Republican}) + \beta_{11}(\text{Unopposed}) \\ & + \beta_{12}(\text{Challenger}) + \beta_{13}(\text{Open Seat}) + \beta_{14}(\text{Prior Close Race}) + \beta_{15}(\text{Legislative} \\ & \text{Professionalism}) + \beta_{16}(\text{Campaign Finance Stringency}) \end{aligned}$$

The dependent variable, electoral success, can be captured in two different ways. The first is through a dichotomous win/loss measure; the other, a continuous measure of candidates' vote shares. Both variables are used to ensure the robustness of results, but only the results of the continuous *vote share* measure are reported.<sup>35</sup>

## 3.7 CONCLUSION

In this chapter, I outline a research design that allows for testing of the four hypotheses related to donor dispersion derived in Chapter 2. I describe the data collection process, including the unique compilation of contribution data that is geocoded to allow for analysis of in-district giving. The focus of the next chapter is discussion of the results of the regressions, including the multiple robustness checks that are conducted.

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<sup>35</sup> Models 1 and 2 are estimated with a dichotomous dependent variable, coded 1 if the candidate won her election, 0 if she lost. Models are included in Appendix A. The results hold for all variables other than those that test Hypotheses 1 and 2. The percentage of in-district donors, which is insignificant in the probit models, is now significant and negative in the linear regression models. Additionally, the percentage of zip codes donating within the district loses significance. This may result from the loss of variation in the dependent variable. Predicting a dichotomous outcome (winning or losing) is not the same as predicting a level of outcome (vote share).

## 4.0 RESULTS

In the previous chapter, I outline the sample on which these hypotheses are tested, as well as describe how this data is collected. The novel geographical data provide a unique set of data that allows for sophisticated testing of the effects of contributors and contributions on election outcomes. In this chapter, I employ linear regression models with the appropriate explanatory variables described earlier that show quantitative support for my basic theories. The theory of contributor dispersion indicates that candidates should be able to achieve electoral success based on characteristics of the contributor base such as number of donors, location of donors, and the time at which donors choose to make their contributions. Applying this theory to state level legislative elections provides four testable hypotheses, listed below.

- Hypothesis 1: The more donors contributing to a candidate from her district, the higher the probability of the candidate achieving electoral success.*
- Hypothesis 2: The greater the percentage of zip codes in a district from which contributions originate, the higher the likelihood for electoral success.*
- Hypothesis 3a: The more early money a legislative candidate receives, the higher the likelihood of electoral success in the general election.*
- Hypothesis 3b: The more contributors that give early money contributions to candidates, the higher the likelihood of electoral success in the general election.*

## 4.1 SELECT SUMMARY STATISTICS

### 4.1.1 Does Money Buy Success?

A look at two simple tabulations provides context for the influence of contributions on electoral outcomes. First, Table 6 shows the relationship between having the most money going into the primary election and winning the contest.

**Table 6.** Crosstab of Highest Earners and Primary Election Winners

		Did the candidate win the Primary Election?		TOTAL
		NO	YES	
Did the candidate receive the highest contribution total in his/her race before the Primary Election?	NO	1,224 (15.93%)	2,441 (31.77%)	3,665
	YES	380 (4.95%)	3,638 (47.35%)	4,018
TOTAL		1,604	6,079	<b>7,683</b>

*Pearson  $\chi^2 = 664.9829$   $Pr = 0.000$*

Candidates that raise the most money before the primary election are overwhelmingly favored to win the election, with 3,638 of the 6,079 primary winners having raised more money than their opponent(s). As for those who did not have the highest level of contributions in the primary season, almost twice as many candidates won than lost, with 2,441 candidates winning their primaries without having the most money at that point. Of the 1,600 losers, nearly 75% of them were also beaten in terms of fundraising. A similar story is told for General Election outcomes.

Table 7 shows the number of candidates who received the money total contributions in the race and how they performed in the General Election, contingent upon being the winner of a primary election. Of the 3,830 winners, 79.8% are the candidates who raised the most money in their races. Only 25% – 950 – of the highest earners lost their races. The other 75% were candidates who lost not only the fundraising race, but the legislative race as well. Money may not outright buy elections, but there is a strong relationship between having more than an opponent and being victorious.

**Table 7.** Crosstab of Highest Earners and General Election Winners

		Did the candidate win the General Election?		TOTAL
		NO	YES	
Did the candidate receive the highest contribution total in his/her race?	NO	1,619 (22.63%)	644 (10.59%)	2,263
	YES	768 (12.63%)	3,048 (50.14%)	3,816
TOTAL		2,387	3,692	<b>6,079</b>

*Pearson  $\chi^2 = 1600$  Pr = 0.000*

#### **4.1.2 In-District v. Out-of-District Donor Counts**

A range of summary statistics is available in Table 8. On average, 50% of candidates' contributors do not live in the district in which candidates run. In real numbers, this works out so that the mean number of contributors that give to a single candidate is approximately 105, whereas the average number of contributors giving to a candidate that *live in that candidate's district* is 45. While the total number of contributors to a candidate ranges from 1 to 3318, in-district donor totals range anywhere from 0 to 1871. Numerous candidates receive donations from citizens outside of their districts – citizens that are unable to cast ballots for a candidate, yet are willing to open their wallets. This is another indication that elections, even the less salient state legislative contests, are increasingly gaining statewide or national interest, possibly due to the increased professionalization of campaigns or the heightened importance of policies being decided at the state level.

**Table 8.** Summary Statistics of Variables

Variable	Mean	Min	Max	Incumbent	Challenger	Open Seat
<b>Dependent Variable</b>						
General Election %	46.00	0	100	70.17	27.95	33.15
<b>Main Independent Variables</b>						
<b>H1</b>   % Donors within District	50.92	0	100	47.00	52.90	53.81
<b>H2</b>   % of Zip Codes within District	37.66	0	100	41.15	34.16	36.55
<b>H3a</b>   % Early Donors (Pre-Filing Only)	36.30	0	100	46.80	25.88	33.13
% Early Donors (Pre-Primary)	70.56	0	100	69.16	65.20	76.63
<b>H3b</b>   % Early Contributions (Pre-Filing Only)	35.90	0	100	46.92	24.99	32.27
% Early Contributions (Pre-Primary)	70.50	0	100	69.50	64.78	76.43
<b>Control Variables</b>						
ln(Total Individual Contributions)	8.77	0.72	13.98	9.03	8.26	8.90
ln(Total PAC Contributions)	8.05	0.00	15.31	9.68	6.36	7.56
Total Individual Donors	105	1	3318	112	81	117
# of In-District Zip Codes Donating	5.30	0	91	5.57	4.37	5.75
# of Zip Codes in District	16.97	1	164	15.92	16.1	18.9
Prior Race % (Incumbent Only)		0	100	73.91		
Legislative Professionalism	0.212	0.054	0.626			
Campaign Finance Restrictions	3.91	0	6			
<b>Other Statistics</b>	<b>Percentage</b>			<b>Incumbent</b>	<b>Challenger</b>	<b>Open Seat</b>
Republicans	49.47%			1270	1218	1313
Democrats	47.54%			1692	780	1181
Third Party	2.99%			8	145	77
% Running for Upper Chamber	22.36%			20.27	23.05	24.19
% Running for Lower Chamber	77.64%			79.73	76.95	75.81
Number of Primary Election Winners				2898	1589	1592
Number of General Election Winners				2616	308	906
<b>Total N</b>				<b>2970</b>	<b>2143</b>	<b>2571</b>

The candidate with the most total donors – 3,318 – is Andy Pugno, a Republican running in California Assembly District 5. While he ran a successful primary campaign, receiving 17,537 votes (the runner-up claimed less than 7,000), he was defeated by 4 points in the General Election by Democrat Richard Pan. In-district donors made up 10% of Pugno’s contributors, compared to 33% of Pan’s contributors. At the lower end, 318 candidates are listed as having only one *individual* donor. Fewer than five individual donors are recorded for 1,076 candidates: 779 of these candidates won their primary election; 375 won the general election.

#### **4.1.3 Percentage of Zip Codes**

The average percentage of zip codes (calculated to test Hypothesis 2) giving from within a general election candidate’s district is around 50%. While this may seem to point toward relatively strong levels of geographic dispersion for candidates, it is mildly misleading without looking at the actual data. In real numbers, this works out to about 6 zip codes per district (average = 5.64 zip codes). When one takes into consideration that the total number of zip codes found in a candidate’s legislative districts ranges anywhere from 1 (as is the case with 136 of the districts) to 164 [in the case of a New York State Senate seat], with the average at 17 zip codes (with a standard deviation of 16) contained in a district, the mean does not provide much substantive information. Instead, consider that thirty-one candidates (approximately 0.4% of the sample) are running in districts that contain more than 100 unique zip codes; 185 candidates are running in districts with between 50 and 100 unique zip codes (2.4% of the sample). For state Senate candidates, the average number of zip codes in a district is 26; for House candidates, the average is 14 zip codes. The number of in-district zip codes donating to incumbents compared to

other candidates is significant ( $p = 0.002$ ): although the means appear to be similar (5.57 in-district zip codes, on average, donate to an incumbent; donations arrive from 5.12 in-district zip codes for all other candidates).

Examination of the zip codes from which the most donations were made yields some unexpected findings, shown in Table 9. The zip code making the most donations is 59601, which falls in Helena, Montana. This zip code falls in three senate districts and six house districts, meaning that there is potential for citizens to donate to a wide range of potential candidates. However, it seems that the zip codes that span more districts direct more of their money to outside races than others. Only 116 of the 1,515 donations made from 59601 were made to candidates in districts representing that zip code. In other zip codes, such as 48706 (Bay City, MI) and 06082 (Enfield, CT), there are only three districts represented in each zip code, reducing the number of candidates that residents of those areas would be able to elect. The destination of contributions varies widely, with contributions given to district candidates anywhere from 7% to 91% of the time. Residents in Michigan are the most likely to donate to an in-district candidate, with citizens of Bay City zip code 48706 sending 91% of the zip codes' total contributions to local candidates. These top 10 zip codes account for less than 0.01% of all contributions analyzed.



**Table 9.** Top 10 Zip Code Donation Sources

<b>Number of Donations</b>	<b>Zip Code</b>	<b>City</b>	<b>Senate District(s)</b>	<b>House District(s)</b>	<b>In-District Contributions</b>
1515	59601	Helena, MT	39, 40, 41	77, 78, 79, 80, 81, 82	116 (7.66%)
1455	54701	Eau Clarke, WI	23, 31	68, 93	804 (55.26%)
1307	59102	Billings, MT	25, 26, 27, 28, 29	49, 50, 51, 52, 53, 54, 55, 56, 57	311 (23.79%)
1304	43215	Columbus, OH	15, 16	24, 25, 26	101 (7.75%)
1150	48706	Bay City, MI	31	96, 97	1016 (91.12%)
1148	48103	Ann Arbor, MI	17, 18	52, 53, 55	787 (68.55%)
994	06082	Enfield, CT	7	58, 59	282 (28.37%)
969	48104	Ann Arbor, MI	18	52, 53	618 (63.78%)
938	48858	Mt. Pleasant, MI	33, 36	99	820 (87.42%)
884	53711	Madison, WI	16, 26, 27	48, 76, 77, 78, 79	117 (13.24%)

#### **4.1.4 Contribution Timing**

As noted earlier, the question of donation timing is also important. These data can be used to examine the timing in four distinct phases: pre-signatory filing deadline, pre-primary, between the primary and general elections, and after the general election takes place. Contributions are coded as falling within one of these time periods by the date the contribution was made. On average, a candidate received 36% of contributions before the signature filing deadline from, on average, 36% of donors. This means that the average candidate has already gathered over 1/3 of her campaign funds from about 1/3 of her total donor base before she even files her signatory paperwork. If the definition of early money/donors is extended to the date of the primary election, these statistics double to 70% each. By the time a typical candidate faces her first electoral hurdle, she likely has amassed the vast majority of her campaign funds from an

overwhelming majority of her donors. The level of donors or funding differs significantly between candidate types, as seen in the Summary Statistics table (Table 4). Incumbents average receiving 47% of their contributions before the signature deadline, compared to 26% for challengers and 33% for open seat candidates. Extending the time period for early money narrows the gap between candidate types, with challengers receiving 65% and open seat candidates 76% of their money by the primary date, compared to 69% for incumbents. This second time period – between the signature filing deadline and the primary election – seems to be important for all candidates, but especially for challengers and open seat candidates. Donors may recognize that the best chance a candidate has to beat an opponent comes in the primary election, so making sure that a candidate has appropriate funding by this point is vital.

## 4.2 OLS REGRESSION RESULTS

Separate models are estimated to test for the effects of early money and early contributors, since the two variables are so highly correlated with each other ( $r = 0.96$ ). I analyze the data using the following regression models, listed by model number according to hypothesis:

### Model 1: H3a

$$\text{Vote Share} = a + \beta_1(\% \text{ Donors within District}) + \beta_2(\% \text{ Zip Codes within District}) + \beta_3(\% \text{ Early Contributions}) + \beta_4(\text{Total Individual Donor Count}) + \beta_5(\text{Unique In-District Zip Code Count}) + \beta_6(\text{Total Zip Codes in District}) + \beta_7[\ln(\text{Total Individual Contributions})] + \beta_8[\ln(\text{Total PAC Contributions})] + \beta_9(\text{Chamber}) + \beta_{10}(\text{Republican}) + \beta_{11}(\text{Unopposed}) + \beta_{12}(\text{Challenger}) + \beta_{13}(\text{Open Seat}) + \beta_{14}(\text{Prior Close Race}) + \beta_{15}(\text{Legislative Professionalism}) + \beta_{16}(\text{Campaign Finance Stringency})$$

### Model 2: H3b

$$\text{Vote Share} = a + \beta_1(\% \text{ Donors within District}) + \beta_2(\% \text{ Zip Codes within District}) + \beta_3(\% \text{ Early Donors}) + \beta_4(\text{Total Individual Donor Count}) + \beta_5(\text{Unique In-District Zip Code Count}) + \beta_6(\text{Total Zip Codes in District}) + \beta_7[\ln(\text{Total Individual Contributions})] + \beta_8[\ln(\text{Total PAC Contributions})] + \beta_9(\text{Chamber}) + \beta_{10}(\text{Republican}) + \beta_{11}(\text{Unopposed}) + \beta_{12}(\text{Challenger}) + \beta_{13}(\text{Open Seat}) + \beta_{14}(\text{Prior Close Race}) + \beta_{15}(\text{Legislative Professionalism}) + \beta_{16}(\text{Campaign Finance Stringency})$$

I discuss the results of both models below. While dummy variables for each state are included in the analysis, they are not reported here. Because of ample evidence of an incumbency advantage in elections, I omit the dichotomous *incumbent* variable to ascertain the differential effect of being a challenger or a candidate in an open seat election. Full results of Models 1 and 2 with state variables included are included in Appendix B. Note that in all figures, error bars represent the 95% confidence interval.

#### 4.2.1 Baseline Models - Models 1 and 2

Regression results are presented in Table 10. The estimated models provide mixed support for the hypotheses. The percentage of in-district donors actually significantly *decreases*, rather than increases, the expected vote share of a candidate, contrary to the relationship postulated in Hypothesis 1. For easy of interpretation, visual representation of this and other relationships using expected values calculated with Clarify (King, Tomz, and Wittenberg 2000; Tomz, Wittenberg, and King 2001). Clarify is a statistical analysis package that uses Monte Carlo simulations to convert the output of statistical models into expected values of the dependent variables, given specific values of the covariates. Figures 9 (Model 1) and 10 (for Model 2) show a visual representation of the main independent variables of interest which test the three hypotheses presented here. While some of the expected values may differ slightly, the same general trends apply to both models. The nearly-equal AIC statistic for each model shows they are functionally the same, meaning that the models fit the data in the same way.

**Table 10.** Regression Results, Models 1 and 2

DV   General Election %	Early Contributions (Model 1)	Early Donors (Model 2)
% Donors within District	-0.023** (0.003)	-0.023** (0.008)
% Zip Codes within District	0.015^ (0.011)	0.015^ (0.011)
% Early Contributions	0.025*** (0.007)	--
% Early Donors	--	0.026*** (0.008)
Total Individual Donor Count	-0.003 (0.001)	-0.003* (0.001)
Unique In-District Zip Code Count	-0.0701 (0.060)	-0.0701 (0.060)
Total Zip Codes in District	-0.016 (0.020)	-0.016 (0.020)
ln(Total Individual Contributions)	0.921*** (0.227)	0.931*** (0.226)
ln(Total PAC Contributions)	1.569*** (0.122)	1.569*** (0.122)
Chamber	-2.173*** (0.558)	-2.185*** (0.558)
Republican	7.971*** (0.404)	7.968*** (0.404)
Unopposed	38.41*** (0.558)	38.40*** (0.556)
Challenger	-10.02*** (1.076)	-9.962*** (1.076)
Open Seat	-0.475 (1.067)	-0.426 (1.067)
Prior Race % (Incumbent Only)	0.125*** (0.014)	0.125*** (0.014)
Legislative Professionalism	-23.61*** (4.728)	-23.61*** (4.727)
Campaign Finance Stringency	3.426*** (0.672)	3.420*** (0.671)
Constant	26.56*** (2.356)	26.45*** (2.355)
<i>N</i>	6079	6079
<i>R</i> <sup>2</sup>	0.7199	0.7200
<i>AIC</i>	49873.42	49872.35

Note: *t* statistics in parentheses. Robust standard errors adjusted for 3929 clusters of races.

^  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

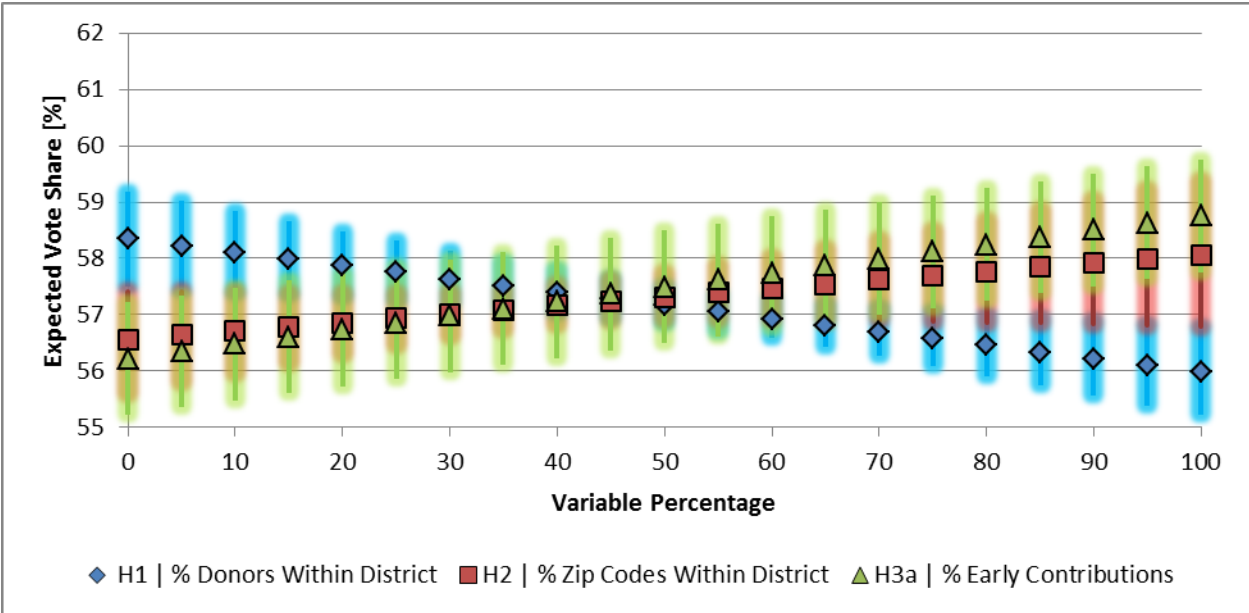


Figure 9. Expected Vote Share by Main Independent Variables, Model 1 [Early Contributions]

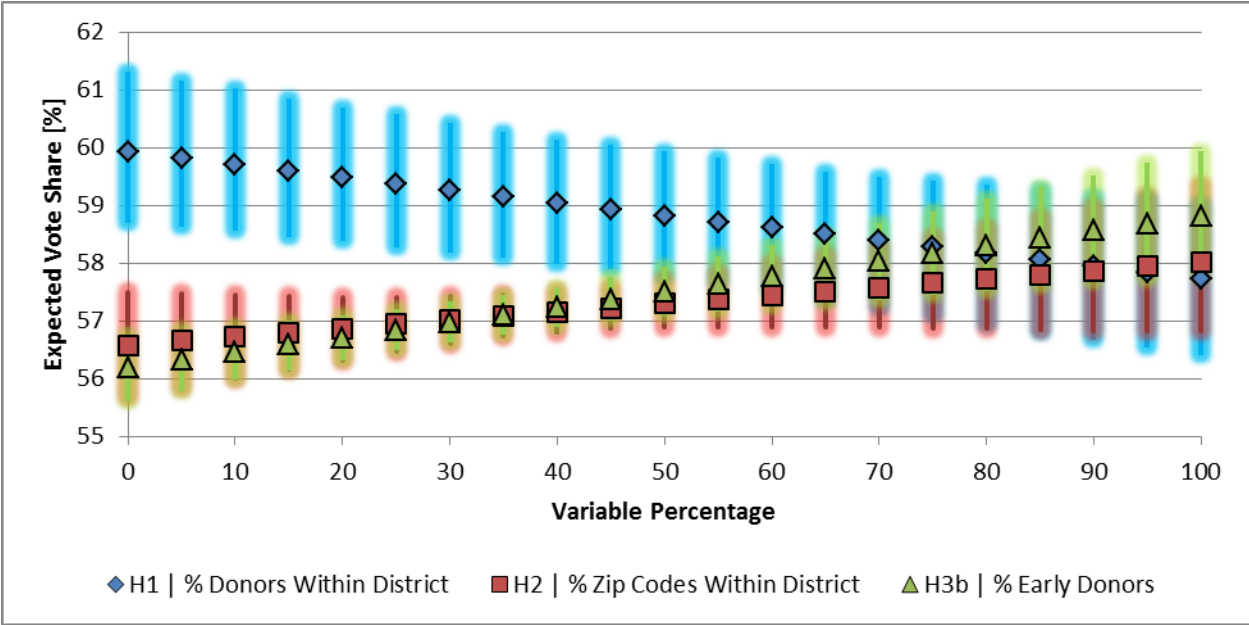
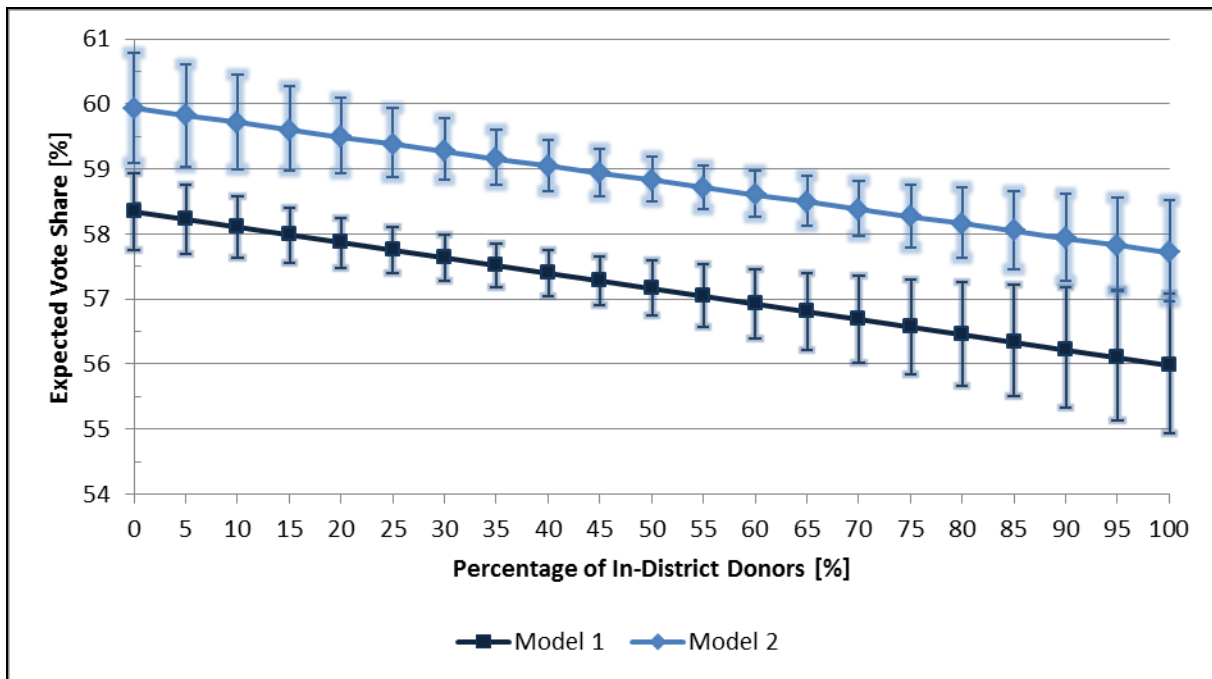


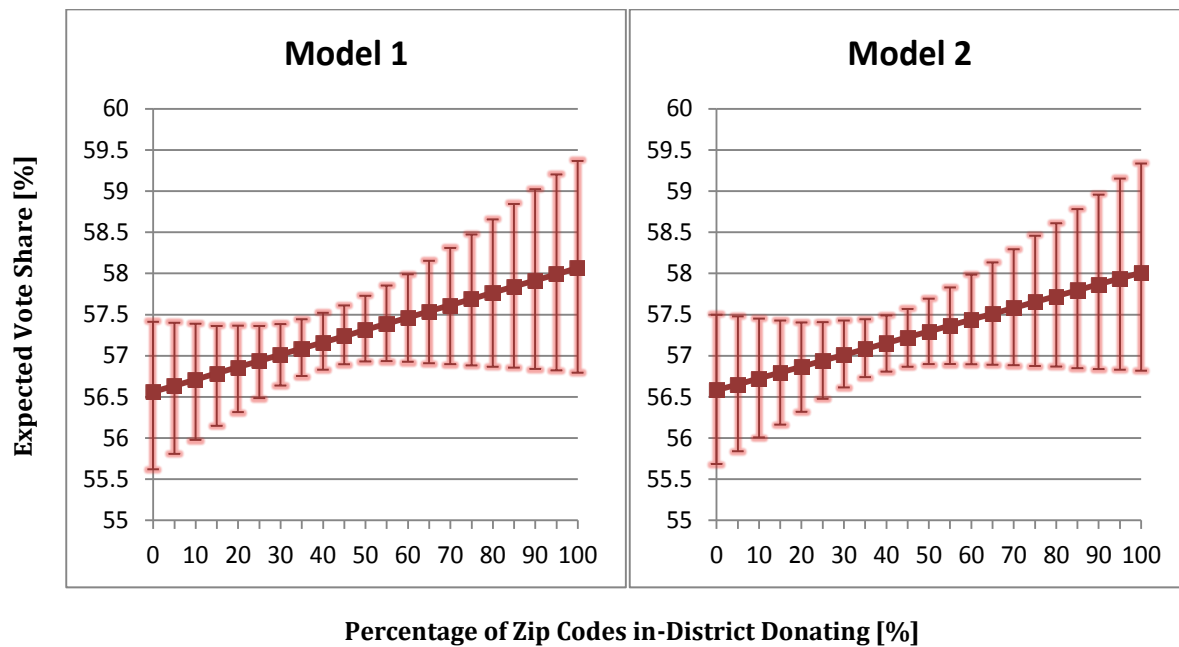
Figure 10. Expected Vote Share by Main Independent Variables, Model 2 [Early Donors]

Figure 11 shows only the estimated values for in-district donors (Hypothesis 1). In Model 1 (early money), the estimated difference between a candidate having 0% of donors within her district (58.34% predicted vote share) compared to 100% of her donors (55.98% predicted vote share) accounts for a 2.3 percentage point difference, with all other variables at their means. In Model 2 (early donors), the results are similar, but the expected values for vote percentages differ slightly, though not statistically significantly. While the difference in the expected vote share for candidates with 1% and 100% of in-district donors is still 2.3 points, the expected vote share for a candidate with 1% in-district donors is 59.93%, whereas the expected vote share for a candidate with 100% in-district donors is 57.71%. **Therefore, Hypothesis 1 is not supported by these models; instead of increasing a candidate’s vote share, increasing the proportion of donors that come from within the district actually decreases electoral outcomes.**



**Figure 11.** Expected Vote Share based on In-District Donors Percentage, by Model

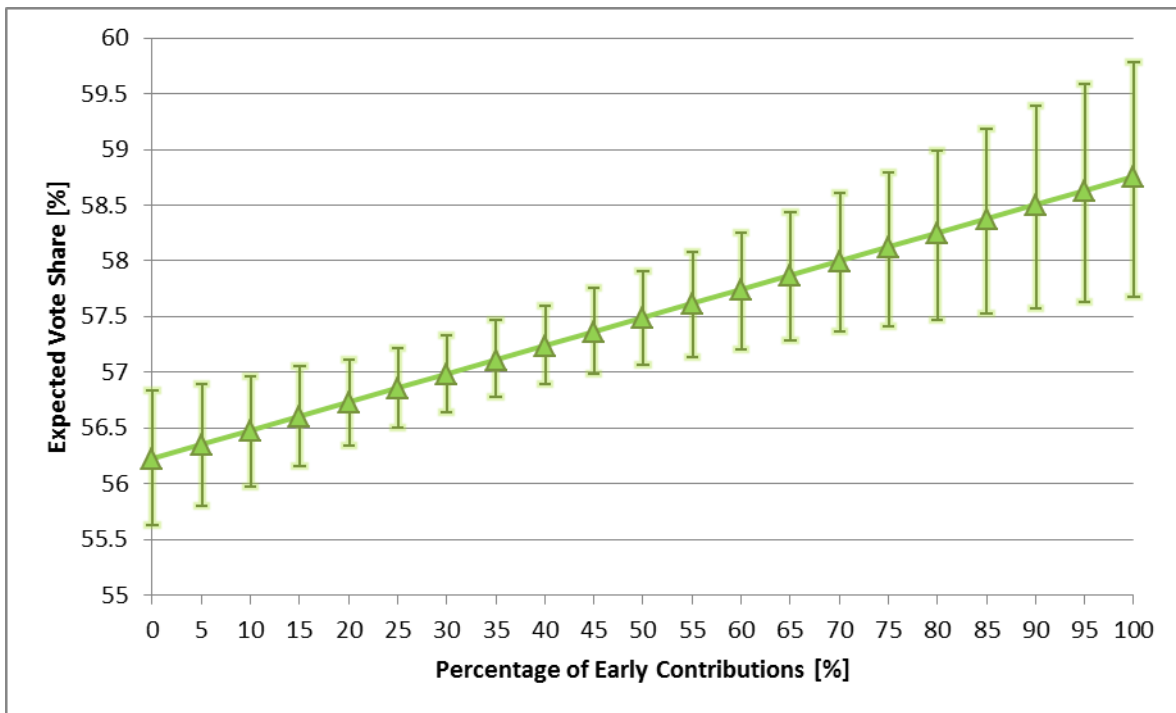
Since Hypothesis 2 is directional, the significance of the coefficients for the percentage of zip codes donating in a district can be determined with a one-tailed test; they are both significant at the  $p < 0.1$  level. A 1-unit increase in the percentage of zip codes donating in a district yields an increase of approximately 0.015 in vote shares. The maximum level of this effect is 1.5 percentage points; in both models, the expected values for vote share are approximately 56% (1% of zip codes) and 58% (100% of zip codes donating). Figure 12 displays this relationship for each model with all other variables at their means (they are plotted on separate graphs due to the nearly equal predicted values). Although the effect is small compared to those of other variables, this finding lends support to the idea that geographic dispersion within the district can provide beneficial boosts to candidates.



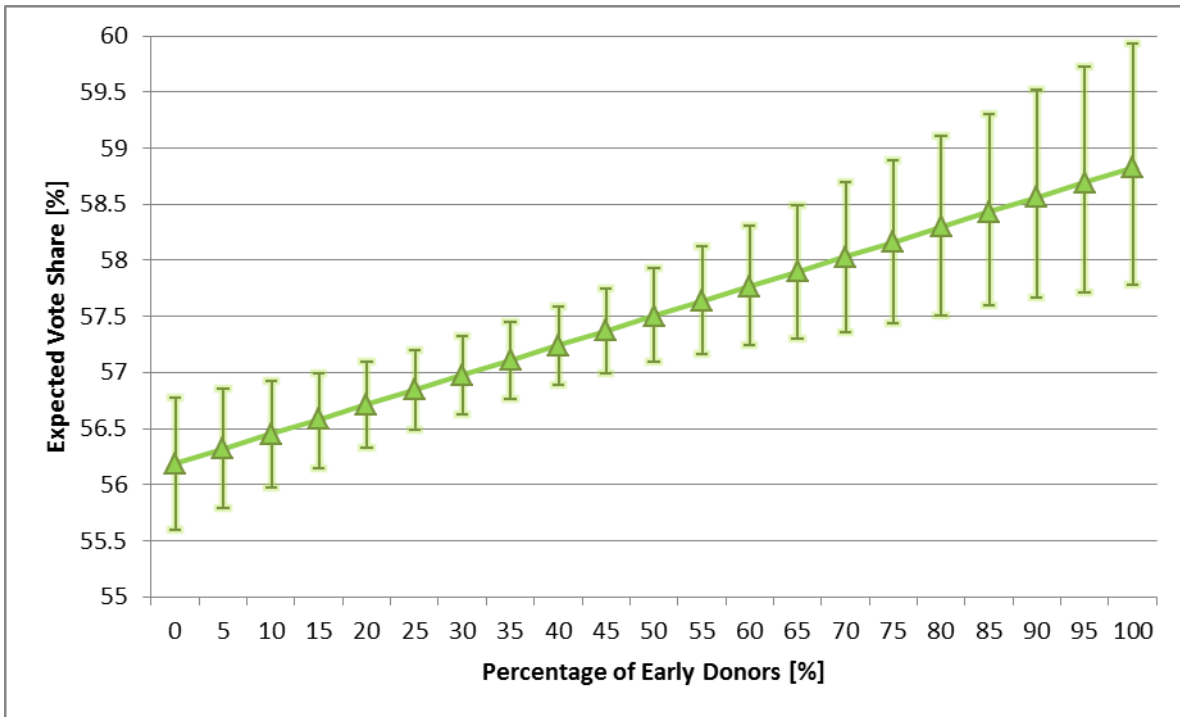
**Figure 12.** Expected Vote Share based on Percentage of In-District Zip Codes Donating, by Model



The two variables that test Hypotheses 3a and 3b are also significant and in the expected direction. Early contributor and early money percentages both increase a candidate's vote share. Figures 13 and 14 present independent visual representations of the expected values for Hypothesis 3 variables. For each variable, both the coefficients and expected values of vote share at different levels are similar. Even with no contributions and no early donors, candidates can still expect to earn about 56% in the General Election; having 100% of donors or 100% of money available before the filing deadline increases the value to approximately 59%. Given that the 50<sup>th</sup> percentile of the percentage of early donors and early contributions is 30% for each of these variables, candidates realistically should expect minimal decreases in vote share.



**Figure 13.** Expected Vote Share based on Percentage of Early Contributions [Model 1]



**Figure 14.** Expected Vote Share based on Percentage of Early Donors [Model 2]

With the exception of two variables, all control variables reach statistical significance. The number of zip codes donating within the district does not significantly affect vote share, nor does the total number of zip codes that comprise the district. On the other hand, the total number of individual donors to a campaign should significantly increase a candidate’s expected vote share; interestingly, this variable is only significant when controlling for early donors, not early money. A 1-unit change in donor count results in a -0.003 point decrease in vote share, meaning that it would take a sizable number of donors in order for the vote share to decrease significantly.

Total donation amounts from individuals and PACs both have positive relationships with vote share. The more money that individuals and PACs give to a candidate, the higher her vote share is expected to be, as hypothesized. Figures 15 and 16 show the expected values of vote share based on levels of giving by each group (by early money/donor model). Given the recent

attention paid to the impact of corporate and PAC money in the political sphere, this effect reiterates the concerns many have about the unequal influence that organized groups can have on elections (especially in light of the two 2010 court rulings: the Supreme Court decision in *Citizens United v. FEC* and the U.S. Court of Appeals for the District of Columbia Circuit's decision in *Speechnow.org v. FEC*. Together, these cases permit independent-expenditure only committees, or "SuperPACs," to spend unlimited amounts on independent expenditures).<sup>36</sup>

There is a sharper increase in expected vote share for PAC money than individual donations at equal levels of giving by the two groups. A candidate receiving \$0 in contributions from either individuals or PACS leads to expected vote shares of less than 50%. It is not until donation levels approach \$10,000 that the effect of contributions from each group begins to equalize, with individual donations causing a larger increase in vote share than PAC donations until this point. Above the \$10,000 mark, PAC contributions begin to exercise a more substantial influence on electoral percentage. While one may expect PAC donations to have a great impact on electoral outcomes, the results here indicate that individual donations are more significant in effecting vote shares than PAC money. At the higher levels of donation totals – over \$100,000 – the influence of PAC contributions slightly outweighs those of individuals. There is little evidence that PAC money affects state legislative elections is a more direct way than individual contributions, at least in terms of vote shares.

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<sup>36</sup> See Sprague and Wells (2012) for an excellent history of the corporation in the public sphere, with special attention to the powers of corporations in modern society.

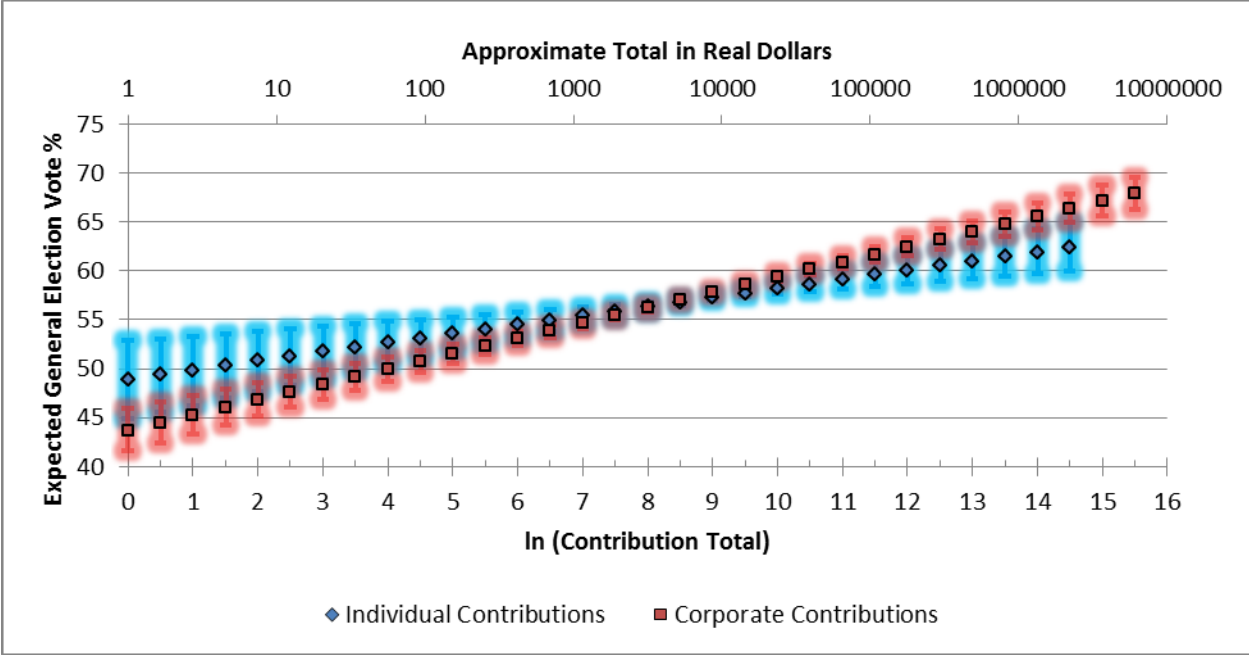


Figure 15. Expected Vote Share by PAC and Individual Contributions, Model 1 [Early Donors]

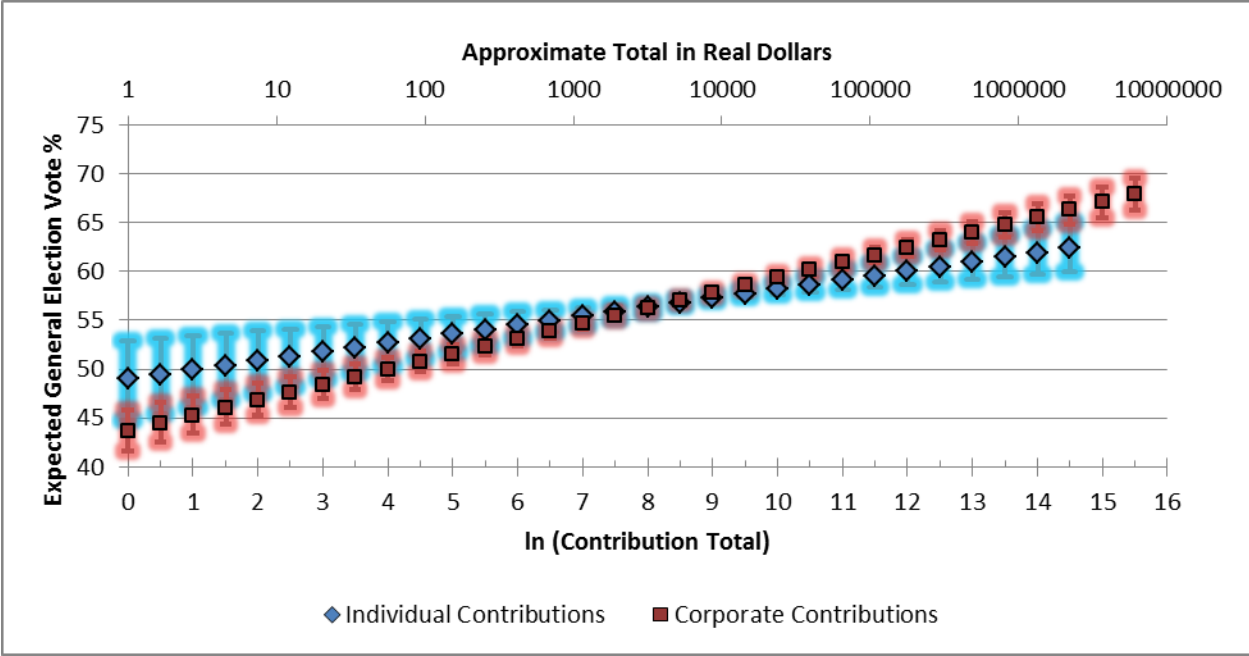
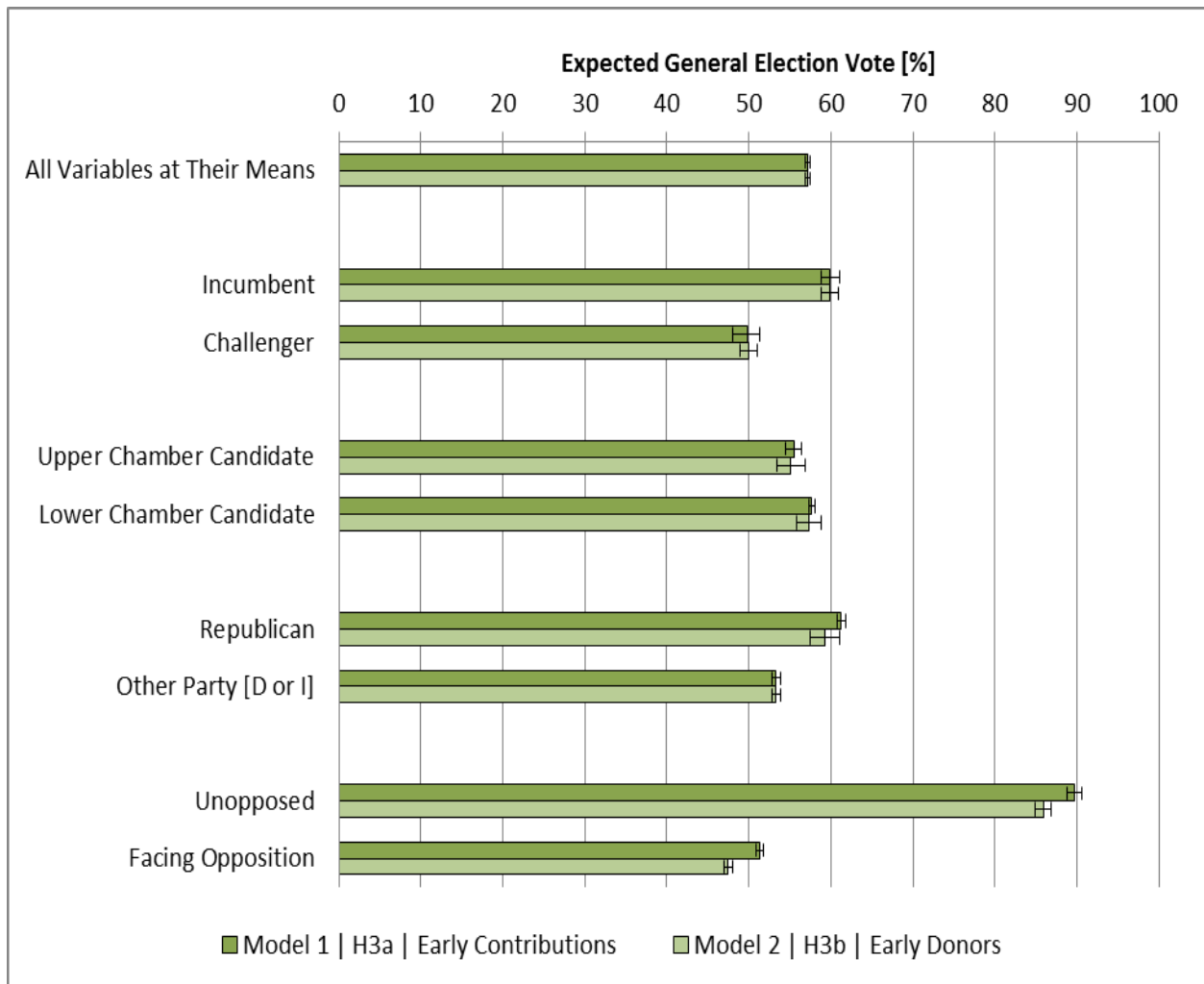


Figure 16. Expected Vote Share by PAC and Individual Contributions, Model 2 [Early Contributors]

The coefficients for the control variables also provide some interesting insight into what influences electoral outcomes; the rows in Figure 17 display the expected values of vote share as a function of different values of independent variables. In cases where the confidence intervals of the expected values overlap each other, the calculated values based off of each model are not significantly different. Both models are both presented in the figures.

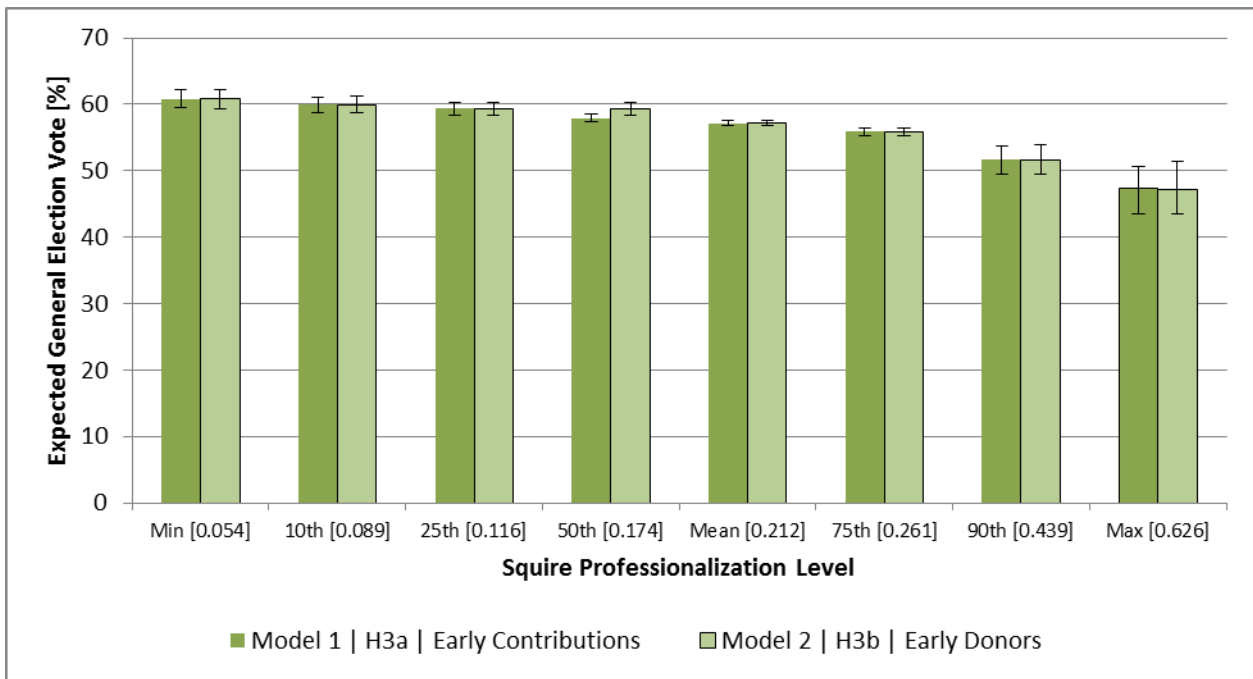


**Figure 17.** Expected Vote Share based on Selected Dichotomous Independent Variables, by Model

With all variables at their means, candidates earn 57.2% in the General Election. Compared to incumbents, challengers and open seat candidates are expected to receive significantly less vote share. The effect is stronger for challengers, who are predicted to receive almost 10 fewer points than an incumbent candidate. Surprisingly, the coefficient for open seat candidates indicates that they can expect to earn only around a half-point less than incumbents, but this is not significant (therefore expected values are not estimated). Incumbents, as expected, will earn the highest vote shares, around 60%; challengers will earn 49.7%. Chamber also makes a difference, with upper chamber candidates earning vote shares 2 points lower than those of lower chamber candidates. There is a small but significant difference [55% – 57%] between candidates in upper and lower chambers of state legislatures. Republican candidates are expected to earn over 7 more points in the General Election [61%] than Democrats or third party candidates [~53%]. This result makes substantive sense, given the strong performances and huge seat gains across the country by GOP members. Unsurprisingly, candidates who run unopposed are predicted to earn about 38 percentage points more than candidates who face electoral competition. The expected vote percentage is significantly different between models: when controlling for early contributions (in Model 1), candidates are expected to receive marginally (but significantly) higher vote percentages than when the number of early donors (in Model 2) is controlled for.

Professionalism and campaign finance restrictions both significantly impact vote share, though in opposite ways. As expected, increased legislative professionalization leads to lower candidates' vote shares, as shown in Figure 18. With all other variables at their means, candidates running in states with professionalism levels below the 90<sup>th</sup> percentile (92% of the cases) are predicted to receive over 50% of the vote share (with all else held constant).

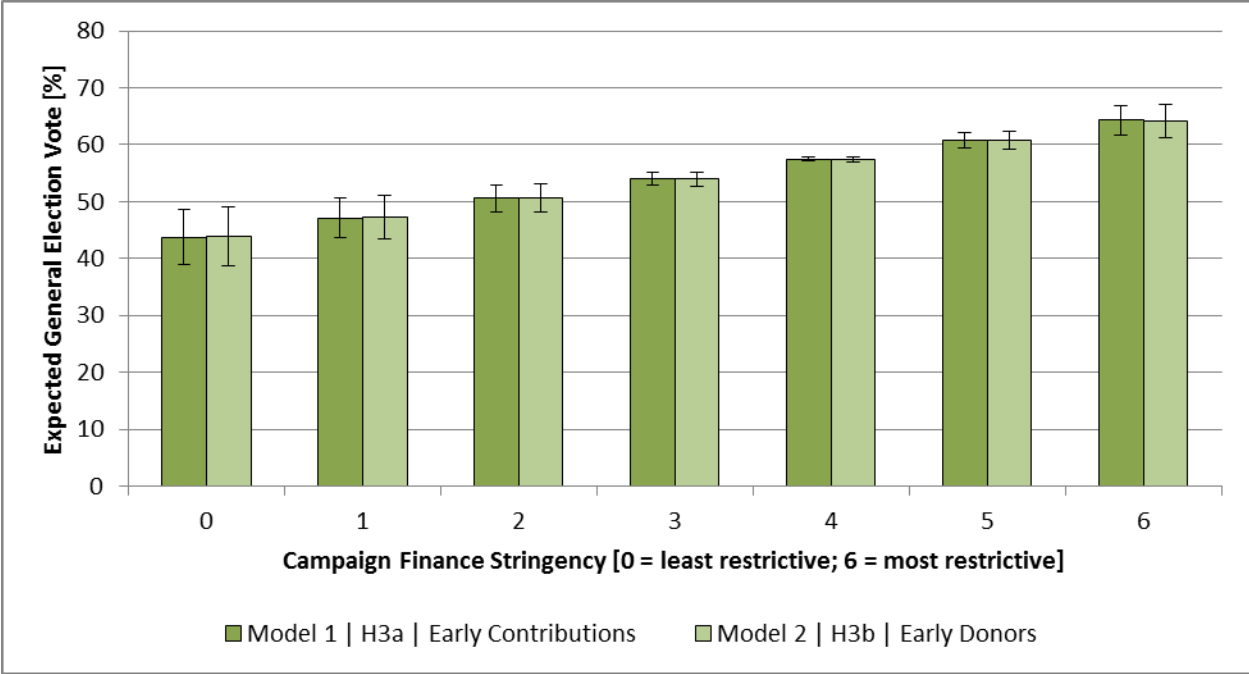
Candidates running in legislatures with professionalization scores below the 75<sup>th</sup> percentile [score = 0.261] are predicted to receive significantly higher vote shares than candidates in the most professionalized legislatures. The difference between percentiles below the 75<sup>th</sup> percentile is not significant, meaning that the effect of professionalization does not substantially differ at these levels. Above the mean level of professionalization, a sharper decrease in vote share is expected. It is only at the maximum level of professionalization that candidates are not expected to receive above 50% of the vote in a race, and this only applies to one state - California.



**Figure 18.** Expected Vote Share at Varying Levels of Legislative Professionalization, by Model

As noted above, previous studies have found more narrow margins of victory in contexts with more stringent regulations, which runs contrary to the findings here (Eom and Gross 2006; Milyo, Primo and Groseclose 2006; Stratmann and Aparicio-Castillo 2006). More stringent regulations lead to *higher* predicted vote shares in this analysis. More strict state campaign finance restrictions actually increase general election percentages for candidates, represented visually in Figure 19, with a 1-unit increase adding slightly more than 3 points to a candidate's vote share. Almost 70% of the observations are in states with a stringency score of 4 or higher, with over 50% in states with a stringency index score of 4 or 5. At no level do the expected values for the variables significantly differ from each other by model, but there are significant differences between levels (i.e., levels 1-4 result in significantly different expected vote shares than expected for level 6, the most stringent finance regulation level). Stringency levels can affect outcomes, however. With all other variables at their means, the expected vote shares at the lowest levels of stringency (0 and 1), are estimated to be below the 50% necessary to win a contest.





**Figure 19.** Expected Vote Share at Varying Levels of Campaign Finance Stringency, by Model

**4.2.2 Robustness Checks**

Several different specifications of the model are tested to assess the robustness of the findings. This is done to see if the results presented above are sensitive to the particular specification of the models. The results estimated here are less likely to be spurious if they hold under different specifications.

**4.2.2.1 Variance Inflation**

First, I test for multicollinearity between the variables. Most of the correlations are relatively low ( $r < 0.6$ ), with the exception of the logged variables of contribution totals from individuals and PAC donors, which correlate at 0.6024. Post-estimation, STATA can compute a

variance inflation factor (VIF) for each independent variable to show any potential problems with multicollinearity. The VIF results are shown in Table 11.<sup>37</sup>

**Table 11.** Variance Inflation Factors for Models Including and Omitting Campaign Finance Stringency Measure

<b>With Stringency Measure</b>	<b>VIF</b>	<b>1/VIF</b>	<b>WITHOUT Stringency</b>	<b>VIF</b>	<b>1/VIF</b>
<i>Campaign Finance Stringency</i>	38.61	0.026	Prior Race % [Incumbent]	6.72	0.149
Legislative Professionalism	9.81	0.102	Challenger	5.55	0.180
Prior Race % [Incumbent]	6.73	0.149	Open Seat	5.36	0.187
Challenger	5.57	0.179	Legislative Professionalism	4.89	0.204
Open Seat Candidate	5.37	0.186	Unique In-District Zip Code Count	4.28	0.234
Unique In-District Zip Code Count	4.29	0.233	ln(Total PAC Contributions)	3.56	0.281
ln(Total Individual Contributions)	3.58	0.279	ln(Total Individual Contributions)	3.54	0.282
ln(Total PAC Contributions)	3.54	0.282	Total Zip Codes in District	3.51	0.285
Total Zip Codes in District	3.51	0.285	% Donors within District	2.8	0.357
% Zip Codes within District	2.8	0.357	Total Individual Donor Count	2.18	0.460
Total Individual Donor Count	2.18	0.460	Chamber	1.53	0.652
Chamber	1.54	0.651	% Donors within District	1.46	0.686
% Donors within District	1.46	0.685	% Early Donors	1.45	0.691
% Early Donors	1.45	0.691	% Early Contributions	1.43	0.697
% Early Contributions	1.44	0.696	Unopposed	1.42	0.705
Unopposed	1.43	0.701	Republican	1.1	0.909
Republican	1.1	0.909	<b>MEAN</b>		<b>3.174</b>
<b>MEAN</b>		<b>5.554</b>			

<sup>37</sup> A full table of VIF statistics, including state variables, is included in Appendix C.

Traditionally, a VIF greater than 10 is thought to signal a potential issue with an independent variable (Kennedy 1992; Marquardt 1970; Mason, Gunst, and Hess 1989; Neter et al. 1989). The VIF for campaign finance restrictions is rather large – 38.61 – with a  $1/\text{VIF}$  of 0.026. One solution to correct for this is to rerun the regression without the offending variable (Acock 2012). The results of the re-estimated models are presented in Table 12. The most noteworthy difference between the re-estimated model and the original is that the coefficient for legislative professionalism (as measured by the Squire Index) decreases from 23.6 in the original to 7.6 in the new models. When not controlling for finance stringency, the professional status of the legislature is found to be responsible for a smaller decrease in vote share. In terms of model fit, the AIC statistic of the new models is 24 points higher than the original shown in Table 10. This implies that the re-estimated models are *not* a better overall fit for the data.

**Table 12.** Regression Results with Campaign Finance Stringency Omitted, Models 1 and 2

<b>DV   General Election %</b>	<b>Early Contributions (Model 1)</b>	<b>Early Donors (Model 2)</b>
% Donors within District	-0.022** (0.008)	-0.021** (0.008)
% Zip Codes within District	0.014^ (0.011)	0.014^ (0.011)
% Early Contributions	0.026*** (0.008)	--
% Early Donors	--	0.027*** (0.008)
Total Individual Donor Count	-0.003 (0.001)	-0.003 (0.001)
Unique In-District Zip Code Count	-0.052 (0.060)	-0.054 (0.060)
Total Zip Codes in District	-0.018 (0.021)	-0.018 (0.021)
ln(Total Individual Contributions)	0.923*** (0.228)	0.933*** (0.227)
ln(Total Corporate Contributions)	1.528** (0.121)	1.528** (0.121)
Chamber	-2.075*** (0.560)	-2.088*** (0.560)
Republican	7.992*** (0.405)	7.989*** (0.405)
Unopposed	38.18*** (0.558)	38.17*** (0.556)
Challenger	-10.33*** (1.075)	-10.27*** (1.075)
Open Seat	-0.705 (1.067)	-0.654 (1.068)
Prior Race % (Incumbent Only)	0.123*** (0.014)	0.123*** (0.014)
Legislative Professionalism	-7.637** (2.837)	-7.678** (2.834)
Constant	31.04*** (2.404)	30.91*** (2.405)
<i>N</i>	6079	6079
<i>R</i> <sup>2</sup>	0.7188	0.7188
<i>AIC</i>	49897.02	49895.85

Note: Standard errors in parentheses. Robust standard errors adjusted for 3929 clusters of races.

^  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Substantively, the inclusion (or exclusion) of the campaign finance stringency variable does little to change the effects of the other independent variables. O'Brien (2007) warns of the potential dangers of attempts to reduce collinearity, including the elimination of the conspicuous variable. Omission of a variable is usually accepted when it is thought to be highly correlated with another variable in the model. In this case, campaign finance stringency is not highly correlated with any other variable – the largest level of correlation is -0.4 between stringency and the dummy variable for Illinois.<sup>38</sup> Thus, the original models presented in Table 10 can be considered accurate estimations.

#### **4.2.2.2 Opposed Candidates Only**

In the baseline models, a dichotomous variable is included to control for candidates who run unopposed, since they should receive a substantial vote share. In fact, every unopposed candidate in the sample received a vote share of 99% or higher in the 2010 election. Including these candidates in the primary models may skew the results, as 781 of the 929 unopposed candidates are incumbents. Significant differences in the means of the two groups are found for variables such as percentage of in-district donors, % of zip codes donating from within the district, % of early contributions and donors, and total campaign fundraising ( $p=0.000$  for all  $t$ -tests).

Normally one could test whether such observations would be considered outliers that bias the results of the regression, but because the models are estimated with clustered standard errors, postestimation tests such as the DfBeta influence statistic<sup>39</sup> and leverage plots are unavailable. A

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<sup>38</sup> A table of correlations between campaign finance stringency and other regressors is presented in Appendix D.

<sup>39</sup> DfBeta “indicates the difference between each of the regression coefficients when an observation is included and when it is excluded” (Acock 2012).

model is estimated omitting all 929 candidates unopposed in their races. Results are displayed in Table 13. There are two main differences from the original models. First, the coefficients for early contributions and early donors are higher (0.025/0.026 originally; 0.030/0.031 in reestimated models 1 and 2, respectively), representing a larger impact of these variables in this case. In opposed races, these early dispersion characteristics have a larger relevance to vote shares. Second, total individual donor count is no longer significant, meaning that the number of donors does not matter to those candidates running opposed.

The AIC of this model is significantly lower than the models previously estimated. While the model fits the data better when unopposed candidates are excluded from the sample, the explanatory power of the model is lessened by the exclusion of this group. Coefficients and their significance are quite similar, suggesting that the unopposed observations are not driving the results. This model serves to bolster support for Hypotheses 2, 3a and 3b, with this specification increasing the expected effects.

**Table 13.** Regression Results, Opposed Candidates Only, Models 1 and 2

<b>DV   General Election %</b>	<b>Early Contributions (Model 1)</b>	<b>Early Donors (Model 2)</b>
% Donors within District	-0.024 <sup>**</sup> (0.009)	-0.023 <sup>*</sup> (0.009)
% Zip Codes within District	0.018 <sup>^</sup> (0.012)	0.018 <sup>^</sup> (0.012)
% Early Contributions	0.030 <sup>**</sup> (0.009)	--
% Early Donors	--	0.031 <sup>***</sup> (0.009)
Total Individual Donor Count	-0.003 (0.001)	-0.003 (0.001)
Unique In-District Zip Code Count	-0.101 (0.067)	-0.102 (0.067)
Total Zip Codes in District	-0.002 (0.024)	-0.002 (0.024)
ln(Total Individual Contributions)	1.081 <sup>***</sup> (0.268)	1.095 <sup>***</sup> (0.268)
ln(Total PAC Contributions)	1.566 <sup>***</sup> (0.129)	1.567 <sup>***</sup> (0.129)
Chamber	-2.471 <sup>***</sup> (0.632)	-2.480 <sup>***</sup> (0.631)
Republican	9.354 <sup>***</sup> (0.465)	9.347 <sup>***</sup> (0.465)
Challenger	-6.783 <sup>***</sup> (1.370)	-6.724 <sup>***</sup> (1.371)
Open Seat	1.894 (1.359)	1.944 (1.359)
Prior Race % (Incumbent Only)	0.183 <sup>***</sup> (0.019)	0.183 <sup>***</sup> (0.019)
Legislative Professionalism	-26.39 <sup>**</sup> (5.000)	-26.39 <sup>***</sup> (4.997)
Campaign Finance Stringency	4.219 <sup>**</sup> (0.800)	4.206 <sup>***</sup> (0.798)
Constant	19.76 <sup>***</sup> (2.907)	19.62 <sup>***</sup> (2.905)
<i>N</i>	5158	5158
<i>R</i> <sup>2</sup>	0.5278	0.5279
AIC	42934.5	42933.75

Note: Standard errors in parentheses. Robust standard errors adjusted for 3019 clusters of races.

<sup>^</sup>  $p < 0.1$ , <sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$

#### **4.2.2.3 Alternative Measure of Early Contributions and Donors**

Both models are also estimated using a different measure of early contributions and donors. Instead of limiting the early time period to prior to the signature filing date, the early time period is extended to the primary election date. The former should provide a more conservative test of the hypothesis, but as others have alternatively denoted the early period as the months leading up to the primary (i.e. Biersack, Herrnson, and Wilcox 1993; Leal 2003), I also test the models with a variation of this measure. The results, presented in Table 14, show the main change involves the coefficient for early contributions and early donors. Examining the shorter time period (pre-filing deadline only) produces significant and positive effects of the percentage of early contributions (0.025 point increase) and donors (0.026 point increase) on vote share. When expanding this time period to include all contributions made up until the day of a candidate's primary election, the coefficients increase by almost 0.02 points, up to 0.042 for the percentage of early contributions and 0.044 for early donor percentage. The coefficients for all other variables remain relatively constant, but the AIC of the new models is significantly lower than the originals, indicating an even better fit for the data. Functionally, there is little difference in the results.



**Table 14.** Regression Results with Alternative Extended “Early” Time Period, Models 1 and 2

<b>DV   General Election %</b>	<b>Early Contributions (Model 1b)</b>	<b>Early Donors (Model 2b)</b>
% Donors within District	-0.021 <sup>**</sup> (0.008)	-0.021 <sup>**</sup> (0.008)
% Zip Codes within District	0.015 <sup>^</sup> (0.011)	0.015 <sup>^</sup> (0.011)
% Early Contributions	0.042 <sup>***</sup> (0.008)	--
% Early Donors	--	0.044 <sup>***</sup> (0.008)
Total Individual Donor Count	-0.003 <sup>*</sup> (0.001)	-0.003 <sup>*</sup> (0.001)
Unique In-District Zip Code Count	-0.066 (0.060)	-0.065 (0.060)
Total Zip Codes in District	-0.016 (0.020)	-0.0150 (0.020)
ln(Total Individual Contributions)	0.891 <sup>***</sup> (0.225)	0.890 <sup>***</sup> (0.226)
ln(Total PAC Contributions)	1.618 <sup>***</sup> (0.122)	1.619 <sup>***</sup> (0.123)
Chamber	-2.190 <sup>***</sup> (0.558)	-2.205 <sup>***</sup> (0.558)
Republican	8.061 <sup>***</sup> (0.404)	8.022 <sup>***</sup> (0.403)
Unopposed	38.14 <sup>***</sup> (0.564)	38.11 <sup>***</sup> (0.562)
Challenger	-10.15 <sup>***</sup> (1.066)	-10.11 <sup>***</sup> (1.066)
Open Seat	-0.687 (1.058)	-0.692 (1.058)
Prior Race % (Incumbent Only)	0.124 <sup>***</sup> (0.0139)	0.124 <sup>***</sup> (0.0139)
Legislative Professionalism	-23.45 <sup>***</sup> (4.750)	-23.53 <sup>***</sup> (4.753)
Campaign Finance Stringency	3.224 <sup>***</sup> (0.672)	3.221 <sup>***</sup> (0.671)
Constant	25.26 <sup>***</sup> (2.354)	25.18 <sup>***</sup> (2.352)
<i>N</i>	6079	6079
<i>R</i> <sup>2</sup>	0.7209	0.7210
AIC	49851.48	49849.4

#### 4.2.2.4 Victors versus the Defeated

Another check to perform is estimation of the differences between general election winners and losers, as there may be different ways in which the dispersion characteristics affect these groups. Since this analysis is focused on the effects of dispersion on electoral success, I estimate two models that separate general election victors and those who are defeated. The two groups have significantly different means: on average, general election losers earn 21% of the vote, compared to the 70% average for victorious candidates ( $p=0.000$ ). I estimate four separate regressions: two (Models 1 and 2) on the general election losers (2,111 race clusters), and two (again, Models 1 and 2) for general election winners (3,787 clusters).

Noticeable differences are shown between the two models and as compared to the original models in Table 15. No independent variable testing a hypothesis is significant in both models, indicating that different aspects of dispersion help (or hinder) electoral outcomes. When considering the full sample of candidates together, the percentage of donors within a candidate's district is found to significantly decrease vote share by 0.023 points. The effects are slightly magnified for those who won in the general election, who can expect a 0.033 point decrease with every one unit increase in the percentage of donors. For candidates that lose in the general election, however, there is no significant effect of in-district donor percentage on their vote shares.

**Table 15.** Regression Results Comparing General Election Losing and Winning Candidates

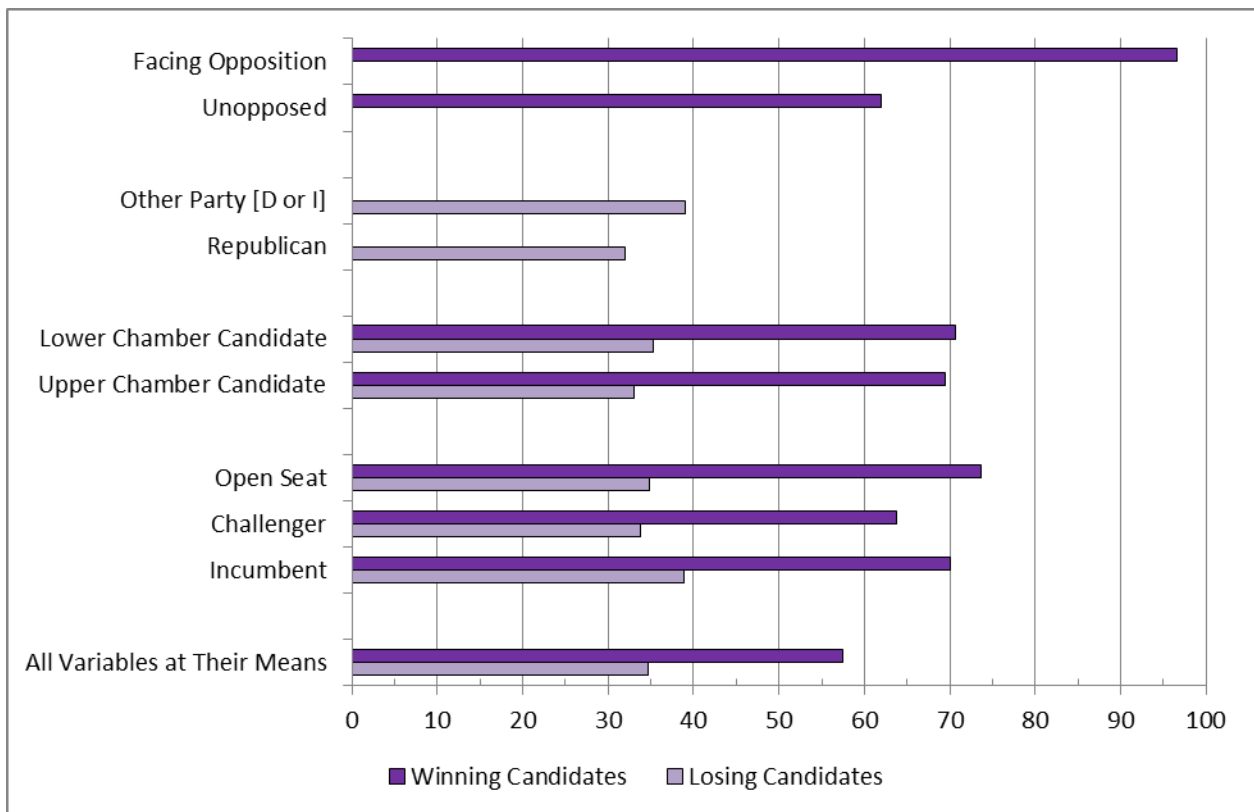
DV   General Election %	General Election Losers		General Election Winners	
	Model 1	Model 2	Model 1	Model 2
% Donors within District	0.011 (0.009)	0.011 (0.009)	-0.034** (0.010)	-0.033** (0.010)
% Zip Codes within District	0.021 (0.013)	0.021 (0.013)	0.005 (0.014)	0.005 (0.014)
% Early Contributions	-0.000 (0.009)	--	0.015 (0.010)	--
% Early Donors	--	-0.000 (0.009)	--	0.017 (0.010)
Total Individual Donor Count	0.001 (0.001)	0.001 (0.001)	-0.002 (0.001)	-0.002 (0.002)
Unique In-District Zip Code Count	-0.038 (0.065)	-0.038 (0.065)	-0.074 (0.076)	-0.074 (0.076)
Total Zip Codes in District	0.052* (0.024)	0.0519* (0.024)	-0.017 (0.028)	-0.017 (0.028)
ln(Total Individual Contributions)	1.340** (0.243)	1.340** (0.242)	-0.151 (0.296)	-0.146 (0.294)
ln(Total PAC Contributions)	1.192** (0.120)	1.192** (0.120)	0.494* (0.218)	0.496* (0.217)
Chamber	7.130** (0.502)	7.130** (0.502)	3.656** (0.546)	3.653** (0.546)
Republican	-2.325** (0.671)	-2.325** (0.671)	-1.203 (0.765)	-1.218 (0.765)
Unopposed*	58.83** (1.506)	58.83** (1.504)	34.57** (0.609)	34.54** (0.609)
Challenger	-5.257** (2.033)	-5.255** (2.033)	-6.261** (1.302)	-6.218** (1.303)
Open Seat	-4.303* (2.030)	-4.302* (2.031)	3.540* (1.140)	3.572** (1.141)
Prior Race % (Incumbent Only)	0.044 (0.037)	0.044 (0.037)	0.089** (0.014)	0.089** (0.014)
Legislative Professionalism	-37.39** (4.839)	-37.38** (4.841)	-9.853 (6.863)	-9.912 (6.861)
Campaign Finance Stringency	4.062** (0.701)	4.060** (0.701)	2.791** (0.961)	2.788** (0.960)
Constant	20.25** (3.016)	20.25** (3.021)	52.50** (3.576)	52.48** (3.575)
<i>N</i>	2263	2263	3816	3816
<i>R</i> <sup>2</sup>	0.5267	0.5267	0.6780	0.6780
AIC	16880.13	16947.86	31095.55	31094.72

\*No unopposed candidate lost in the general election.

Note: *t* statistics in parentheses. Standard errors adjusted for 3929 clusters.

<sup>^</sup> *p* < 0.1, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

Predicted probabilities, displayed in Figure 20, are calculated to give context to these results. The difference between a complete donor pool coming from within a candidate's district (100% of the variable level) compared to 0% coming from within results in a 3.26 point decrease in estimated vote share. At the 100% level, a candidate will earn an expected 57.28% in the general election. A candidate with no in-district contributions can expect a vote share of 54.01%. Hypothesis 1 is again unsupported by these findings, since they show that increased levels of in-district donors actually may reduce general election vote shares.



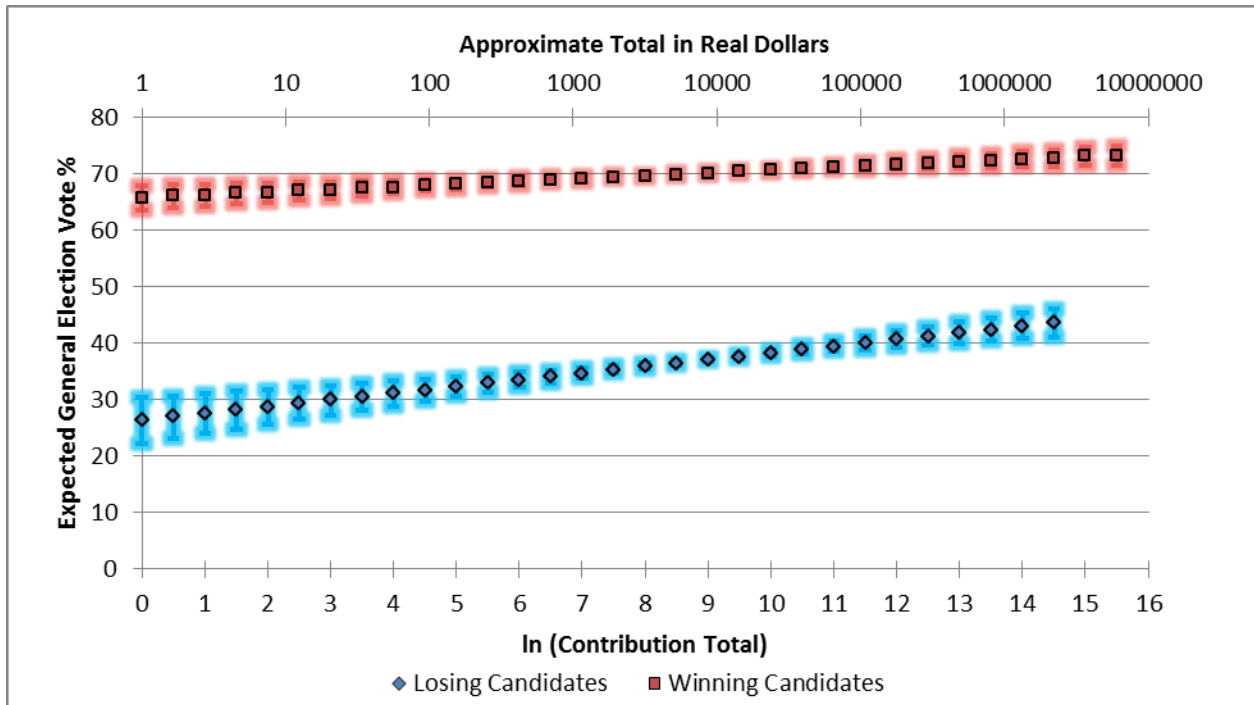
**Figure 20.** Expected Values of General Election Vote Share, Comparing Losing and Winning Candidates

In the test of Hypothesis 2, the results for the percentage of zip codes within a district that donate vary by winners and losers. General election losers experience positive and significant increases in vote share with increases in geographic dispersion, an effect not felt by those who win the elections. The impact is noticeable for unsuccessful candidates, with a coefficient of 0.021, compared with the coefficient of 0.015 for the full sample. With 0 zip codes in the district donating, a candidate can expect a 34% vote share; with 100% of the zip codes donating, there is a marginal but significant increase to 36.1%. Winners, on the other hand, experience no significant effect of increased geographic dispersion of donors in their districts.

Hypothesis 3 findings are also group-dependent and different from the original estimated effects. While failed candidates see no significant influence of how much early money or how many early donors they have, successful candidates see positive, significant increases in their vote shares with increased contributions occurring early in their campaigns. The magnitude of the effect is the same either early donors or dollars. A candidate with 0% early contributions or 0% early donors can still expect 69% of the vote share; increasing this to 100% for either category jumps the expected value up a mere 2 points, to 71%. Either way, early money or donors are not vital or necessary forces for electoral success, as they are still expected to earn more than enough votes in the general election to claim victory.

Control variables provide quite different results when the data are grouped by electoral success. While the significance levels do not change much, the sizes of coefficients can vary starkly. The most pronounced difference between the models, and compared to the original estimates, is the effect of individual and PAC contribution totals. Figure 21 visualizes the expected vote shares based on PAC giving levels by group. Contrary to the results of the full sample, individual contribution totals are a significant influence only for unsuccessful

candidates. In other words, winning candidates do not benefit from increased levels of individual giving. Higher levels of PAC contributions lead to increased vote shares for both winners and losers, yet somewhat surprisingly the magnitude of the effect is greater for unsuccessful candidates.



**Figure 21.** Expected Vote Share by PAC and Individual Contributions, Losing and Winning Candidates

### 4.3 SUMMARY

In this chapter, multiple linear regression models are estimated to test the four hypotheses developed to test a theory of donor dispersion and its effects on electoral outcomes for state legislative candidates. Overall, moderate support is provided for the hypotheses when tested on groups divided by electoral results.

The percentage of in-district donors performs unexpectedly as a predictor, with higher levels of in-district contributors leading to significantly lower vote shares for candidates. Increased percentages of zip codes donating in a district and early contribution characteristics both significantly raise the expected vote shares of candidates, with a maximum effect of less than 3 percentage points. Challengers and open seat candidates are expected to earn lower vote shares than incumbent candidates, and Republicans are predicted to earn significantly higher vote shares than Democratic or Independent candidates. Race and chamber context also affects electoral outcomes, with upper chamber candidates and contestants in states with higher levels of legislative professionalization earning significantly lower vote shares than their counterparts. Candidates in states with more restrictive campaign donation limitations are predicted to earn significantly higher vote shares than candidates in states with more relaxed regulations.

Various robustness checks of the models yield complementary results. When estimating models only for opposed candidates, the results hold across most variables, with a slight increase in the effect of early donors and donations over the original model. The geographic dispersion of contributors in a district (as measured by the percentage of zip codes donating) increases the electoral percentages earned by defeated candidates, but not for victors. In district donors, contrary to expectations, negatively affect winners' vote shares, but not those of unsuccessful candidates. Increasing early money and donor levels can significantly increase electoral results,

but only for successful candidates; the effect is not shared with those who lose. The trio of dispersion characteristics does little to help candidates win at the polls.

While any scholar would prefer unwavering support for her basic theory, there is good reason to be interested in these more mixed results. First, the lack of support for Hypothesis 1 indicates a potential theoretical concern. Basic views of representation almost necessitate the view that the more support a candidate receives from constituents the more success is to be expected. Finding a negative relationship for Hypothesis 1, assuming appropriate measurement, casts doubt not on the view that elected officials embody the interests of a districts voters but rather on the view that *donors* are accurate representations of the underlying populace. If in-district donations do not positively correspond to electoral success, then either the donors are voting against their donation targets, or the non-donors are a more influential group. Of course, this does assume accurate (though not necessarily precise – the values captured reflect the true number, but not necessarily their exactitude) measurement, which could be a confounding problem. The direction of bias would be towards smaller numbers of donations (mistyped addresses, incorrect amounts, data loss), but not in any particular direction. Since the data is collected by the same organization, is no reason to expect that contribution error would favor a party, geographic region, or candidate. That is, measurement error is expected to be random. Given this, theories about who donates from a population should be evaluated for their predictive success. Perhaps donations have a motivating force akin to negative campaign advertising: the more money one candidate gets, the more ideological opponents vote (but do not necessarily donate). Such questions cannot be answered by the data used here. The importance, however, is that deviations from theory can be identified, tests constructed, and research advanced.



## **5.0 CONCLUSION**

In this chapter, I briefly review the results of the empirical findings and discuss several potential implications of the findings, as well as directions for continued research.

### **5.1 REMARKS AND DISCUSSION**

This dissertation introduces and tests a theory of contributor dispersion that emphasizes the underlying characteristics of the contribution bases of political candidates. This theory brings together the literatures of political science and campaign strategy and communication to develop an explanation for how campaign donors and contributions can impact electoral outcomes. The models propose that donor location and timing have effects beyond merely supporting a state legislative candidate; they may serve to increase the overall vote share earned. Candidates receiving more contributions from donors within their districts, across a wider geographic range of the district, and at earlier times in the campaign cycle should, all else considered, be expected to receive higher vote shares in the General Election. Increased levels of in-district and across-district donors should indicate support for the representational potential of a candidate, since it speaks to her appeal to the citizens that may vote for her. Early money, on the other hand, may

come from a more select group of donors (friends, family, or loyal partisans), and may not help delineate the representativeness of the candidates.

The empirical evidence presented in Chapter 4 provides mixed support for dispersion theory. Even when controlling for more common explanatory variables in the literature, such as candidate status, legislative professionalization, and prior race performance, dispersion characteristics have significant effects on vote share. The base models show that while increased geographic distribution of donors (as operationalized by the percentage of zip codes in a district that donate) and early contributions/contributors will significantly increase electoral percentages, the same does not hold for the total number of donors to a campaign. Increase donor count reduces the expected vote share for a candidate in the general election, contrary to the expectations of dispersion theory.

The findings are also somewhat dependent on the groups the theories are being tested on. The results hold when tested on a sample of opposed candidates only and when controlling for an extended early time period. However, varying results occur when the models are estimated on samples of successful and unsuccessful candidates separately. The percentage of in-district donors significantly decreases vote share only for *winning* candidates. Winners also experience a significant increase in vote share from increased early contribution levels and donor counts. Candidates who lose in the general election are only helped by increased geographic dispersion of donors within their districts (measured by the percentage of zip codes donating within the district).

Taken together, these results indicate a need for richer theories about donating to political candidates. As noted in Chapter 4, there is ample reason to argue that candidates should experience benefits from increased donations within their jurisdiction. A simple theory would

suggest that fundraising for winning candidates is a losing enterprise because it takes away from more productive pursuits. Campaign resources, such as candidate time, are highly constrained; misapplication generates significant opportunity costs. At a certain point there may be a level at which the candidate needs no more money, but could have improved their win by spending more time on constituent services or speech-making. Alternatively, the amount of money going to a winning candidate may serve to crowd out voting: voters observe (from the media) the amount of money a leading candidate has, and do not turn out to. Empirically, tracking the date and size of donations with the donation target's polling numbers would provide a view on this argument. Such a test is beyond the scope of this project. The need for more refined theories of donating, however, is clear.

These results should not call for writing off state legislative elections as undemocratic exercises. Dispersion characteristics are, theoretically, indicative of the representational potential of a candidate as related to electability. It does not mean that the candidates elected with large campaign chests are unable to represent, or represent well. Instead, it may signal that 1) these candidates are the best representatives of the donor class, or 2) these candidates were best able to utilize the contributions they collected to show the electorate that they represent their interests. That early money and donors has an influence on general election outcomes raises more questions: are early donors realizing the potential of candidates early in the race, or are they focusing their money toward candidates that they would most like to see in office early in the campaign to help the candidates stave off intra-party competition? The temporal patterns of election cycles and donating are highly idiosyncratic to their states, as they depend on primary deadlines and registration, primary types, campaign finance laws, and more. As such, these are questions beyond the scope of current, but hopefully not future, work.

## 5.2 CONTRIBUTIONS OF THIS RESEARCH

The major contribution of this research to the literature on elections is that it demonstrates contributor dispersion is a helpful, but not overly powerful, source of influence in electoral outcomes. There is no definitive proof for either side of the argument regarding the (potentially) plutocratic nature electoral politics in the United States. In some cases, it is helpful for a candidate to derive her support from within her district; the results indicate that increasing the represented count of zip codes contributing (i.e. expanding geographic dispersion across the district) can bolster vote share, yet increasing the number of donors is actually *detrimental* to a candidate's vote portion. While it is shown here that disperse donor bases provide small boosts to candidates, the reverse of this inference cannot be made. This does not prove that politics is a game played by those who are put into office with the help of the highest bidders. But it does show that constituency support, however basic, can have varying results.

Additionally, this research reaffirms the explanatory power of variables such as incumbency and contributions totals found in other studies of legislative elections. That the results support existing literature shows that the legislative elections studied here follow the general trends found in other arenas and at other times is reassuring empirically, but perhaps not normatively. The overwhelming evidence of the power of the dollar in politics may lead to inferior representation not only in terms of who is elected, but what the legislators do once they are in office. Policymaking may become a secondary concern to fundraising, as a number of legislators report spending a significant portion of their time raising funds for either themselves or their caucus (Powell 2012). Even in an off-election year, incumbents work to build up their war chests for their next electoral contest. With so much of an emphasis on fundraising, it is

hardly surprising that contributions can influence the behaviors of legislators, swaying the choices they make on policies being debated in their legislatures.

This study also speaks to campaign finance literature and practices. The examination of dispersion shows that in-district considerations are important, but total contribution levels from individuals and PACs overall have larger effects on election percentages. The cumulative effect of the findings, then, indicate an interesting gap between regional support and candidate success. Indeed, the negative coefficient on in-district donations and electoral success suggests a troubling relationship for those concerned with descriptive representation. Campaigns that cover wider geographic range, demonstrated by the total contribution levels, suggests that candidates do well to focus on potential supporters that do not stand to gain directly by living within the candidate's jurisdiction. Political delivery of benefits to donors outside the scope of district-focused policy may represent a potentially worrisome severing of the electoral connection.

That money from committees can have such substantial bearing on electoral outcomes is an accepted finding in the literature, as noted in the introduction. Though states may place limits on the amounts donated by PACs, the organizations have spent decades working on ways to circumvent these caps, including bundling and the creation of their own independent-expenditure committees (Powell 2012). To counteract or mollify PAC power at the state level, Jewell and Cassie (1998) note suggestions of reform to PAC spending. They claim that limits on PAC contributions do not seem to work, but other types of reform, including placing "a limit on the proportion of a candidate's total funding that comes from PACs," may be more successful (220). This would be done "in an effort to make legislators less dependent on PACs and thus less indebted to interest groups. Some plans, for example, have set that limit at 25 or 50 percent of total funding" (Jewell and Cassie 1998, 220). While limits may seem to be beneficial in theory,

implementation may bring its own set of issues. If candidates are unable to rely on PACs for large portions of their funding, they will have to look to other sources which may not necessarily be individuals – it may come in the form of independent expenditures.

One linkage that is often overlooked in the literature, and that I am unable to make here, concerns individuals making donations “in furtherance of the same agendas as PAC donations and lobbying activities” (Powell 2012, 198) instead of due to their own reasoning. If individuals are not making donations of their own accord but rather in support of or as encouraged by PACs, then the true effect of PAC influence on campaigns is underestimated. Future research should examine ties between individuals and PAC bundling at the state level.

Another finance-related consideration is regulation of where money comes from in geographic terms. As there are very few restrictions on receiving contributions from out-of-district or out-of-state contributors, contribution levels are not actually accurate gauges of constituency support for a candidate. They are, instead, reflective of the purchasing power candidates have in electoral contests. Placing geographic limitations on donors could potentially reduce the outside influence placed on races. The data used in this analysis reveals that an average candidate receives approximately \$8,000 from within her district, significantly less than the \$12,517 accrued from individuals living outside of her district ( $p = 0.000$ ). Normatively, restricting donor location would create a legislative body comprised of members beholden to their district constituents, not to donors external to their dominion.

In terms of reporting, the extreme variation in transparency and reporting requirements makes standardization of contribution data rather difficult. Some states, such as Texas, do not require contributors to provide their address, which is why Texas is excluded from this analysis. Districts are not labeled in consistent ways across data sources, making merging of data a more

demanding activity. Even candidate names are not reported consistently: middle names are sometimes included, as are suffixes and, surprisingly, nicknames. Catherine becomes “Cathy,” Richard becomes “Dick,” William becomes “Wills,” “Bills,” “Billys,” “Bobs,” or even “Chip.” The more complicated nicknames do not reflect the real name at all. HR Maxwell, candidate for the Arkansas House, is referred to Dusty in certain documents. Matthew Hicks, Oregon House candidate, is called Wally. There are also a surprising number of men named Butch who run for office in the United States. Contributor names are also unstandardized, making it difficult to note instances of repeated giving by single individuals. When trying to match data from different sources together, many of these complications ensued in problematic merges that had to be checked for validity a number of times. All data was merged on district characteristics/by race to avoid any potential problems with candidate names. Better, more consistent reporting will allow for easier interpretation by the public and researchers alike, and provide a clearer avenue for cross-state study.

### **5.3 FUTURE RESEARCH**

The conclusions reached here provide a number of directions for future research. The first is to use the same measures of dispersion to explain candidate performance in primary elections. At the national level, evidence has been provided that demonstrates the ideological differences in general election versus primary election constituencies (Brady, Han, and Pope 2007; Fenno 1978; Stewart 2012). In primaries, candidates are facing a different standard. They are competing against members of their own party that may share similar views and policy positions.

In primary elections, candidate differentiation becomes more important, and this is where the campaign comes in. Early money, early donors, and in-district support may be more likely to substantially influence primary outcomes, contingent upon the presence of a challenger in the race.

More research should also be done to apply dispersion theory to a broader set of elections over time. Because of the costliness of data collection, management, and cleaning, I was unable to incorporate a wider range of races in the current study. However, both contribution data and electoral results are available for extended time periods. Dispersion theory can also be tested at the Congressional level.<sup>40</sup> As noted in Chapter 2, Gimpel, Lee, and Pearson-Merkowitz (2008) find that more than two-thirds of Congressional candidates' campaign funds are provided by out-of-state donors and groups, which is only a slightly higher proportion than state legislative candidates receive. If contribution and spending totals continue to serve as more powerful explanations of electoral success than other characteristics, such as contributor dispersion, concerns of a plutocratic government remain warranted.

Since most of this theory is based on the representational linkage between constituents and their representatives, future research should tease out this relationship more thoroughly. Survey research would be beneficial to this end. Conducting surveys of district constituents during a campaign would allow for direct questioning of their views of candidates. Here, it would be important to assess why constituents support a given candidate. Are there personal connections between them? Have they been encouraged to donate by a friend or social group? Or do they think that this candidate will be the best representative of their desires in the legislature? This survey could be followed up by additional surveys administered after the new

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<sup>40</sup> Testing at the presidential level would not be a useful activity, as the president is the one elective office with a truly national constituency.



legislative session starts, in order to measure the constituency thoughts about legislator performance. While the exact research design would need to be developed further, survey evidence could further support dispersion theory.

Another potential direction for research is the examination of candidate contributor bases as network structures. Network studies is a burgeoning field within political science, and the methodology and theories have been applied to the study of political parties (Masket 2009, 2012; Koger, Masket, and Noel 2009), Congressional cosponsorship (Fowler 2006) and member organizations (Victor and Ringe 2009, 2013), social movements (Heaney and Rojas 2007), collective action (Scholz, Berardo, and Kile 2008), and voter mobilization and engagement (Bond et al 2012; Klofstad 2007). Each candidate has their own unique network that can be analyzed, consisting only of contributors to his or her campaign.

Contributors share a bond with candidates through their donations: the act of donating ties a person to a candidate. Contributors can also be tied to each other if they donate to the same candidate(s). As more and more people give to a single candidate, a web of contributors – which can be thought of as a network – takes shape. Over the course of a campaign, a candidate's contribution network is in transition, changing with each donation made by a contributor. Campaign structures are not static; they are subjected to network processes that serve not only to create networks, but also sustain and even dissolve established social structures (Doreian and Stokman 1997). Gathering data on network structure at one point in time (say from the date of the first recorded donation) allows for comparison of the network at future times (for example, the date of the primary, 90 days before the election, and Election Day).

Using the number of ties, a measure of network density can be calculated, which is the proportion of observed ties in relation to all possible ties that could be formed. The denser the

network, the more linkages there are between citizens/contributors in a district, and thus the more potential for contagion demonstrated within the network. The range of a network, or the extent to which an actor's networks links it to other diverse actors (Knoke and Yang 2008), is be reflected through the geographic spread of contributors to a given candidate.

Observations can also be made about individual contributors concerning their centrality and prestige within a given network. The degree for each individual contributor can be calculated to show the extent to which he or she connects to all other nodes in the network. The more connections forged between individuals, the higher the degree of a given individual. Similarly, calculating actor closeness will reveal how near a node is to another. Such characteristics may also be incorporated into regressions that will predict the likelihood of electoral success for each of the candidates.

The goal of this dissertation is to provide an alternative supporting explanation for the electoral success of state legislative candidates. Empirical testing provides mixed evidence of the influence of dispersion characteristics on electoral outcomes. This analysis serves as an introductory study of dispersion that can and should inform future studies of campaign contributions.

## **DISSERTAION APPENDICES**

## **APPENDIX A: Probit Results, Models 1 and 2**

**Table 16.** Full Probit Results, Models 1 and 2

<b>DV   General Election %</b>	<b>Early Contributions (Model 1)</b>	<b>Early Donors (Model 2)</b>
% Donors within District	-0.000 (0.001)	-0.000 (0.001)
% Zip Codes within District	0.001 (0.001)	0.001 (0.001)
% Early Contributions	0.004 <sup>***</sup> (0.001)	--
% Early Donors	--	0.004 <sup>***</sup> (0.001)
Total Individual Donor Count	-0.000 (0.000)	-0.000 (0.000)
Unique In-District Zip Code Count	-0.004 (0.006)	-0.004 (0.006)
Total Zip Codes in District	-0.002 (0.002)	-0.002 (0.002)
ln(Total Individual Contributions)	0.149 <sup>***</sup> (0.024)	0.150 <sup>***</sup> (0.024)
ln(Total Corporate Contributions)	0.128 <sup>***</sup> (0.014)	0.128 <sup>***</sup> (0.014)
Chamber	-0.101 <sup>**</sup> (0.039)	-0.102 <sup>**</sup> (0.039)
Republican	1.003 <sup>***</sup> (0.060)	1.003 <sup>***</sup> (0.060)
Unopposed	1.611 <sup>***</sup> (0.169)	1.611 <sup>***</sup> (0.169)
Challenger	-1.235 <sup>***</sup> (0.128)	-1.226 <sup>***</sup> (0.129)
Open Seat	-0.208 (0.112)	-0.200 (0.112)
Prior Race % (Incumbent Only)	0.012 <sup>***</sup> (0.002)	0.012 <sup>***</sup> (0.002)
Legislative Professionalism	-1.389 <sup>***</sup> (0.296)	-1.386 <sup>***</sup> (0.297)
Campaign Finance Stringency	0.150 <sup>***</sup> (0.672)	0.147 <sup>***</sup> (0.671)
Constant	-2.630 <sup>***</sup> (0.245)	-2.645 <sup>***</sup> (0.245)
<b>N</b>	6079	6079
<b>R<sup>2</sup></b>	0.4588	0.4591
<b>AIC</b>	4445.716	4443.642

**APPENDIX B: Full Results Table with State Variables, Models 1 and 2**

**Table 17.** Full Results of Models 1 and 2 with State Variables

<b>DV   General Election %</b>	<b>Early Contributions (Model 1)</b>	<b>Early Donors (Model 2)</b>
% Donors within District	-0.023 <sup>**</sup> (0.003)	-0.023 <sup>***</sup> (0.008)
% Zip Codes within District	0.015 <sup>^</sup> (0.011)	0.015 <sup>^</sup> (0.011)
% Early Contributions	0.025 <sup>***</sup> (0.007)	--
% Early Donors	--	0.026 <sup>***</sup> (0.008)
Total Individual Donor Count	-0.003 (0.001)	-0.003 <sup>*</sup> (0.001)
Unique In-District Zip Code Count	-0.0701 (0.060)	-0.0701 (0.060)
Total Zip Codes in District	-0.016 (0.020)	-0.016 (0.020)
ln(Total Individual Contributions)	0.921 <sup>***</sup> (0.227)	0.931 <sup>***</sup> (0.226)
ln(Total Corporate Contributions)	1.569 <sup>***</sup> (0.122)	1.569 <sup>***</sup> (0.122)
Chamber	-2.173 <sup>***</sup> (0.558)	-2.185 <sup>***</sup> (0.558)
Republican	7.971 <sup>***</sup> (0.404)	7.968 <sup>***</sup> (0.404)
Unopposed	38.41 <sup>***</sup> (0.558)	38.40 <sup>***</sup> (0.556)
Challenger	-10.02 <sup>***</sup> (1.076)	-9.962 <sup>***</sup> (1.076)
Open Seat	-0.475 (1.067)	-0.426 (1.067)
Prior Race % (Incumbent Only)	0.125 <sup>***</sup> (0.014)	0.125 <sup>***</sup> (0.014)
Legislative Professionalism	-23.61 <sup>***</sup> (4.728)	-23.61 <sup>***</sup> (4.727)
Campaign Finance Stringency	3.426 <sup>***</sup> (0.672)	3.420 <sup>***</sup> (0.671)
Constant	26.56 <sup>***</sup> (2.356)	26.45 <sup>***</sup> (2.355)
<b>N</b>	6079	6079
<b>R<sup>2</sup></b>	0.7199	0.7200
<b>AIC</b>	49873.42	49872.35

*t* statistics in parentheses

<sup>^</sup> *p* < 0.1, \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

[CONTINUED ON NEXT PAGE]

Table 17 (Continued)

	Early Contributions (Model 1)	Early Donors (Model 2)
AL	8.994 <sup>***</sup> (1.983)	8.982 <sup>***</sup> (1.981)
AK	-10.42 <sup>***</sup> (2.591)	-10.42 <sup>***</sup> (2.593)
AR	-9.294 <sup>***</sup> (2.385)	-9.298 <sup>***</sup> (2.384)
AZ	-9.102 <sup>**</sup> (3.329)	-9.140 <sup>**</sup> (3.328)
CO	-11.27 <sup>**</sup> (2.480)	-11.25 <sup>**</sup> (2.479)
CT	-2.414 (3.172)	-2.318 (3.172)
DE	-12.91 <sup>***</sup> (2.822)	-12.91 <sup>***</sup> (2.820)
FL	-13.31 <sup>***</sup> (2.026)	-13.30 <sup>***</sup> (2.028)
GA	-7.988 <sup>***</sup> (1.744)	-7.977 <sup>***</sup> (1.743)
HI	-13.31 <sup>***</sup> (2.729)	-13.30 <sup>***</sup> (2.729)
IL	2.873 (1.675)	2.829 (1.672)
IN	-4.785 <sup>***</sup> (1.336)	-4.852 <sup>***</sup> (1.334)
KS	-11.28 <sup>***</sup> (2.321)	-11.27 <sup>***</sup> (2.320)
KY	-13.68 <sup>***</sup> (2.801)	-13.68 <sup>***</sup> (2.799)
MD	0.324 (2.642)	0.350 (2.640)
ME	7.100 <sup>***</sup> (1.584)	7.090 <sup>***</sup> (1.583)
MI	-7.273 <sup>***</sup> (2.109)	-7.237 <sup>***</sup> (2.107)

	Early Contributions (Model 1)	Early Donors (Model 2)
MN	-11.97 <sup>***</sup> (3.343)	-11.96 <sup>***</sup> (3.342)
MO	3.007 <sup>*</sup> (1.172)	2.988 <sup>*</sup> (1.165)
MT	-9.991 <sup>**</sup> (3.624)	-9.952 <sup>**</sup> (3.622)
NC	-12.54 <sup>***</sup> (2.578)	-12.52 <sup>***</sup> (2.576)
NV	-20.11 <sup>***</sup> (3.676)	-19.99 <sup>***</sup> (3.680)
NY	-5.848 <sup>***</sup> (1.639)	-5.841 <sup>***</sup> (1.640)
OH	-59.93 <sup>***</sup> (2.218)	-59.98 <sup>***</sup> (2.218)
OK	-14.78 <sup>***</sup> (2.621)	-14.82 <sup>***</sup> (2.621)
OR	-10.25 <sup>***</sup> (2.306)	-10.18 <sup>***</sup> (2.305)
PA	-3.807 <sup>**</sup> (1.346)	-3.809 <sup>**</sup> (1.346)
RI	-12.64 <sup>***</sup> (3.511)	-12.63 <sup>***</sup> (3.510)
SC	-5.860 <sup>*</sup> (2.683)	-5.852 <sup>*</sup> (2.682)
TN	-18.37 <sup>***</sup> (3.520)	-18.35 <sup>***</sup> (3.518)
UT	-0.112 (1.368)	-0.116 (1.368)
WA	-9.730 <sup>***</sup> (2.879)	-9.729 <sup>***</sup> (2.877)
WI	-7.012 <sup>**</sup> (2.398)	-7.014 <sup>**</sup> (2.397)
WY	1.786 (3.973)	1.884 (3.976)



## **APPENDIX C: FULL VIF Statistics of Variables**

**Table 18. VIF Statistics**

<b>Variable</b>	<b>VIF</b>	<b>1/VIF</b>
<i>Campaign Finance Stringency</i>	38.61	0.026
Legislative Professionalism	9.81	0.102
Prior Race % [Incumbent]	6.73	0.149
Challenger	5.57	0.179
Open Seat Candidate	5.37	0.186
Unique In-District Zip Code Count	4.29	0.233
ln(Total Individual Contributions)	3.58	0.279
ln(Total Corporate Contributions)	3.54	0.282
Total Zip Codes in District	3.51	0.285
% Zip Codes within District	2.8	0.357
Total Individual Donor Count	2.18	0.460
Chamber	1.54	0.651
% Donors within District	1.46	0.685
% Early Donors	1.45	0.691
% Early Contributions	1.44	0.696
Unopposed	1.43	0.701
Republican	1.1	0.909

<b>State Variable</b>	<b>VIF</b>	<b>1/VIF</b>
CT	10.79	0.093
TN	8.69	0.115
RI	7.97	0.126
KY	5.48	0.183
MN	4.85	0.206
WI	4.81	0.208
OK	4.68	0.214
NC	4.17	0.240
NV	4.11	0.243
MI	4.06	0.246
CO	4.05	0.247
IL	3.74	0.267
NY	3.71	0.270
OH	3.69	0.271
WY	3.64	0.275
SC	3.36	0.298
KS	3.36	0.298
AR	3.27	0.306
HI	3.23	0.310
GA	3.12	0.320
DE	3.08	0.325
FL	2.97	0.336
OR	2.67	0.375
PA	2.63	0.380
ME	2.61	0.383
AZ	2.6	0.385
AK	2.29	0.436
MO	2.21	0.453
MT	2.16	0.463
AL	2.05	0.488
IN	1.95	0.514
UT	1.87	0.535
MD	1.74	0.574
WA	1.48	0.678

**APPENDIX D: Correlation Table, Campaign Finance Stringency**

**Table 19.** Correlations of Campaign Finance Stringency with Other Variables

Variable	Correlation
Legislative Professionalism	0.305
Total Individual Donor Count	0.164
ln(Total PAC Contribution)	-0.125
ln(Total Individual Contributions)	0.109
% Zip Codes Within District	0.100
Unique In-District Zip Codes	0.098
Chamber	0.092
% of Donors Within District	-0.059
Unopposed	-0.053
% Early Donors	-0.045
General Election Percentage	-0.041
% Early Contributions	-0.039
Prior Race % (Incumbent Only)	-0.031
Republican	-0.024
Open Seat	0.019
Total Zip Codes in District	-0.013
Challenger	0.007

State Variable	Correlation
IL	-0.412
MO	-0.331
AL	-0.319
UT	-0.274
CT	0.243
WI	0.240
ME	-0.230
RI	0.209
TN	0.207
IN	-0.205
MI	0.165
NV	0.153
MN	0.141
NY	0.140
GA	-0.119
AZ	0.115
KY	0.108
OK	0.105
NC	0.104
CO	0.097
HI	0.094
DE	0.073
WY	0.067
AK	0.066
MT	0.048
PA	0.013
FL	0.010
OH	0.010
SC	0.009
AR	0.009
KS	0.009
OR	0.008
MD	0.006
WA	0.004

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