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Electoral Systems and Campaign Finance in Legislative Elections

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy

in

Political Science

by

Joel W. Johnson

Committee in charge:

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The Dissertation of Joel W. Johnson is approved, and it is acceptable
in quality and form for publication on microfilm and electronically:

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2009

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ABSTRACT OF THE DISSERTATION

Electoral Systems and Campaign Finance in Legislative Elections

by

Joel W. Johnson

Doctor of Philosophy in Political Science

University of California, San Diego, 2009

Professor Matthew Shugart, Chair

Electoral systems are known to be powerful shapers of electoral politics, but little research has considered their consequences for campaign finance. Focusing on systems fostering within-list or within-party competition, I make several arguments.

Chapter 1 argues that these systems affect the likelihood that disclosure regulations extend to individual candidates (and not simply political parties). Electoral rules affect the degree to which individual candidates become objects of attention and/or active campaigners and thus also the 'demand' for the revelation and control of

candidates' political finances. My detailed survey of the disclosure regulations for 44 countries supports the theory.

Chapter 2 argues that within-list competition does not necessarily foster campaign spending because it may diminish the supply of contributions. Chile is a case in point. I develop a model of the Chilean campaign finance marketplace, and the theory's main result is that candidates who are competitive only vis-à-vis their own listmates are relatively unattractive to contributors. An analysis of the official disclosure reports of candidates in the 2005 Chamber of Deputies elections supports the theory. The analysis focuses on candidates' campaign income because this best illustrates the effect of market forces.

Chapter 3 argues that the effects of campaign spending cannot be understood as simply the amount of votes 'purchased' per dollar; it also takes votes from competitors, and the effects can vary based on the identity of the competitor. Electoral systems matter because they affect incentives for campaign coordination, in which teammates target their campaigns at different voter groups, which also reduces the extent to which coordinators' expenditures detriment one another. Consequently, across electoral systems there is variation in the degree of intrateam coordination and so too in the degree to which spending affects intrateam versus interteam contests. The theory is supported with spending effects estimates for Chilean and Irish elections.

The final two chapters discuss methodological issues in estimating campaign effects for multi-candidate elections. Chapter 4 considers a dyadic approach for estimating within-team and between-team effects. Chapter 5 considers regression specification problems when the number of candidates per district varies.

INTRODUCTION

To deserve the name, a democracy needs free and fair elections. But for democratic institutions to work well, they must also promote representative, accountable, and capable governments. This means that the electoral systems used for legislative elections matter.

Electoral systems are the sets of rules that specify the types of votes that citizens may cast and how those votes are translated into seats for legislative candidates. They include rules that dictate whether a vote cast in one district can also affect electoral results in a separate "tier" of seats, as well as whether a voter can cast multiple votes or even rank order candidates according to their preference. They also specify how many candidates are elected in each district and how votes translate—via some mathematical formula—into victories for candidates, various candidates, and/or lists of candidates.

Electoral systems affect the incentives of all those involved in the game of winning elections, including voters, candidates, legislators, and parties. The strategies that work best in one institutional environment are not the same that will work best in another institutional environment. So how voters vote, how candidates campaign, how legislators serve, and how parties organize each vary with electoral systems. The performance of democracy is implicated.

The main consequences of electoral systems can be divided into two types: interparty and intraparty (Shugart 2006). The interparty consequences of electoral systems include the proportionality of election results and the degree to which

elections promote bipartism or fragmentation in the party system. Because the stability of legislative majorities and the ability of electorates to hold legislative majorities accountable for their performance tend to be inversely related to the fragmentation in the legislature, these interparty consequences entail a tradeoff, with legislative representativeness pitted against stable and accountable majorities.

By contrast, the intraparty consequences of electoral systems involve the degree to which rules foster within-party electoral competition (in general elections) and/or lead candidates to devote more energy to developing ties with their electorates instead of their party leadership (or vice versa). Roughly put, these consequences originate from the importance of parties or candidates in a voter's decision of how to vote. In party-promoting systems, voters are empowered to select between (but not within) lists of candidates fielded by parties. Here, the voting decision has little to do with the individual candidates who make up the party lists and much more to do with the differences between party platforms. A telling indicator of this is the pervasiveness of the actual lists (with candidates' names): they seldom appear on voters' ballots and they are not widely advertised or circulated before the election. Contrast this with more "candidate-centered" systems, where voters are not only empowered to select among individual candidates, but they often can select among candidates of the same political party. This, of course, makes the voting decision much more about the reputations, accomplishments, and personalities of individual candidates.

One of the intraparty consequences to follow this party-versus-candidate distinction is party cohesiveness: more candidate-centeredness means less party cohesiveness, and so also a diminishment in the utility of party labels and the ability of

voters to hold parties collectively accountable. Further afield, the distinction affects policymaking and the nature of the activities that legislators will pursue in order to seek reelection. For example, candidate-centeredness motivates particularistic and pork-laden policies because these allow legislators to claim credit for local goods. As a result, we may see more particularism and fewer public goods the more the electoral system promotes candidate-centered elections.

The intraparty implications of electoral rules extend to matters of political finance. Or so I argue. Little in the large body of research on electoral systems has considered the implications for political finance. This is mainly because the academic treatment of the two subject matters—the intraparty consequences of electoral systems and comparative political finance—are both somewhat recent undertakings. Compared to what we know about interparty politics, for example, much less is known about the intraparty consequences of electoral rules (Shugart 2006). And comparative political finance has lagged many other fields in the study of comparative democracy in part because most democracies (including the 'developed' sort) have only recently begun to regulate political finance, thereby producing data about campaign fundraising and expenditure that can be studied. Comparative political finance is also underdeveloped because it is difficult to study—analyzing the finances of political competitors is serious undertaking for one country, let alone many.

More specifically, I will argue that electoral systems affect (a) campaign finance regulations, (b) campaign fundraising and expenditure, and (c) the effects of campaign spending on electoral results. In each case, my arguments—which appear in

Chapters 1, 2, and 3, respectively—turn on some facet of electoral rules as they relate to intraparty politics in comparative perspective.

Campaign Finance Regulations

If we sought out to compare the world's campaign finance regulations, we might expect to find that they "match" the electoral environments they regulate. For example, where electoral systems make for candidate-centered elections, we expect the regulations to lay some emphasis on individual candidates: disclosure regulations will mandate that individual candidates file disclosure reports; public financing will provide finance for individual candidates; spending limits will apply to individual candidates, etc. And where elections are party-centered, we expect to observe regulations that focus entirely on party organizations, without bother to regulate the behavior of each and every candidate.

Although this is a reasonable and perhaps intuitive proposition, it has never been tested for a large number of democracies. And there are good reasons to think that such a test would actually show a different type of pattern. Indeed, because campaign finance regulations are usually chosen via policymaking processes that include legislatures, with members who would prefer not regulate the kind of behavior at which they have proved adept, we might instead observe all sorts of "mismatches" between electoral contexts and regulatory environments. But even if the relationship does occur, we require a good explanation: an intuition does not suffice.

In Chapter 1, therefore, I examine the degree to which there is a relationship between electoral systems, party/candidate-centeredness, and campaign finance

regulations—in particular, whether regulations mandating disclosure apply to individual candidates or only parties. I also develop a theory that explains how electoral systems affect candidate/party centeredness and how this in turn affects campaign finance regulations. The latter part of this argument is rather simple; it states merely that the supply of candidate-level regulations depends on how much demand exists for those regulations in the polity. The simplicity is out of necessity, for policy outcomes are rather "distant" from the immediate effects of electoral systems and policymaking processes are too complicated to build a theory that can specify when and where they will produce regulations that extend to candidates. But, other things being equal, greater demand for candidate-level regulations will lead to a greater probability that regulations will extend to individual candidates, despite legislators' objections to having their political finance regulated.

The demand for candidate-level regulations emerges from a system's candidate-centeredness, which I define as the degree to which candidates are *objects of attention* (i.e., the degree to which voters attend to the attributes of individual candidates or, instead, simply "vote the party") and/or *active competitors in elections* (i.e., the degree to which candidates undertake campaigns for votes). Of course, these two are closely related, but electoral systems affect them in distinct ways. For example, in comparative terms, "closed list" rules—in which voters select between party-ordered lists of candidates, with no ability to change the ordering of candidates on the lists—diminish a candidate's incentives to campaign for votes because campaigning does little to influence his chances of getting elected, that being determined much more by his position on the list. With lesser campaign "presence",

voters may start to pay less attention to candidates, but in this case the effect of the electoral system on voter attention is indirect. At the same time, however, the closed list system could have a direct effect on voter attention; for example, knowing that their votes are for groups of candidates, voters might choose to ignore the differences between individual candidates (regardless of how much they campaign). In other words, electoral systems affect candidate-centeredness through various mechanisms which are analytically distinct. My argument in Chapter 1 pays close attention to these analytical distinctions, and aims to do so with respect to a large number of differences among electoral systems. In essence, then, the core of my argument bears a close relationship to the literature on institutional determinants of candidates' incentives to cultivate a "personal vote," especially Carey and Shugart's (1995) seminal treatment of the subject. However, I think that my account makes a contribution to this theoretical literature, offering new ways to understand the mechanisms that link electoral systems to the candidate-centeredness of legislative elections.

Candidate-centeredness affects the demand for candidate-level regulation because as there is either greater interest in the differences between individual candidates or it becomes evident that candidates engage in their own campaigning, the interest in regulating and revealing candidates' campaign finances grows. Therefore, there should be a relationship between electoral systems and whether disclosure regulations extend to individual candidates. To investigate this, I conduct a 44-country survey of disclosure regulations. This survey—the most comprehensive analysis of campaign finance disclosure regulations to date—shows indeed that the likelihood that a country's disclosure regulations mandate that individual candidates (in addition to

political parties) must disclose campaign finance is strongly related to the candidate-centeredness of the electoral system. The survey also shows that countries with hybrid-like "mixed-member" and "flexible list" electoral systems have chosen to regulate candidates and parties in interesting and suggestive ways, and that several countries require disclosures but never make them publicly available.

One consequence of the relationship between electoral systems and disclosure regulations is that some countries have official candidate-level campaign finance data available while others do not. This impacts what citizens can know about candidates in different democracies, and it affects the study of comparative political finance. In fact, it was after finding out which countries disclose candidate-level data that I began to analyze various official (candidate-level) campaign finance data. Those analyses led to the remainder of this dissertation.

Campaign fundraising and expenditure

In Chapter 2 I turn my attention to a particular type of candidate-centered electoral system—open list proportional representation—and to candidates' campaign fundraising and expenditure. I argue that Chile's campaign finance markets vary across electoral districts with the locus of electoral competition—that is, whether the real contest in a district is within or between lists. I take the supply and demand of campaign finance to be a function of the expectations about which candidates and lists will be competitive and the interests of various suppliers in the outcomes of those contests. In this model, therefore, the "amount" of within-list and between-list competition is determined by the expected closeness of the race and not (say) the

number of competitors on a list. In fact, Chilean lists have no such variation since the electoral system limits each list to two names and each district to two winners. Across districts, however, there is variation in the intensity of competition occurring within and between the two main multiparty coalitions that run lists, the left-leaning *Concertación* and the right-leaning *Alianza por Chile*.

The model predicts that candidates will differ in their pressures to raise and spend money, and in particular that the candidates in the closest within-list contests ("intralist marginals") experience campaign finances shortages (i.e., high demand and low supply) relative to other competitive candidates, as contributors tend to favor candidates who are either electorally "safe" or involved in close interlist contests. This is somewhat at odds with the literature on open list systems, which holds that within-list competition increases campaign spending because it increases candidates' demand for campaign finance. My argument implies that this is not always true, that campaign spending also depends on the supply of campaign contributions, and so the effect of introducing or increasing within-list competition is conditional on the economy's interest in helping candidates compete against their own listmates. Where this interest is low, the effect of within-list competition on spending may be nil or even negative.

Indeed, analyzing the official campaign finance disclosures of major-coalition candidates to the 2005 Chamber of Deputies, the lower chamber of Chile's Congress, I find that the shortages are sufficient to create no spending differences between candidates in close within-list contests and other competitive candidates. In the case of Chile, therefore, within-list competition does not increase campaign spending.

To illustrate that this stems from a more limited supply of contributions, however, I focus the analysis on candidates' campaign income. In particular, my theory predicts that intralist marginals will be inclined to spend more of their *own* money on their campaigns because they experience high demand *and* low supply. I find empirical support for this prediction with a multi-equation statistical analysis (using Seemingly Unrelated Regression) of the campaign income data in the 2005 candidates' disclosure reports. I also find that intralist marginals' greater own spending does not fully compensate for the fewer contributions they receive from suppliers, which again indicates that the within-list competition does not increase campaign spending. In open list systems, the supply of campaign finance matters.

The analysis also supports my theory that I find that intralist marginals are particularly lacking in "public" contributions, as opposed to "secret" contributions. This distinction stems from a feature of Chilean campaign finance law that is unique among the world's regulatory frameworks: a system to hide from candidates the identities of their contributors. Intended to protect politics from the corrupting influence of money, the system of secret contributions was introduced in a sweeping campaign finance reform in 2003 and was first used at the national level in the 2005 elections. Notwithstanding the question of why contributors would want to make their donations through this system—an interesting question on which I reflect—my model suggests that intralist marginals will be unattractive to access-motivated suppliers who want to donate publicly, which is again exactly what my results show.

All together, this chapter covers a lot of ground. It develops a model to explain the Chilean campaign finance marketplace; it analyzes candidates' campaign

expenditures and campaign income; and it illustrates that within-list competition does not always lead to more campaign spending. This final part is the most relevant for the wider literature on candidate-centered systems and campaign finance, but all three components illustrates the complexity of competition and campaign finance in open list systems.

The Electoral Effects of Campaign Spending

In Chapter 3, I focus on the effects of campaign spending—that is, how much campaign spending affects candidates' vote shares. I focus on candidate-centered environments in which the electoral system fosters within-list and/or within-party competition (hereafter, simply "within-party" competition). Although all of these systems provide incentives for within-party competition, they differ in the extent to which they give parties incentives to equalize vote shares across candidates. Under certain electoral rules, parties can win more seats if the votes obtained by their candidates are not too unequal. Towards this end, parties can take several steps, including "bailiwicking" electoral districts so that each member has "rights" to certain portion of the district and coordinating the party's supporters so that equal portions cast their votes for different candidates. A consequence of these strategies is that "assets"—such as personal reputations, incumbency, and campaign finance—are less relevant for determining which party members win more votes. The reason for this is simple: because equalization involves shifting votes from stronger to weaker candidates, the greater the party's success at equalizing votes the less that their candidates' vote shares will differ as a result of members' electoral assets. In effect,

equalization mutes the impact of assets, and this muting is more pronounced vis-à-vis same-party (SP) competitors than it is vis-à-vis other-party (OP) competitors because the SP competitors are the beneficiaries of the vote management schemes. Put differently, I argue that the extent to which assets affect the electoral prospects of *parties* versus *party-members* is variable and determined in part by parties' equalization activities.

This argument is the first to pay attention to how the effects of campaigns and campaign assets can affect copartisans differently than other candidates, and so it is also the first to argue that these relative effects can vary across institutional settings as well as the first to attempt to estimate such effects.

To establish this argument, I discuss why some electoral systems foster intraparty competition and why two of those systems—the single transferable vote (STV) and the single non-transferable vote (SNTV)—give parties incentives to equalize the vote. I then estimate the effects of campaign spending by SP and OP competitors on candidates' vote shares for the 2002 Irish parliamentary elections, which used STV and where substantial efforts to "manage" the vote towards equality were observed. For comparison, I estimate similar quantities for the 2005 elections in Chile and review similar estimates that were obtained for Japan by Cox and Thies (2000). In neither of these countries' elections did parties undertake actions to equalize the vote. In Chile, there would be no reason to as its OLPR system creates no such

incentives.[1] And while Japan used SNTV, there is no evidence that the dominant Liberal Democratic Party (LDP) ever explicitly sought to equalize the vote. A comparison of the three sets of estimates shows that relative to a country's OP spending effects, the SP effects are smallest in Ireland—as we would expect given the greater cooperation among copartisans in Irish elections.

As is perhaps already evident, the campaign spending effects I estimate are atypical. Usually, spending effects are taken from the perspective of a focal candidate, as in the vote-share gain that *the spender receives* per dollar. The effects I estimate are from the perspective of *competitors*. In this "relational" conceptualization, the expenditures of each candidate has multiple effects—one for each of his/her competitors. This conceptualization is useful for the analysis of all multicandidate electoral data because each candidate is a threat to some competitors more than to others. It is also relevant to the growing body of research which seeks to assess the importance of intraparty competition in general elections. Of course, it is also the type of spending effect implicated by my theory.

For the most part, the process of estimating relational spending effects is no different than the process of estimating other spending effects, and I use the standard instrumental variables and two-stage least squares (2SLS) regression approach. This is not to suggest that the task is easy. Instrumental variables must meet stringent requirements which in practice can only be satisfied to a degree. Yet, even modest

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[1] For Chile, I analyze not parties but electoral coalitions. As mentioned above, each coalition runs its own list. As implied, however, the electoral system gives them no incentives to equalize votes within the lists.

departures from the requirements can lead to significant estimate bias. More generally, statistical estimates can be highly sensitive to model specification, which is a real problem when the goal is to estimate the precise effects of campaign spending on results. Naturally, I do my best to confront these challenges. But I am also aided in the sense that my goal is not to obtain exact spending estimates per se, but to compare multiple spending estimates for a given country. (I then compare *pairs* of estimates across countries.)

In the subsequent and final two chapters (Chapters 4 and 5), I provide two short essays that continue this concern with the statistical estimation of the effects of campaigns, campaign spending, and campaign assets. In Chapter 4, I consider an alternative method to estimate the relational effects of electoral assets. This is to transform the data so that observations correspond to competitor-to-competitor *dyads* and variables correspond to *differences* between competitors' vote shares, spending, etc. Pairing each candidate with each of his competitors, there will be two types of dyads, SP and OP. A simple interaction between dyad type and the spending difference variable can therefore allow comparison of SP versus OP spending effects.

It is the simplicity and intuitiveness of this approach that is the main motivation behind this chapter. But the dyadic analysis of multicandidate electoral data may hold greater promise. Many of the methods used to analyze multicandidate data are complicated by variation in number of observations (i.e., candidates) across electoral districts.[2] For the dyadic analysis, this is less problematic because variation

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[2] In other words, some statistical models inadvertently obtain estimates not by averaging effects across candidates or districts but by comparing candidates of different districts.

in the number of competitors across parties or districts simply means more of those dyads. Further, compared to the candidate-centered approach, which tends to treat individuals as if their electoral behaviors and performances were completely independent, the dyadic transformation makes it so the *relationships* between competitors are the main subject of analysis. Indeed, dyadic data *is* relational data. This is why it is routinely used to analyze the relationships among states or among individuals in social settings, and why it may seem odd that is has never between used to study the relationships among electoral competitors.

For the purposes of estimating the relational effects of campaign spending, however, my dyadic approach faces the same challenges as in Chapter 3—i.e., it still requires good instrumental variables. In order to focus on this central challenge and because Chapter 3 is already rather lengthy, I introduce the dyadic model as a separate chapter. My main concern in this chapter is thus with the viability of the dyadic approach as compared to the candidate-level model in Chapter 3. I test several versions of the dyadic model, showing that they indeed provide similar results as the candidate-level model in Chapter 3.

In Chapter 5, I discuss another obstacle to measuring campaign effects with multicandidate data. Compared to the other challenges inherent in measuring causal effects with electoral data, the problem is minor and easily fixed. But it can greatly bias regression estimates, and it seems to have gone unnoticed. The problem stems from the fact that whatever factor has the effect of giving one candidate more vote share must also take vote share away from competitors. This means that when one includes both the focal candidate and his/her competitors in the same statistical model,

the model will estimate not the "boost" effect (i.e., the amount of vote share the focal candidate receives relative to the counterfactual in which she did not have the campaign or asset) but the "spread" effect (i.e., the amount of vote share gain *versus his (average) competitor* for the campaign or asset). This is problematic for two reasons. First, researchers often report their conclusions as boost effects, yet their models suggest that they have in fact estimated spread effects. Second, spread effects are biased whenever the electoral data have variation in the number of candidates per district. The reason for this is that the candidates' boost effect is dispersed across multiple competitors, so the same boost effect will translate into different spread effects. Therefore, a model that uses data which vary in the number of candidates per district will yield a corrupted estimated of the effect.

To avoid the problem we must pay close attention to which candidates we choose to use in the statistical model and/or adjust the dependent and independent variables so that they produce boost effects. One easy solution (albeit one that is available only when one and only candidate per district has the asset in question and when all other variation in candidates' vote shares is random) is to use only those asset-holding candidates in the model. In most cases, however, producing unbiased estimates is a bit more involved.

Electoral systems, campaign finance, and democracy

In all, this dissertation makes a good number of contributions. Each of my three main arguments is a contribution to our understanding of the implications of electoral systems for political finance. I also make contributions by extending the

theoretical literature on electoral systems and candidate-centeredness; by developing theory about the variation in the relational effects of campaigns; by introducing the dyadic analysis to the study of multi-candidate elections; by drawing attention to other modeling issues in the estimation of campaign effects with data that varies in the number of candidates per district; by a deep empirical study of disclosure regulations; and by providing the first comprehensive analysis of campaign fundraising in Chilean elections. Of course, mine is sure not to be the last word on any of these topics—indeed, it only scratches the surface in some cases. Throughout, I comment on issues that are worthy of future research.

In concluding that electoral systems have consequences for political finance I do not mean to suggest that one should choose an electoral system for how it affects campaign financing or its regulation. But the consequences are important to understand, not least for their implications for campaign finance and its regulation. Consider campaign finance disclosure. One reason disclosure is important is that it helps give voters the information they need to know to select and control their representatives with minimal "agency loss." My argument that there is little demand in party-centered systems for candidate-level information suggests that the absence of candidate-level regulations in these democracies is not problematic—individual candidates are simply of little importance for representation and accountability. However, there are also reasons to think otherwise: we know that it is rational for voters to be ignorant, and without knowing what information would be revealed about candidates with candidate-level regulations, we cannot know for sure if there is not information that voters would want to know. Moreover, disclosure is also important

for enforcing other regulations such as limits and prohibitions on certain contributions; yet without candidate-level disclosure we cannot know if such regulations are being undermined by candidate-level behavior. These concerns suggest that party-centered democracies extend their regulations to individual candidates, or at least introduce mechanisms to ensure that the general lack of information about individual candidates is neither unwise nor counterproductive.

Of course, for disclosure regulations to work they require much more than that they apply to the agents competing for votes; they also require serious enforcement and a lack of regulatory loopholes. And I would suggest that these issues are more important for candidate-centered systems. As organizations, political parties can have units and personnel devoted entirely to fundraising; and despite a need for money, they are not overly prone to jeopardizing their reputations for contributions from sources of ill-repute and/or blatantly exchanging policy for contributions. In the candidate-centered system, by contrast, individual candidates not only have to do their own fundraising, but they also might be more willing to provide contributors favors in exchange for political contributions. Further, it can be quite difficult to keep track of the behavior of so many candidates, especially if parties are weak and inchoate. Therefore, in order to provide information about competitors and/or to help enforce other financial regulations, it is a greater concern for candidate-centered systems that disclosure regulations are well-designed and enforced.

In and of itself, the amount of campaign spending is not a major concern for democratic performance. If elections are expensive, however, we might worry about competitors spending too much time fundraising and about the ability of less-moneyed

sectors of the society to compete in elections. We might also worry about why suppliers are so eager to finance campaigns, especially in candidate-centered systems, where parties are weaker and majority control of legislatures less frequently hang in the balance, and so where easy financing would suggest that individual candidates have too much power over particularistic policymaking. We also have reasons to worry if rather than too much money there is insufficient money to fund campaigns: competitors' views and positions will not be sufficiently publicized for voters to learn about electoral alternatives, and competitors' unsatisfied demand for money could lead them to engage in corrupt practices.

Serious scrutiny should therefore be given to open list systems, which are held to be bad on both fronts, leading to too much campaign spending and, in the opinion of Chang and Golden (2007), also corruption. But my study would suggest otherwise (or at least that these allegations deserve reconsideration), and on both counts. On the one hand, I find that—at least in the Chilean case—more within-list competition leads candidates to spend more of their *own* money. This does not rule out the possibility that they also engage in more corruption; indeed, their own money might have been raised via corrupt practices. But the finding does not bode well for the corruption hypothesis. On the other hand, I find that more within-list competition does not necessarily lead to more campaign spending. It is important to note that my conclusion on this point is stated at the candidate level. It is possible, therefore, for more within-list competition to lead to less campaign spending per candidate and still more campaign spending per seat. This, in fact, is an important question for future research.

In the meantime, however, we cannot say that within-list competition always increases candidates' campaign spending.

Closely related to the issue of how money is spent in elections is the question of how much it matters to electoral outcomes. Although large effects may be worrisome for various reasons, this dissertation suggests that it is not enough to ask how much spending matters. In multi-candidate races with within-list or within-party competition, we also need to know whether a candidate's campaign spending affects primarily his own copartisans or his other competitors. If it primarily affects within-party contests, then campaign spending would seem rather wasteful in that it has little effect on interparty legislative composition, but with that comes the benefit that interparty composition is not highly dependent on campaign expenditures. However, if the opposite occurs and expenditures affect primarily interparty contests, then we might worry that economic inequalities will translate into political inequalities. In this case, however, it may provide some comfort that it is electoral strategy (and the degree to which parties try to equalize the vote) that determines these relational effects and not the other way around. That is, my argument that relational spending effects are a function of how candidates and parties compete for votes shifts our attention from the effects of spending to the causes and exercise of vote management strategies. Again, we would not select an electoral system for the type of spending effects it promotes; neither would we do so solely for its equalization incentives. But without understanding these consequences, we misunderstand the importance of campaign spending, and with misunderstandings come improper or even counterproductive remedies.

And, though not always productive or made with the best of intentions, we can expect such remedies to be forthcoming. Campaign finance regulations everywhere seem subject to frequent adjustment, even in the most consolidated democratic regimes. No doubt, this is in part because loopholes become known and exploited and because fears about an inappropriate influence of political contributions are difficult to quell, if not well-founded. But no matter how much they undergo reform, and no matter how much regulatory diffusion occurs across national borders, the regulation of political finance for legislative elections will remain a domestic enterprise, as the demands and issues that influence reforms emerge from the behavioral consequences of a country's electoral system.

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CHAPTER 1

ELECTORAL SYSTEMS AND POLITICAL FINANCE DISCLOSURE

REGULATIONS

1.1   Introduction

If politicians were angels, there would be no need to worry about money interfering with democratic representation. Tellingly, however, most of the world's democracies have adopted political finance regulations. These include contribution limits, bans on certain contributions, and state subsidies for political campaigns, all of which can reduce the extent to which politicians privilege contributors in the making of policy.[1] However, the most common regulation among democracies is the requirement that competitors disclose political finance.[2] Of course, this does not mean that all disclosure regulations are the same. Rather, disclosure "regimes," or the collection of regulations and practices governing disclosure, exhibit a dizzying array

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[1] Another approach, advocated by Ackerman and Ayres (2004) and practiced to some degree in Chile, attempts to hide from politicians the identities of their contributors. If politicians cannot be certain about who has given them contributions, it is hoped, then they would not be likely to return anybody any favors. The Chilean system, first used at the national level in the 2005 elections, allows for contributors to donate to candidates secretly by funneling them through the Electoral Service. There is currently not enough information about how well the system works, but it was widely used in the elections.

[2] Disclosure regulations are the most popular form of campaign finance regulation according to the data collected for this paper. This popularity is unsurprising, given that disclosure rules are useful for their own sake (revealing information) and for enforcing other regulations (e.g. contribution limits).

of diversity – each unique with regard to which financial transactions have to be disclosed, what about them must be disclosed, when they must be disclosed, and whether and how they are to be made public.

Part of the reason for this diversity is that not all regimes mandate disclosures for the same immediate ends. For example, while one regime may aim to make political contributions public in the hopes that the "sunlight" shed on the connections between politicians and contributors will "disinfect"[3] politics, another regime may use disclosures only to enforce limits on campaign contributions. In the former, there would be little need to require disclosures from politicians that lose elections; in the latter, there would be little reason to make disclosures public. Of course, disclosure regulations might also be designed only to give the appearance of regulation, so the diversity may also include any number of regulatory loopholes. Indeed, this type of creativity is not surprising given that it is the regulated (office-holding and aspiring politicians) who are also in part the regulatory suppliers (office-holding politicians and other policymakers).

Another reason for regulatory diversity stems from differences in the competitive environments to be regulated. Specifically, I argue that electoral systems – the collections of rules that translate votes into seats and govern the types and number of votes available to voters – affect the likelihood that a country's regulations will mandate disclosures from individual candidates. Because they vary the degree to which voters determine which candidates in each party get elected, electoral systems

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[3] With regard to the public disclosure of information and "social diseases," U.S. Supreme Court Justice Louis Brandeis famously stated that "sunlight is said to be the best of disinfectants" (Brandeis 1914).

affect 1) the degree to which individual candidates are objects of attention and/or active competitors in elections – the "candidate-centeredness" of elections – and thus also 2) the "demand" for the revelation and control of candidates' political finances. Other things being equal, therefore, countries with more candidate-centered electoral systems are more likely to mandate *candidate-level* disclosures. Surveying the rules and practices that govern the disclosure of political contributions to competitors for 44 democratic legislatures – the most comprehensive survey of disclosure to date – I show that the correlation between disclosure rules and electoral systems is strong.

This relationship is not counterintuitive,[4] but there are several reasons why it deserves attention. First, the degree to which the relationship holds cannot be determined until the data are collected and analyzed. For the theory here, the data show few surprises; however, they do reveal that several electoral systems entailing intra-party competition do not have candidate-level regulations, in contrast to what a recent review of the comparative political finance literature took as given.[5] Still, the relationship should not be taken as inevitable, particularly since both sets of rules are outcomes of complex and varied policymaking processes that usually involve legislators – those who, having proven successful in the electoral context to be regulated (or re-regulated), may have their own ideas about which rules are appropriate. From this perspective, we might expect the relationship between the two

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[4] It has also been anticipated: see Carey and Shugart (1995, p. 437, n. 30) and Scarrow (2007, p. 200).

[5] "[In some countries] candidates from the same party compete against each other to various degrees. As a result, they run campaigns separate from their parties' campaigns, and they file their own campaign spending reports" (Scarrow 2007, p. 200).

sets of rules to at least contain a lot of "noise." Since we instead find a strong relationship suggests that electoral systems are indeed rather important factors in the structuring of regulatory regimes.

This raises the second reason for this study: the relationship merits an explanation. In one sense, the theory offered here is simple in that it only goes so far as to specify how electoral systems may be responsible for the variation in the demand for candidate-level disclosures. But this much of the theory is also comprehensive and novel, adding to the literature on electoral systems new reasons why different systems, such as "open lists" versus "closed lists," create different electoral environments. Put differently, the theory indicates that the effects of electoral systems may be more varied and numerous than previously recognized.

The third reason attention to this relationship is warranted is that the variation in candidate-level disclosures matters. It affects not only the types of political finance research that can be done cross-nationally, but also the degree to which voters are likely to know information about their political candidates. Of course, what information reaches publics depends also on the efficacy and comprehensiveness of the disclosure regimes. Some of this information can be gleaned from the data presented here, as the survey goes well beyond the question of who discloses to examine what, how, and when disclosures are required and how (if at all) those disclosures are made public. However, this paper analyzes only the data regarding whether contributions are itemized or categorized, whether those disclosures are made publicly available and on the internet, and how they relate to electoral systems. All

other data, including those of other political finance regulations (e.g. contribution limits and public financing), appear in the appendix.

Collecting data on political finance regulations and practices is not easy. Some regulations are codified in comprehensive electoral codes, others are scattered throughout a variety of statutes, and still others are mere practices that occur without statutory or regulatory stipulation. Fortunately, in addition to the help of many helpful ministerial, parliamentary, electoral, and regulatory organizations – many of whom now post legislation and data on the internet – there are also a number of existing surveys with detailed information about political finance regulations. I relied on these sources primarily for fields that are peripheral to the present question (e.g., the existence of contribution limits or public subsidies), and particularly the selections in Grant's edited volume (Grant 2005), the ACE Electoral Knowledge Network (2006), and International IDEA (2003).[6] Still, gaps in the data remain, even for countries where there are multiple sources of information. These may appear more frequently for Asian and Eastern European democracies, but accurate information about the small but important details of disclosure regulations and their practice is difficult to obtain for even the most robust and transparent regulatory regimes. I indicate where

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[6] Casas-Zamora (2005) and Pinto-Duschinsky (2002) were also helpful. International IDEA data reproduced by permission of International IDEA from [Funding of Political Parties and Election Campaigns] © International Institute for Democracy and Electoral Assistance 2003. Permission includes data at the ACE Electoral Knowledge Network (2006), a project of International IDEA and other partner organizations. http://www.idea.int.

substantial doubts remain, and provide in the appendix a list of the organizations and sources consulted for each country.

This chapter proceeds as follows. The first section explains how the incentives generated by electoral systems affect the likelihood that a democracy will adopt candidate-level disclosure regulations, while the second section explains how electoral systems create those incentives. The third section presents the data and discusses the regulatory regimes of various countries, and the fourth section concludes. The appendix follows.

1.2   The Supply and Demand of Candidate-Level Disclosures

The creation or reform of political finance disclosure regulations can be said to be a function of regulatory supply and demand. By this I mean that without some demand for the disclosure of political finance – be it to enforce other regulations such as contribution or spending limits, to expose or limit the influence of political contributions on policymaking, or simply to provide voters information about competitors' contributors – no disclosure regulations will be supplied. This does not mean that the supply will meet the demand. On the contrary, regulatory markets are imperfect because supply occurs via political policymaking processes and because the interests of most suppliers (policymakers) may diverge from those of demanders, be they voters, interest groups, or a subset of the policymakers.

Not to dismiss the importance of supply-side factors, this article is focused on the variables affecting the demand of a particular type of regulation: those mandating disclosures from legislative candidates. Specifically, I argue that electoral systems –

the set of rules that govern voting and translate votes into legislative seats – have political consequences that affect the demand for *candidate-level* regulations. As detailed in the following section, certain variations in these electoral rules affect the degree to which individual candidates (rather than political parties) are either the primary *agents of competition* or the *objects of attention* in legislative elections. The two of these go hand in hand, and can be jointly described as the candidate- or party-"centeredness" of elections.

Separately, however, each can affect the demand for candidate-level disclosure regulations. For instance, the more individual candidates campaign, the more likely it is they will engage in campaign finance practices that attract scrutiny, and regardless of the level of interest in the candidates as electoral alternatives. Similarly, the more attention to individual candidates as objects of electoral choice (rather than simply political parties), the more likely it is that such scrutiny will be forthcoming regardless of candidates' practices simply because voters may wish to know about candidates' contributors. Since each of these affects the demand for candidate-level disclosures, and electoral systems vary in their candidate-centeredness, electoral systems in turn influence the demand for candidate-level disclosures.[7] Consequently, other things being equal, a cross-national survey of disclosure regulations should reveal that they are more likely to apply to individual candidates in countries that use more candidate-

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[7] Note that the argument says nothing about the demand for *party*-level disclosure regulations. Since political parties typically campaign and matter even in the most candidate-centered environments, we should not expect greater demand for candidate-level regulations to correspond to a lesser demand for party-level regulations.
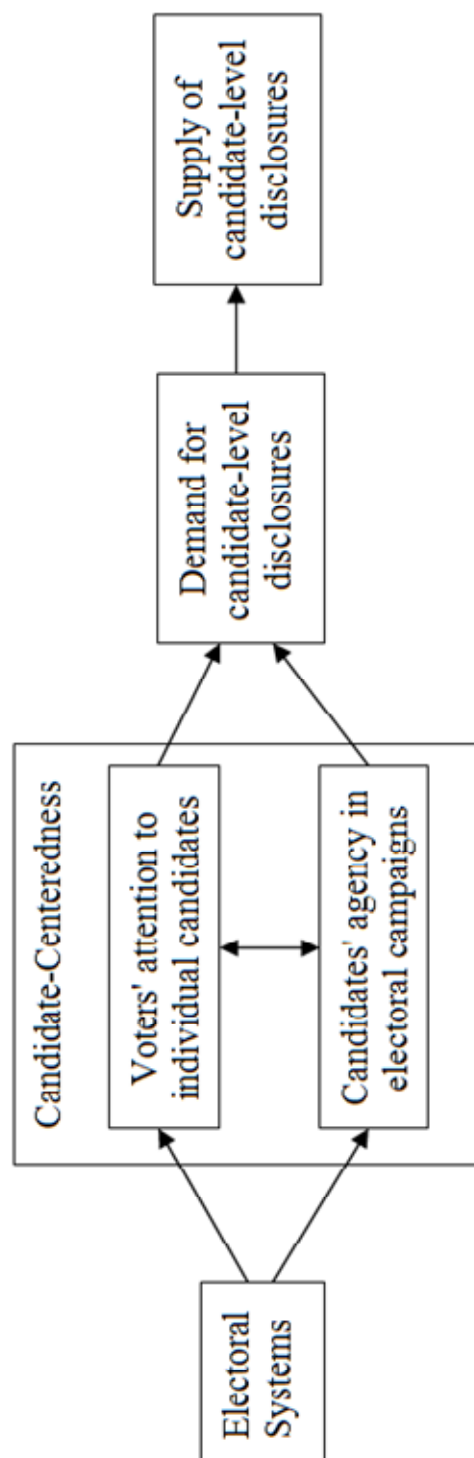
Figure 1.1.: The Relationship between Electoral Systems and Candidate-Level Disclosure Regulations

centered electoral systems. The complete process—from electoral systems to the demand for and supply of disclosure regulations—is given by Figure 1.1.

Again, this is not to say a country with a more party-centered electoral system cannot have candidate-level regulations while a more candidate-centered system does not. The latter may have no regulations at all (the theory says nothing about when or whether *any* regulations are supplied), or it may have enacted regulations that cover only donors or political parties and not individual candidates. However, unless either suppliers invariably ignore the demand for candidate-level information or other factors prove more decisive in supply and demand of regulations, systems with greater demand for candidate-level regulations will be more likely to have candidate-level disclosures.[8]

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[8] Rejecting a reverse process – that the political finance systems affect the choice of electoral systems – is easy since very few countries chose the main features of their electoral systems after disclosure regulations were in place. And although it may be theoretically possible for certain political finance systems to alter the affect the candidate-centeredness of elections – for instance, some parties may have been strengthened vis-à-vis candidates by systems of public financing (Ferdinand 2003; Kreuzer 2000; Kostadinova 2007) and in the US's now-closed "soft money" loophole was hoped to do something of the sort (see Ansolabehere and Snyder 2000) – in no case is it clear that any such regulations had a large effect such they might create a demand for electoral system change. But, this does not preclude the possibility that electoral and political finance systems are chosen simultaneously (i.e., the notion that both systems are endogenous to something). Such a case might be made for Japan, where campaign finance practices and frustration with "money politics" in Japan helped usher in electoral system and campaign finance reforms. It is relevant, however, that the "money politics" was in part due to Japan's electoral system (Cox and Thies 1998, 2000).

1.3   Electoral Systems and Candidate-Centered Elections

To explain the left-most part of Figure 1.1—the connection between electoral systems and electoral candidate-centeredness—requires consideration of both the relevant variation among electoral systems and the reasons why they lead to different levels of electoral attention to and agency by candidates. I do these tasks simultaneously, beginning with a contrast of three systems: those that use single-member districts (SMDs), closed list proportional representation, and open list proportional representation. Subsequently, other electoral systems are considered.

Two main features of any electoral system are the district magnitude (M) – the number of seats elected in a given electoral district – and the formula used to determine which competitors win seats. In the Anglo-American system, the magnitude is one (SMDs) and the formula plurality rule, in which the candidate with the most votes wins the seat. Here, individual candidates are objects of attention for two reasons. First, voters are likely to give some attention to candidates' "personal attributes" – anything that is specific to individuals, such as their character, profession, or accomplishments – and not only the candidates' "partisan attributes," such as a party's ideological platform or record in government. Second, individual candidates are likely to undertake some campaign activities that inadvertently, if not also explicitly, draw attention to them as competitors. (Note that neither point implies that political parties do not also matter; voters may care also about candidates' partisan attributes and political parties may also engage in campaign activities designed to aid the election of an individual candidate.) Of course, these are also related the other way

around: just as campaigning draws attention to candidates, candidates campaign in part because it advertises their personal attributes. Clearly, therefore, the extent to which candidates are objects of attention and agents of electoral activity are closely related. However, they are important to distinguish because each can affect the demand of candidate-level disclosures and because departures from the M=1 system will affect each in different ways, as argued subsequently.

First, it should be recognized that not all SMD systems necessarily contain the same amount of candidate-centeredness.[9] For instance, the United States is more candidate-centered than the United Kingdom because in the latter (i) the vote for legislator also determines the government, which leads voters to give less (more) attention to candidates' personal (partisan) attributes and (ii) parties rather than district-level primaries control which candidates receive nominations, which may lead candidates to behave more homogenously in the legislature (lest they not receive reelection nominations) and subsequently reduce the meaningfulness of personal attributes to voters as guide as to how candidates might serve as representatives (Cain

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[9] Similarly, not all SMD systems use plurality rule. France, for instance, uses a majority-plurality rule in which there is a second-round election held under plurality rule if no candidate obtains a majority in the first take. But this rule has little if any impact on candidate-centeredness. Thus, the factors which cause France's candidate-centeredness to differ from the US or UK would be the centralized nominations and semi-presidential design, in which there is both an elected (and legislatively powerful) head of state and a prime minister who heads the government.

et al. 1987; Carey and Shugart 1995).[10] Of course, these factors can also vary across countries with different electoral systems, and therefore merit their own consideration.

But, to provide a first example of the importance of electoral systems, consider the contrast between the SMD system and what is called closed list proportional representation (CLPR). Under CLPR rules, candidates from the same political party run on a list against lists representing other parties to win the district's M>1 seats, and seats are allocated to lists based on their proportion of the votes and then to candidates on the lists according to how the party ranks the candidates on the list.[11] Since a candidate's list rank is determined by the party and not the voter, who cannot vote for a particular candidate but only for one of the various lists, a candidate's chance of getting elected depends primarily on their party-given rank (and how well the party performs as a whole).

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[10] Like nomination control, parliamentarism may also lead to more homogenous legislative behavior via the confidence vote, causing personal attributes to be less meaningful indicators of legislative behavior.

[11] Three clarifications are in order. First, nothing prevents lists from running a single candidate, in which case a vote for the list is equivalent to a vote for the candidate. But when M>1, parties usually run more than candidate so that they might win more than one seat or to help "push" other candidates to victory. Second, the grouping of copartisan candidates on a single list may depend on parties' control over ballot access. For instance, pre-2003 Colombia used closed lists but did not require parties to control which lists could feature its name. The result was a proliferation of lists within each party, each in competition with one another. Because votes pooled only within lists, the system functioned like SNTV and CLPR (Cox and Shugart 1995). Lastly, serving the function of plurality rule in SMD systems are a variety of formulae to determine how a distribution of votes translates into a quantity of seat for each list, but these are not important for the candidate-centeredness of elections.

For candidates hoping to get elected, therefore, "high" list ranks are crucial. To get these, electorally-valuable personal attributes may help. By putting candidates who are well-liked by voters in the electable (high) positions of the list, a list may attract more votes and thus win more seats.[12] However, this follows only if voters pay some consideration to the names on the lists. And, since a vote for one list helps a group of candidates, whose combined personal attributes might not differ greatly from those of another list, the voter has less reason to cast a vote based on the personal attributes of a single candidate. A voter could "aggregate" the attributes of various candidates to determine which list has the better average personal attributes. But most voters would simply select a list based on its partisan attributes – a meaningful and easily-attainable differentiator between the sets of candidates (Shugart et al. 2005; Chin and Taylor-Robinson 2005).[13] Relative to an SMD system, therefore, CLPR gives voters less reason to attend to individual candidates.

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[12] It is reasonable to suppose that personal reputations being equal, candidates who are more faithful advocates of the party are more likely to receive good list ranks. Like nomination control generally, this phenomenon can lead to more cohesive legislative parties and a corresponding reduction in the usefulness of personal attributes to voters because, however attractive a candidate's personal attributes, they are less indicative of her future legislative behavior. However, this effect is not a consequence of closed lists per se.

[13] If a voter has information reliable enough to predict how many seats each list will win, he can then determine which candidates on each list will be marginal for a seat. In this case, the voter would have cause to give the same amount of consideration to personal attributes as he does under an SMD system (Shugart et al. 2005). The information requirements for this are substantial, however, and only likely to occur under low-M CLPR systems. And still, the voter may still (albeit "irrationally") take into account

Another distinction between SMD and CLPR systems is that the latter gives candidates less reason to campaign. Because candidates' electoral prospects depend on the performance of the list, each may choose to "free ride" rather than campaign in full force on the supposition that their own campaign efforts have only a negligible effect on their own and their party's electoral prospects. The consequent reduction in candidates' campaign "presence" not only constitutes a reduction in candidate-centeredness, but may also engender an additional, indirect decrease by taking voters' attention off candidates as individuals. In other words, just as a voter's conceptualization and evaluation of a public policy issue can be influenced by its portrayal and emphasis in the news media (the so-called "priming" and "framing" effects; see Chong and Druckman 2007), a difference in the amount of campaign activity undertaken by individual candidates might lead to a reduction in voters' attentiveness to candidates' personal reputations.[14]

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the personal attributes of other candidates on the various lists on the thinking that he simply cannot vote for a list with such-and-such candidate, even if that list's marginal candidate is his most preferred.

[14] Consider two further effects, both of which are related to those I have described, but neither a component of candidate-centeredness as it has been defined here: 1) If competitors in a CLPR system suspect that voters will pay less attention to their personal attributes (because they are "bundled together" with their listmates' attributes), they may adopt campaign and representation styles that place less emphasis on advertising and building personal attributes, and 2) If legislators in CLPR systems have greater difficulties claiming credit for certain personal reputation-building activities, such as constituency service (Chin and Taylor-Robinson 2005), they are likely to engage in less of them. Of course, it might be possible for either of these effects to indirectly affect candidate-centeredness; but since each is one step farther from those of electoral systems proper, I do not consider them.

Theoretically, then, there are three reasons why CLPR is less candidate-centered than an otherwise similar SMD system, each sufficient to vary the demand for candidate-level financial disclosures: (i) less campaign presence of candidates due to greater campaign free-riding incentives, (ii) the "bundling" of personal attributes, causing voters to pay them less attention, and (iii) the indirect effects of (i) on the importance voters place on personal attributes. To my knowledge, the last mechanism is new to the literature (cf. Canache et al. 2000), and the first two differ from theories in the extant literature in important but subtle ways. For instance, though they compose a part of Shugart et al.'s (2005) account, the focus there is on the *information demands* voters have to be able to evaluate the personal attributes of marginal candidates (see note 13).

Consider now open list proportional representation (OLPR). Like CLPR, OLPR has competing lists of candidates, where lists get seats in proportion to the number of votes cast for the list. Here, however, a voter can select a particular candidate on a list and those "preference votes" determine the order in which candidates get elected from the list.[15] To maximize election chances in this system, candidates do not need a high party-provided list rank (indeed, there are none) but more preference votes than all but s-1 candidates on the list, where s is the number of seats won by the list.

Unlike CLPR, therefore, a candidate's incentives in an open list system will be not to free-ride but to campaign in full force. These incentives may not contrast with

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[15] Some OLPR systems allow a "list level" vote in place of a preference vote. This type of vote affects the number of seats allocated to each list, but has no effect on intra-list allocation of seats to candidates.

those in an SMD system, but the incentives to emphasize personal attributes in one's campaign might. So argue Carey and Shugart (1995), who reason that the need for candidates to differentiate themselves from their co-partisan running-mates under OLPR gives heightened incentives to undertake activities to advertise and develop unique personal attributes among the electorate (with activities such as bill sponsorship and pork-barrel projects particularly worthwhile because they pose less threat to the coherence of the candidates' party label than candidates differentiating themselves on ideological grounds). Though these activities do not constitute greater candidate-centeredness as defined here, they may affect candidate-centeredness indirectly if they should cause voters to give greater attention to personal attributes – similar to effect (iii) for CLPR systems. Where this is the case, the OLPR system is more candidate-centered than both SMD and CLPR.[16]

Before considering other electoral systems, the role of district magnitude deserves comment. Although existing theories hold that increasing M contributes to candidate-centeredness in OLPR and diminishes it in CLPR (Carey and Shugart 1995, Shugart et al. 2005), I do not consider difference in M other than M=1 versus M>1 for two reasons. First, because M varies within most OLPR and CLPR electoral systems (across districts) any attempt to compare the candidate-centeredness of various

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[16] On some occasions, the contrast between OLPR and CLPR may be less stark. If the voter has enough information to determine which lists are marginal for seats but does not know which candidates on those lists are likely to get those seats, then it would be rational for the voter to combine or average the personal attributes of each list's candidates. However, these circumstances are highly specific, and not likely to undermine the greater candidate-centeredness of OLPR.

electoral systems entails some averaging of M. Second and more importantly, the reasons I have provided for greater/lesser candidate-centeredness across systems do not bear as close a connection with M as the arguments in those studies. It does stand to reason that both the bundling effect and the free-riding effect get more pronounced in CLPR with larger magnitudes (as parties run longer lists), but so long as the two list-based systems entail multiple candidates per list and it is not abnormal for parties to win more than one seat per district, the systems will differ from SMD systems. Consequently, I do not differentiate systems according to M.

1.3.1   Other electoral systems

With this foundation, we can consider other systems. I begin with the "flexible list," which allocates seats within lists in part by preference votes (like open lists) and in part by party-provided list orderings (like closed lists). Whether the flexible list system resembles more CLPR or OLPR depends on the rule determining the strength of preference votes vis-à-vis list orderings. Unfortunately for the purposes of predicting whether the system is more/less candidate-centered, these formulae tend to be complex. Consider Belgium's: candidates that receive enough preference votes to surpass an electoral quota are elected and subsequently other candidates on the list are given list-level votes (see note 15) until the sum of these and their preference votes push them over the quota, starting with the first candidate on the list and moving down the list until all of the list's seats are allocated. If half of the list-level votes are depleted before all of the list's seats are allocated to candidates, then the remaining winners are elected according to their preference votes. Thus, preference votes only

privilege candidates who receive enough of them to surpass the quota on their own or those who remain un-elected after half the list-votes votes are doled out (and unallocated seats remain), both of which are rare (de Winter 2005). Because preferences votes seem similarly if not more impotent in other flexible list systems, we can expect their level of candidate-centeredness to be more like CLPR than OLPR.

Another set of electoral systems do not use lists at all, but allocate M>1 seats by simple plurality rule or by vote transfers. In the former type, called the single non-transferable vote (SNTV), voters cast a vote for a single candidate and the top M vote-getters win seats. The latter type, the single transferable vote (STV), allows voters to rank-order candidates and then allocates seats by transferring votes from candidates that are elected or eliminated during the counting process to candidates still in the running for seats (until all M seats are allocated). The formulae which govern the vote-counting process in STV systems are complex, but the system, like SNTV, is similar to open lists in that co-partisans compete with one another for (higher ranked) votes. Therefore, these systems ought to accord similar levels candidate-centeredness as OLPR systems.

Because the remaining systems relevant here are combinations of the aforementioned systems across electoral districts, I confine the main analysis to four types of systems: (1) M>1 where preference votes determine which candidates on a list get elected (open lists and STV; there are no instances of SNTV); (2) M=1 (SMDs); (3) M>1 where preference votes in part determine which candidates get elected (flexible lists); and (4) M>1 where there are no preference votes (closed lists). In order, these are listed from most candidate-centered to most party-centered.

The systems not included in these four categories include mixed-member and other multi-rule systems. The typical mixed-member system (MMS) combines a "lower" SMD tier with an "upper" closed list tier, and gives voters a vote for each tier. Here, we might expect the lower tier elections to be characterized by more candidate-centeredness than those for the upper tier. But it is not clear that the two tiers should be considered in isolation, especially because some systems do not give voters a vote for both tiers (e.g., Mexico) and others allow candidates to run in both tiers simultaneously (e.g., Lithuania, Japan). Therefore, I have no theoretical expectations about their likelihood for candidate-level disclosures.

1.4   Comparing Disclosure Regulations

With electoral systems considered, we turn to the data. Table 1.1 arranges countries according to their electoral systems and the regulations governing the disclosure of campaign income. The electoral institutions are arranged horizontally and the campaign finance disclosure regimes are differentiated vertically according to their *agents of disclosure*: (a) individual candidates only (and not political parties), (b) both parties and *all* candidates, (c) both parties and *some* candidates, (d) parties only, or (e) neither parties nor candidates. Also included are fields for countries that have not enacted disclosure requirements and those for which I could not determine whether candidates, parties, or both disclose campaign income. The reason to differentiate between requirements for "all" and "some" candidates is that there are several regimes that exempt certain classes of candidates, such as non-partisan candidates or (in mixed-member systems) list-tier candidates. (Note, however, that

Table 1.1: Electoral Systems and Agents of Campaign Income Disclosure Regulations, *circa 2007*

Agents of disclosure	← More candidate-centered / Less candidate-centered →				
	Preference votes only (M>1)	Single-member districts	Preference votes and list order	List order only (closed lists)	Mixed-member & multi-rule systems
Candidates only	Malta				
Parties and all candidates	Brazil, Chile, Ireland	Australia, Canada, France, India, United States, United Kingdom	Belgium		Estonia, Japan
Parties and some candidates	Finland, Poland				Colombia, Hungary, Lithuania, New Zealand
Parties only	Dominican Republic		Austria, Czech Republic, Netherlands, Slovakia	Argentina, Bulgaria, Costa Rica, Israel, Norway, Portugal, Spain	Denmark, Georgia, Germany, Mexico
None	Switzerland		Luxembourg, Sweden	South Africa, Uruguay	
Insufficient information	Peru			Italy	South Korea, Taiwan

Table 1.1: Electoral Systems and Agents of Campaign Income Disclosure Regulations, Continued

Notes on table: Italics indicate parliamentary system according to Shugart 2006 (and my own coding for Luxembourg and Malta); non-italics include presidential, semi-presidential or other regimes. Theory applies to regions shaded gray. Dark gray regions expected to be least populated. See Table 1.3 in the Appendix for more information on each disclosure regime.

Notes on electoral systems: *COLOMBIA*: Parties, political movements, social movements, and other groups can choose to run on either an open or closed list. *DENMARK*: Seats are allocated to parties at the national level, but then within parties at in nomination districts according to various methods which resemble either closed or open lists. *DOMINICAN REPUBLIC*: Electoral rules changed from closed to open lists in 2000. *ESTONIA*: Open lists with compensatory regional and national tiers based on party vote totals; voters get one vote. Compensatory tier uses closed lists. *FRANCE*: Majority-plurality electoral formula. *GEORGIA*: Mixed-member system (MMS) with single-member districts (SMDs) and closed lists for a national district. *GERMANY*: MMS with SMDs and closed lists for regional districts; voters get a vote for each tier. *HUNGARY*: MMS with SMDs and closed lists for regional districts, with a further compensatory national tier; voters get a vote for SMDs and for the regional tier. *ITALY*: Currently closed lists with seat allocation to coalitions at the national level. Previously MMS with SMDs and closed lists in regional districts. *LITHUANIA*: MMS with SMDs and open list in a national district; voters get a vote for each tier. *MEXICO*: MMS with SMDs and closed lists in regional districts; voters vote only for the SMD tier. *NETHERLANDS*: A version of flexible lists. *NEW ZEALAND*: MMS with single-member districts and closed list national tier. Voters get two votes. *NORWAY*: Similar to flexible lists, voters may cross candidates off the lists. But since it extremely rare for a candidate loses his seat via this mechanism, it is listed as CLPR. *POLAND*: Open list in regional districts; previously had a second, national tier. *SLOVAKIA*: Flexible lists, voters get up to four preference votes. *URUGUAY*: Legislative and executive votes are fused – a single vote selects a presidential candidate and a list to each of the two chambers. The lists are sub-party lists, but they are closed within each list.

included in the "all candidates" category are regimes that require all candidates to disclose only if they engage in their own fundraising and/or expenditure. Therefore, Estonia, which exempts candidates if they accept no contributions or make no expenditures, appears in category b.)

The shaded region in Table 1.1 corresponds to the countries which have different levels of candidate-centeredness and which have adopted disclosure regulations. The table confirms my prediction that countries will be concentrated in the upper-left and lower-right corners of the shaded area (or that the darkly-shaded regions will be least populated). Where preference votes matter, disclosure requirements usually require at least some (if not all) candidates to file reports: all SMD countries require all candidates to file, and all open list or STV cases that require disclosures do so from at least some candidates, except the Dominican Republic. By contrast, where preference votes matter little or are nonexistent, candidates do not disclose: only one flexible list (Belgium) and no closed list system requires candidate-level disclosure. Before making other observations, I discuss some of the regimes in greater detail.

Countries using open lists. Among the open list cases, the Dominican Republic is the only country with disclosure regulations that do not apply to candidates. However, since the electoral system was recently changed from CLPR, and the disclosure regulations were adopted before the electoral reform, it is not as exceptional

as its placement in the table would indicate.[17] Nevertheless, although candidates and voters seem not yet to have adapted to the open list system (Sagas 2003), my theory would suggest that future campaign finance reforms in the Dominican Republic are likely to confront some demand for candidate-level disclosures.[18]

Peru's regulations might be like the Dominican Republic's in exempting candidates, but there is evidence to the contrary. For example, Article 31 of the Political Parties Law (2003) states that "candidates cannot receive any type of direct donations without the knowledge of their political parties," and a 2005 regulation prohibits candidates from making expenditures without the involvement of their political parties (and requires parties to include their candidates' expenditures in their disclosures).[19] In addition, the party disclosure data made public by the National Office of Electoral Processes (ONPE) show at least some candidate-level information: the money given from parties to candidates.[20] Ultimately, however, I left Peru uncategorized because I was unable to confirm if candidates themselves must disclose their political contributions. (Inquiries I made with ONPE were unreturned.)

Beyond these regimes, there are some that require disclosures from only certain types of candidates. Poland's rules require disclosures only from independent

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[17] For this reason, the country should perhaps appear in the closed list column. Since I did not collect data regarding when countries adopted their electoral systems or disclosure regulations, it appears as is.

[18] Then again, a first priority may be implementation of the existing disclosure requirements – to date, it seems they have been ignored (Bolivar Díaz 2007; Cordero 2007).

[19] Article 54 of *Reglamento De Financiamiento y Supervisión De Fondos Partidarios* (2005).

[20] Data are available at http://www.onpe.gob.pe and http://www.transparencia.org.pe.

candidates and thus produce little candidate-level information since most candidates run under party labels. Finland's regulations are a bit different – indeed, distinctive among all the countries surveyed here – in that they require disclosure only from *winning* candidates. This regulation seems designed only for the purpose of checking legislative behavior, as it can neither provide information to voters before the election nor be used to enforce spending or contribution limits for losing candidates (indeed, there are no such regulations).

Lastly, Switzerland has no campaign finance disclosure requirements at the federal level (there are some at the canton level). This regime perhaps reflects the relative unimportance of their "citizen legislature" vis-à-vis the Federal Council or even their longstanding tradition of confidentiality in financial matters.

Countries using STV. After a scandal involving dubious contributions made by developers to legislators and local politicians, Ireland introduced regulations in 1997 (reformed in 2002) that, among other things, mandated disclosures from all legislative candidates. Similar regulations exist in Malta, the other country using STV. But, unlike the other countries surveyed here, Malta's disclosure regulations do not extend to political parties. This is not at odds with my theory, but it is interesting, and the exemption for parties has not gone unnoticed (e.g., *The Times of Malta* (2007) newspaper recently called for reforms to mandate party-level disclosures).

Countries using flexible lists. Reflecting the fact that their candidate-centeredness is more like closed list than open list systems, most flexible list systems provide only party-level disclosures. (Although not by regulation but voluntary agreement among political parties, Sweden also provides some party-level disclosures

(Nergelius 2005)). Nevertheless, it is significant that candidates in these systems do collect preference votes and sometimes in quantities large enough to get elected in spite of the party-provided list orderings. It would seem, therefore, that whatever candidate-level campaign activity and intraparty competition that occurs in these elections has not been sufficient to merit candidate-level disclosures.

The candidate-level regulations in Belgium were adopted by ministerial decree (18 April 2003) shortly after a reform to the electoral system (in 2002-03) made Belgian lists more flexible (the new system is described above). Perhaps the regulation was introduced based on the expectation that elections would become more candidate-centered, or perhaps it had simply become time to lend some enforceability to the spending limits that had existed for candidates since 1989 (Maddens and Noppe 2005). Either way, however, the disclosures are not made easily accessible – they are viewable only at the Interior Ministry for a period of fifteen days.

Countries using mixed-member and multi-rule systems. Though outside the shaded region, it is worthwhile to consider the regulatory environments of the mixed-rule systems, especially New Zealand and Lithuania, who have chosen to require disclosures from only the candidates of the more candidate-centered (SMD) tier (their upper tiers use closed list and flexible lists, respectively). This may be because list-tier candidates do not engage in fundraising or campaigning, because voters do not care about who supports list-tier candidates, or both.

Hungary and Colombia differentiate among candidates differently. Like Poland, the former differentiates between independent and partisan candidates, requiring disclosures only from the latter. In Colombia, rules distinguish between, on

the one hand, candidates who compete as part of "social movements" and "significant groups of citizens" and, on the other hand, candidates who compete as members of "political parties" or "political movements." The former submit their own reports directly to the National Electoral Council (CNE), while the latter must submit reports to their parties or movements, who then aggregate that data along with the organization's financial information before reporting to the CNE. Thus, although all candidates and their groups are required to retain the candidate-specific information in case the CNE should want to investigate, the candidate-level data is not disclosed or made public for parties or political movements. This means that there are candidate-level disclosures required for some open list and some closed list candidates – after a 2003 reform to the electoral system, parties and other groups could begin choosing their own list type.

The remaining mixed-rule countries either require disclosures only from parties (e.g., Germany and Mexico) or from all candidates (e.g., Japan). Estonia's regulations fit the latter category, though their rules require disclosures from partisan candidates only when they raise or spend their own money, regardless of whether they run in the regionally-districted open list tier or the national closed list tier.[21]

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[21] Estonia's open lists are slightly different than the norm – they only elect candidates if they receive enough preference votes to surpass the 10% of the Hare quota (the number of district votes cast divided by M). Also, voters do not have a vote for the national-tier closed lists; instead, these lists are used to correct for the disproportionality between seats and votes at the district level. The campaign finance for candidates in this system shows that few file disclosures. Data for the 2003 election are available at

It is possible to draw some connections between the disclosure regimes of the countries that do not distinguish between candidates running under different rules (as do New Zealand and Lithuania) and their current or previous electoral systems. For instance, Mexico's current system has been recognized as substantially party-centered because of party-controlled nominations and a prohibition on the reelection of legislators (Weldon 2004), and Japan adopted its current candidate-level regulations nearly simultaneously with an electoral reform to abandon its candidate-centered SNTV system.[22] To consider these possible connections at length, however, would be beyond the scope of this paper.

1.4.1 Beyond electoral institutions[23]

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www.vvk.ee/r03/yld_kulud.stm, where the reports of party-affiliated candidates are attached to those of their parties.

[22] A connection can also be made for Colombia, which previously used an SNTV-like system (see note 11) and a regulatory system that, beginning in 1994, distinguished between independent and non-independent candidates (requiring disclosure from only the former) but later evolved to regulate all candidates – by at least the 2002 election the CNE collected and make public at least some candidate-level reports for non-independent candidates (cf. Botero and Olivella 2006; de la Calle n.d.). After the electoral system reform, the CNE created the new disclosure distinctions (Resolution No. 0157, 31 Jan 2006).

[23] I do not consider variables that may affect disclosure regimes other than electoral systems and parliamentarism. Some variables, such as the presence of other campaign finance regulations (e.g., spending limits, public financing), can be examined with the data provided in the appendix. Other variables, such as party control over candidate nominations, prove too difficult to collect since they

Table 1.1 also allows us to examine the relationship between disclosure requirements and government types: either parliamentary (in italics) or non-parliamentary (including presidential, semi-presidential, and other forms of government, as categorized by Shugart 2006). Although parliamentarism is an important factor affecting a country's candidate-centeredness, the table shows no apparent relation between it and disclosure regulations. This does not mean that at a more nuanced analysis of disclosure regulations would find the influence of parliamentarism insignificant. For example, the greater accessibility of disclosure information in the US versus the UK might be a result of the greater candidate-centeredness in the US – while candidates' disclosures in the UK are hard to access because they are neither centralized nor published, disclosures in the US are published on the internet by the Federal Election Commission.

1.4.2   Beyond "who discloses?"

While it is one thing for candidate-centered systems to entail candidate-level disclosure regulations, it is another for those regulations to actually produce information that accurately accounts for candidates' political finance. While my theory does not address whether the disclosure regulations of one country are likely to be more or less effective than any other, Table 1.2 allows a comparison of the extent to which regulatory regimes provide detailed disclosure information to publics. The table distinguishes between the various candidate-level disclosure regulations in existence

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often vary within countries (across parties). Still other variables, such the number of years a country has been democratic, do seem not overly significant after considering Table 1.1.

and the party-level regulations of countries that do not require any candidate-level disclosures (excluding the Dominican Republic), showing for each two statistics: (1) the percent of regimes collecting itemized contributions that publicly disseminate only aggregated figures (as in Austria, France, and Portugal) and (2) the percent of regimes that publicly release itemized contributions that do so over the internet. (Information for each of the countries is appears in the appendix.)

The data in Table 1.2 show that disclosure regulations applying to candidates are more likely than those applying to (only) political parties to both disseminate itemized contributions and to do so via the internet. With the caveats that disclosure regulations may be created for different purposes and that various loopholes can undermine the accuracy of publicly-disseminated disclosures, the data suggests that regimes that regulate candidates are no less effectual than those that do not. It further implies that the demands for candidate-level disclosures are supplied to some meaningful degree.

It should be noted that although regimes mandating candidate-level disclosures provide voters more information, their timing is wanting – only the United States releases any information *before* polling day (see Table 1.3 in the appendix). In the candidate-centered system, where competitors (candidates) come and go from election to election, disclosures released only after elections inform voters little.[24] In the party-centered system, by contrast, where competitors tend to stick around from election to election, post-electoral disclosures still have some value for future elections.

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[24] Countries that provide some pre-electoral disclosures or estimates by parties include Costa Rica, Germany, Peru, Slovakia, and the UK.

Table 1.2: Agents of Disclosure and the Publicity of Political Contributions

Agent of disclosure	Electoral system	Number of countries with contribution disclosures	Public disclosure of contributions contains items	Public disclosure of contributions made via internet
Candidates	Preference votes only (M>1)	7	71%	71%
	SMDs	6	86%	43%
	All	19	68%	63%
Parties*	List order only (closed lists)	7	29%	29%
	All	15	47%	47%

* Includes only regimes that do not mandate disclosures from any candidates. The Dominican Republic is excluded.

1.5   Discussion

This article has revealed a pattern of democracy and disclosure: the regulations regarding which competitors disclose their political finance varies with other democratic institutions. My explanation for this relationship is that electoral systems create different levels of demand for candidate-level regulations. Electoral systems do this by affecting both the degree to which candidates act as electoral competitors and the amount of scrutiny voters give to candidates. Though the two reasons are related, each is a plausible demand-side cause for the adoption of candidate-level disclosure regulations.

The reasons why electoral systems affect the candidate-centeredness of elections are several and somewhat involved, but their differentiation extends existing theories in the electoral systems literature. My argument gave less consideration to the supply of disclosure regulations for reasons of length and because a convincing account of the various policymaking processes requires considering a large number of inherent and structural factors. But, the fact that existing regulatory regimes vary in tandem with electoral systems suggests that the various supply-side factors do not greatly stifle the demand for candidate-level disclosures. Given that politicians have interests that do not necessarily coincide with those demanding of political finance information and regulation, we might have found otherwise. The strength of the relationship suggests that although political finance regulations tend to be subject to frequent adjustment, their disclosure requirements will continue to correlate with the candidate-centeredness of various electoral systems.

Although the relationship between disclosure regulations and electoral systems raises no normative issues, it does beg important questions for the less candidate-centered systems: Do individual candidates raise and spend money? If so, who finances them and in what amounts? How do they spend their money and is any left unspent? What mechanisms ensure that party-level regulations are not being undermined by money flows through candidates' accounts, as "soft money" was used – and "527 organizations"[25] still are – to get around contribution limits to candidates in the United States? Questions such as these will remain unanswerable without reliable information about candidates' political finance. Where individual candidates are of little electoral importance, few may find this disconcerting. Then again, the level of interest might also depend on the answers.

Chapter 1, in full, is a reprint of the material as it appears "Democracy and Disclosure: Electoral Systems and the Regulation of Political Finance" in the *Election Law Journal* 2008 (Volume 7, Number 4). Johnson, Joel W. The dissertation author was the sole investigator and author of this paper. The paper is reproduced by permission. It has gone through minor formatting changes only. Chapter 1 also includes data reproduced by permission of International IDEA from [Funding of Political Parties and Election Campaigns] © International Institute for Democracy and Electoral Assistance 2003. Permission includes data at the ACE Electoral Knowledge

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[25] Soft money contributions were not subject to limits as they were given to and spent by political parties, but they were used to help candidates, who are subject to contribution limits. 527's are non-profit organizations governed not by campaign finance regulations but tax regulations, and are thus not subject to contribution limits. They, too, spend money hoping to affect district-level elections.

Network (2006), a project of International IDEA and other partner organizations. http://www.idea.int.

1.6   Appendix: Data and Sources

This appendix contains a list of sources and references used for each country, information on the scope of the survey, and the full survey of disclosure and other political finance regulations. The sources by country are as follows:

Argentina: Argentina Law 25.600 (2002); Ferreira Rubio (2005); Ferreira Rubio (1997)

Australia: Australian Electoral Commission (www.aec.gov.au)

Austria: Sickinger (2005); Federal Ministry of the Interior (www.bmi.gv.at)

Belgium: Maddens & Noppe (2005); Federal Public Service Home Affairs (www.diplomatie.be); Belgian Chamber of Representatives (www.dekamer.be)

Brazil: Supreme Electoral Tribunal (www.tse.gov.br)

Bulgaria: Ikstens et al. (2001); Kostadinova (2007)*;* Central Electoral Commission (www.2005izbori.org); National Assembly of the Republic of Bulgaria (parliament.bg)

Canada: Elections Canada (www.elections.ca)

Chile: Electoral Service (www.servel.cl)

Colombia: National Electoral Council (www.cne.gov.co); Botero & Olivella (2006)*;* de la Calle (n.d.)

Costa Rica: Casas-Zamora (2005); Supreme Electoral Tribunal (www.tse.go.cr)

Czech Republic: Casas-Zamora (2005); Ministry of the Interior (www.mvcr.cz)

Denmark: Pedersen (2005)*;* Information Office of the Danish Parliament (Folketinget, www.ft.dk); Elklit (2005)

Dominican Republic: Ley Electoral (No. 275-97)*;* Participación Ciudadana (www.pciudadana.org); Casas-Zamora (2005); Bolivar Díaz (2007); Cordero (2007)

Ecuador: Participación Ciudadana Ecuador (www.participacionciudadana.org)

Estonia: National Election Committee (www.vvk.ee); Riigikogu (www.riigikogu.ee)

Finland: Tarasti (2005); Ministry of Justice (www.om.fi)

France: Commission Nationale des Comptes de Campagne et des Financements Politiques (www.cnccfp.fr); Doublet (2005)

Germany: Morlok and Streit (2005); Bundestag (www.bundestag.de)

Hungary: Enyedi (2005); Ikstens et al. (2001); Act XXXIII of 1989 on the Operation and Financial Management of Political Parties (Available at: www2.essex.ac.uk/elect/database/Hungary/databases/legislationPPA.asp); Act C of 1997 on Electoral Procedure (Available at: www.valasztas.hu/en/02/acts/1997c_en.html)

India: Electoral Commission (*Handbook* 2006, www.eci.gov.in); Sridharan (1999); Representation of the People Act, 1951; Election and Other Related Laws (Amendment) Act, 2003

Ireland: Standards Commission in Public Office (www.sipo.gov.ie); O'Dowd (2005)

Israel: Hofnung (2005); Knesset (www.knesset.gov.il); State Comptroller (www.mevaker.gov.il)

Italy: Pelizzo (2004); Fabiano (2005); Transparency International Italia (www.transparency.it); Legge 10 Dicembre 1993, n. 515

Japan: Blechinger-Talcott and Hasebe (2005); Kohno 2001; Carlson (2007)

Lithuania: Law on Elections to the Seimas, As Amended 2000, (Available at: www.essex.ac.uk/elections/); Central Electoral Committee (www3.lrs.lt/rinkimai/2004/seimas/index.eng.html)

Luxembourg: Reding and Wurth (2005)

Malta: Electoral Office (www.electoral.gov.mt); *The Times of Malta* (2007)

Mexico: Instituto Federal Electoral (www.ife.org.mx)

Netherlands: Nehmelman (2005); Tweede Kamer (Parliament, www.tweedekamer.nl); Ministry of the Interior and Kingdom Relations (www.minbzk.nl); Kiesraad (Electoral Committee, www.kiesraad.nl)

New Zealand: Elections New Zealand (www.elections.org.nz)

Norway: Hjorth and Nygård (2005)*;* Ministry of Local Government and Regional Development (www.odin.dep.no); Norwegian Social Science Data Services (www.nsd.uib.no); Regulatory changes in Lov 06-17-2005, 11-24-2005 not reflected in survey.

Peru: Oficina Nacional de Procesos Electorales (www.onpe.gob.pe)

Poland: Walecki (2005); Ikstens et al. (2001)

Portugal: Canas and Meirinho Martins (2005); Tribunal Constitutional (www.tribunalconstitucional.pt); STAPE (www.stape.pt)

Slovakia: Mesežnikov (2005)

South Korea: In (2005); Ferdinand (2003); Shin et al. (2005); Jaung and Mo (2001)

Spain: Fernández Vivas (2005); Tribunal de Cuentas (www.tcu.es); Ley Orgánica 5/1985 del Régimen Electoral General (Available at: noticias.juridicas.com)

Sweden: Nergelius (2005); Riksdag (www.riksdagen.se); Valmyndigheten (Electoral authority, www.val.se)

Taiwan: Chang (2005); Ferdinand (2003)

United Kingdom: Electoral Commission (www.electoralcommission.org.uk)

United States: Federal Elections Commission (www.fec.gov)

Uruguay: Casas-Zamora (2005)

Survey scope and data. The survey encompasses both regulations and practices. Examples of the latter include the decision of a regulator to post disclosure reports on the internet or the collection of *itemized* disclosures despite no specific statutory requirement to do so. Where there is not specific information otherwise, I assume regulations are in effect.

The scope of the survey is confined to regulations and practices governing campaign finance and annual political finance to politicians and parties (though more attention to income regulations than disclosure regulations). It ignores disclosure

regulations regarding income other than direct or in-kind political contributions, such as consulting or investments. And no attention is given to the rules that govern third parties, presidential candidates, competitors to upper legislative chambers. For information on these regulations, see International IDEA (2003).

It is of course harder to confirm that regulations do *not* do something, such as mandate candidate-level disclosure or provide public access to disclosures, since this information in unlikely to appear in print. Where not appearing in print, I only concluded that something does not occur if multiple sources made no indication.

The full survey appears in Table 1.3, which includes the following fields: (1) whether candidates, parties, or both disclose (there are entries only for competitors that do disclose, and "N/A" when neither parties nor candidates disclose), (2) the level of detail (e.g. whether contributions must be itemized or can be aggregated into categories, such as "business") in income disclosure reports submitted to regulatory authorities and the level of detail in published (i.e. publicly-available) income disclosures (both indicating if there is a threshold over which contributions must be itemized); (3) how income disclosures are made public (e.g. internet, at electoral office); (4) when income disclosures are made public (e.g. pre-electoral, post-electoral, or annual); (5) whether campaign expenditures are disclosed to the public and the level of detail in them; (6) whether candidates or parties receive direct public funding (subsidies given annually or electorally by the state to candidates or parties); (7) whether there are bans on sources of campaign income (e.g. corporations, foreign sources, etc.); (8) whether there are limits on the size of contributions, and (9) whether there are limits on campaign expenditures. A plus sign (+) in columns (6)-(9) indicates

if the information comes from IDEA's survey. If there is no plus sign, the information comes from country-specific sources listed above.

The data in items (1)-(5) correspond to those I analyze in the text. The second part of column (2) – what contributions are disclosed to the public – was determined by examining disclosure reports or locating specific information about what information is made public. It is of course possible that some country makes available to the public itemized information, but I could not locate information to that effect. The information about the level of detail in reports, items (1) and (3), includes contribution thresholds under which those details are not required (by law or regulation). Although the notes contain much information, I did not systematically examine whether these thresholds apply per contribution or per contributor/year (or some other formula). Further, these fields only include information about direct political contributions, and not necessarily other contributions, such as those on credit or in-kind.

Table 3:1: Disclosure Regulations for Parties and Candidates in Legislative Elections

Country	1. Who discloses?	2. Level of income disclosure# Level of disclosure in reports	2. Level of income disclosure# Level of disclosure to public	3. Public access via…	4. Timing of income disclosure (pre-/post-electoral, annual)	5. Expenditure disclosure to public#	Other regulations 6. Direct public funding	7. Bans on income^	8. Contribution limits	9. Spending limits
ARGENTINA	Parties	Items	None*	None	Pre, post, annual*	Items	Y	Y	Y	Y
AUSTRALIA	Candidates*	Items: A$200	Items: A$200	Internet	Post*	Totals	N*	N	N	N
AUSTRALIA	Parties	Items: A$10000	Items: A$10000	Internet	Annual	Totals	Y	Y+	N	N+
AUSTRIA	Parties	Items: E$7260	Categories	Newspaper	Annual	Categories	Y	N	N	N
BELGIUM	Candidates	Items: E$125	Items: E$125	Office*	Post*	Items	N	Y	Y	Y*
BELGIUM	Parties	Items: E$125	Items: E$125	Office*	Post, annual	Items	Y+	Y	Y	Y+
BRAZIL	Candidates	Items	Items	Internet	Post*	Categories	N	Y	Y*	N
BRAZIL	Parties	Items	Items	Internet	Post, annual*	Categories	Y	Y	Y*	Y
BULGARIA	Parties*	No info.	No info.	Internet	No info.	No info.	Y+	Y+	Y+*	Y+*
CANADA	Candidates	Items: C$500*	Items: C$500	Internet	Post*	Items	Y	Y	Y	Y
CANADA	Parties	Items: C$500*	Items: C$500	Internet	Post, annual*	Items	Y	Y	Y	Y
CHILE	Candidates	Items: US$667*	Items: US$667	Internet*	Post*	Items	Y	Y	Y	Y
CHILE	Parties	Items: US$667*	Items: US$667	Internet*	Post, annual	Items	Y	Y	Y	Y
COLOMBIA	Either*	Items	Categories*	Internet	Post*	Categories	Y	Y+	N+	Y+
COSTA RICA	Parties	Items	Items	Internet	Monthly*	Categories	Y	Y+	Y+*	N+
CZECH REP.	Parties	Items	Items	Parliament*	Annual	Categories	Y+*	Y+	N+	N+
DENMARK	Parties	Names: D$20000*	Names: D$20000*	Internet	Annual	Categories	Y	N+	N	N
DOMINICAN REP	Parties	No info.*	None	None	Post, annual	No info.*	Y	Y+	N+	N+
ESTONIA	Candidates*	Items	Items	Internet	Post*	Items	N	Y+	Y	N+
ESTONIA	Parties	Items	Items	Internet	Post*	Items	Y+	Y+	Y+*	N+

Table 3:1: Disclosure Regulations for Parties and Candidates in Legislative Elections, Continued

Country	1. Who discloses?	2. Level of income disclosure#		3. Public access via…	4. Timing of income disclosure (pre-/post-electoral, annual)	5. Expenditure disclosure to public#	Other regulations			
		Level of disclosure in reports	Level of disclosure to public				6. Direct public funding	7. Bans on income^	8. Contribution limits	9. Spending limits
FINLAND	Candidates*	Items: E$1700	Items: E$1700	Internet	Post*	Totals	N	N	N	N
	Parties	Items: E$1700	Items: E$1700	Internet	Post, annual*	Totals	Y	N	N	N
FRANCE	Candidates	Items	Items, no names*	Office*	Post	Categories	Y	Y	Y	Y
	Parties	Categories	Categories	Internet*	Annual	Categories	Y	Y	Y	Y
GEORGIA	Parties	Items: E$10000	Items	Internet*	Post	Categories	Y+	Y+	N+	N+
GERMANY	Parties	Items: E$10000	Items: E$10000	Internet	Annual*	Categories	Y*	Y	N	N
HUNGARY	Indpts*	Items: US$1767*	Items: US$1767	No info.*	Post*	Categories	N	Y	N	Y
	Parties	Items: US$1767*	Items: US$1767	Journal*	Post, annual*	Categories	Y	Y	N	N
INDIA	Candidates	Items	Items	Office*	Post*	Items	N	.	.	Y
	Parties	Items: Rs10000	Categories	Internet	Post, annual	Categories	N+	N+	N+	N+
IRELAND	Candidates	Items: €634.87*	Items	Internet*	Post, annual*	Categories*	Y*	Y	Y*	Y*
	Parties	Items	Items	Internet	Annual	Categories*	Y	Y	Y	N
ISRAEL	Parties	Items	Items	Internet	Post, annual	Categories*	Y	Y	Y	Y
ITALY	Candidates	No info.	No info.	No info.	Post*	Yes*	Y	.	Y	Y
	Parties	No info.	No info.	Internet*	Post, annual	Yes*	Y	Y+	N	Y+
JAPAN	Candidates	Names: Y50000	Names: Y50000	Journal*	Annual	Names*	N	Y	Y	Y
	Parties	Names: Y50000	Names: Y50000	Journal*	Annual	Names*	Y	Y	Y	N+
LITHUANIA	Candidates*	Items	Items	Internet	Post*	Items	Y	.	.	Y*
	Parties	Items	Items	Internet	Post*	Items	Y	Y+	Y*+	Y*
LUXEMBOURG	N/A*	None	None	N/A	N/A	None	Y*	N	N	N
MALTA	Candidates*	Items	Items	Office*	Post	Categories*	N+	N+	N+*	Y+*
MEXICO	Parties	Items	Items	Internet*	Post and annual*	Categories	Y*	Y	Y*	Y*

Table 3:1: Disclosure Regulations for Parties and Candidates in Legislative Elections, Continued

| Country | 1. Who discloses? | 2. Level of income disclosure# | | 3. Public access via… | 4. Timing of income disclosure (pre-/post-electoral, annual) | 5. Expenditure disclosure to public# | Other regulations | | | |
		Level of disclosure in reports	Level of disclosure to public				6. Direct public funding	7. Bans on income^	8. Contribution limits	9. Spending limits
NEW ZEALAND	Candidates*	Items: NZ$1000*	Categories	Internet*	Post*	Yes*	N	N	N	Y
	Parties	Items: NZD10000	Items: NZ$10000	Internet*	Post, annual*	Items*	N	N	N	Y
NORWAY	Parties	Names: US$2600	Names: US$2600	Parliament	Annual	None	Y*	Y	N	N
PERU	Parties*	Items	Items	Internet	Pre, post, annual*	Items	Y	Y	Y	N
POLAND	Candidates*	Items	No info.	No info.	Post, annual	Yes*	N	Y	Y	Y
	Parties	Items	No info.	No info.	Annual	Yes*	Y	Y	Y	Y+
PORTUGAL	Parties	Items	Categories	Internet	Post, annual	Categories*	Y*	Y	Y	Y
SLOVAKIA	Parties	Items/names	Items/names	Internet*	Post, annual*	Yes*	Y+	Y	.	Y
SOUTH AFRICA	N/A*	None	None	N/A	N/A	None*	Y+	N+	N+	N+
SOUTH KOREA	Cand (all?)	No info.	No info.	No info.	No info.	No info.	.	.	.	.
	Parties	Items	Categories*	Categories	Post	Items*	Y*	Y	Y	N
SPAIN	Parties	No info.*	Categories	Internet*	Post, annual	Yes*	Y*	Y	Y	Y*
SWEDEN	N/A*	None	No info.	No info.	No info.	None	Y*	N	N	N
SWITZERLAND	N/A*	None	None	N/A	N/A	None	N*	N	N	N
TAIWAN	Cand (all?)	Items: NT$20000	No info.	No info.*	No info.	Items*	Y	Y	Y	Y
	Parties	Items: NT$20000	No info.	No info.*	No info.	Items*	Y	Y	Y	N
UNITED KINGDOM	Candidates	No info.	No info.	Office*	Post*	Categories	N	Y	N	Y
	Parties	Items: £5000*	Items: £5000	Internet	Week, quarter*	Categories	Y	Y	Y	Y
UNITED STATES	Candidates	Items: $200	Items: $200	Internet	Month, quarter*	Items	N	Y	Y	N
	Parties	Items: $200	Items: $200	Internet	Month, quarter*	Items	N	Y	Y	N
URUGUAY	N/A*	None	None	N/A	N/A	None	Y*	N+	N+	N+

Table 3:1: Disclosure Regulations for Parties and Candidates in Legislative Elections, Continued

Table notes. N/A = not applicable. "." means no information. # "Items" = amounts and names. "Names" = names of donors without amounts. "Categories" and "Totals" = aggregated amounts without names. Colons with a monetary figure indicates the threshold over which items or names must be disclosed. This does not include information about whether anonymous contributions are allowed above threshold. ^Indicates that there is any ban on a source of income (foreign, business, etc.) + Reproduced by permission of International IDEA from [Funding of Political Parties and Election Campaigns] © International Institute for Democracy and Electoral Assistance 2003. Fields 6-9 correspond to questions from the International IDEA database as follows. "Do political parties receive direct public funding?", "Is there a ban on any type of donation to political parties?", "Is there a ceiling on how much a donor can contribute?", "Is there a ceiling on party election expenditure?" Asterisks next to IDEA information contain quoted information in the country notes below.

Country Notes:

ARGENTINA	(2) Public disclosure of required reports was included in law but vetoed by the president. (4) Itemized income/expenditure due 10 days before election. Post-electoral report due 60 days after election. (5) Expenditure by item is required in pre-electoral, post-electoral and annual reports.
AUSTRALIA	(1) Candidate income/expenditure is normally through parties, though candidates are required to file "nil" returns. (2) Candidates do not have to disclose contributions or expenses incurred by their parties. (4) Candidate reports are due 15 weeks and made public 24 (via internet) weeks after election. Candidate income is disclosed 24 weeks after election. Disclosure of party income is due in November (16 weeks after June 20) and made public on 1 February. (6) Independent candidates do receive public funding.
BELGIUM	(3) Candidates and parties electoral reports are viewable by public for 15 days at the Electoral Authority, during which voters may add remarks to the reports. (4) Electoral reports are due 45 days after election. Parties and candidates also file annual list of names of contributors (no information regarding whether these are published). Parties annual reports are published in Parliamentary documents. (9) By legislation, the spending limits for candidates depend on their pre-electoral list-position (with top candidates having higher spending limits).
BRAZIL	(4) As of 2006, parties and candidates are required to submit pre-electoral estimates of income and expenditure. And, parties are required to submit monthly balance sheets as well as annual reports. All of these contain categorized income and expenditure. (8) Businesses are limited in what they can contribute.
BULGARIA	(1) The EPIC database says candidates disclose as well. I found no confirmation of this. (8) Yes, per election cycle. (9) Yes, per election cycle.
CANADA	(2) Donation disclosure applies for the total of all contributions per donor per year. C$500 is the threshold as of 1 Jan 2007; it was previously C$200. (4) Electoral reports due within 4 months after election.

Table 3:1: Disclosure Regulations for Parties and Candidates in Legislative Elections, Continued

Country	Description
CHILE	(2) The threshold is the dollar-approximate value for the 2005 legislative election. Contributions below the threshold may be anonymous, but these are capped at a total of 20% of the candidate's spending limit. Above the threshold, candidates and parties may also receive "secret" contributions in which they do not know the source of the donation. (4) Legislation requires post-electoral reports to be on the internet for at least a year (after they are analyzed by the Electoral Service).
COLOMBIA	(1) Candidates report if they were members "significant groups of citizens" or "social movements" but groups report if they are "political movements" or political parties. (2) Reports are aggregated by list for candidates who file. (4) Reports are due one month after election. (6) Parties and political movements receive direct public funding.
COSTA RICA	(2) Casas-Zamora (2005) reports on what income and expenditure is missing in reports. (4) Disclosure is reported monthly during campaign periods, otherwise quarterly. (5) Expenditure disclosure is required only of parties anticipating public funding. (8) Per year.
CZECH REPUBLIC	(2) Donations that are less than 50.000 CZK require names and amounts. Donations over 50.000 CZK require more information (e.g. address, date of birth) and verification by auditor. (3) Official reports are submitted to the Chamber of Deputies. The Chamber does not, but some parties post these on the internet on their own accord. (4) Summaries are also sometimes posted in newspapers. (6) For parties.
DENMARK	(2) Names of contributors who donate over D$20,000 are required (unless they donate anonymously).
DOMINICAN REPUBLIC	(2,5): Law requires that parties who receive electoral subsidy are required to account for their income/expenditure according to "accepted legal principals." (3) Bolivar (2007) and Cordero (2007) report that there has not been public disclosure.
ESTONIA	(1) Independent candidates must file, and partisan candidates file by attaching their information to their parties' reports if they have their own campaign finance (i.e. candidates who receive no income or make no expenditure do not file). (4) Reports are due one month after the election. (8) Per year.
FINLAND	(1) Only elected candidates file reports. (4) Electoral reports due two months after confirmation of electoral results. Sub-national party organizations also file annual reports.
FRANCE	(2) Candidates' reports have names of contributors removed; public can see the amounts of donations, but not the sources. (3) Candidates' reports are available at local (constituency level) electoral offices. Parties reports are published in the official journal, which is online. (4) Reports are due two months after election.
GEORGIA	(3) 2004 data is posted on the internet.

Table 3.1: Disclosure Regulations for Parties and Candidates in Legislative Elections, Continued

Country	Regulations
GERMANY	(2) Categories, items for contributors who donate at least €10,000/year. (3) Reports are published in parliamentary bill and are available on internet (including donations over €50,000). (4) Donations over €50,000 to be reported immediately. (6) For parties.
HUNGARY	(1) Only independent candidates also file reports. (2) For foreign donations, the disclosure threshold is US$353. (3) Sources conflict on whether independent candidates reports are available to public. Parties are also required to post their reports on their internet sites. Their reports are published in the National Gazette, which is online (reports may thus be online). (4) Electoral reports are due 60 days after second round of election.
INDIA	(1) Candidates who run in more than one district are required to file returns in each district. (3) Candidates file at the local district electoral offices for a fee "of Rs.1 per folio or part of a folio chargeable for the supply of attested copies of the account of election expenses or of any part thereof" (Handbook 2006). (4) Candidates file within 30 days after electoral results.
IRELAND	(2) Threshold applies per donor. (3) On internet, reports for losing candidates not found. (4) Winning candidates and parties file annually; losing candidates file after election. (5) All candidates file all-but-minor expenses after the election. (6) Public funding for winning candidates or those receiving 1/4th of the electoral quota. (8) Maximum contribution for 2002 election was €2539.48. (9) €25,394.76, €31,743.45, or €38,092.14 per candidate in a 3, 4, or 5 seat constituency, respectively.
ISRAEL	(1) Disclosure for intraparty (nomination) contests enforced by parties. (5) Expenditures are reported by item annually and post-electorally; they are disclosed to the public either by category or total. (6) For parties.
ITALY	(3-4) Candidate reports are due 45 days after results. They are viewable for 120 days, but there is no information about where or whether they are actually filed. Parties' annual reports are published in the Gazzetta Ufficiale, which is online.
JAPAN	(3) Reports are published in local or national register. They are also viewable at Election Administration Committee at the district level or Election Department in the Ministry of Internal Affairs and Communications (if they competed in more than one prefecture) for up to three years. (5) Names of contributors of over Y50,000 are required.
LITHUANIA	(1) SMD candidates file, list candidates do not (their parties do). (4) Candidates must file within 15 days of election results; parties within 25 days of election results. (6) Candidates and parties get free television and radio time, and SMD candidates get a free campaign poster. (9) SMD candidates have a spending limit of 50AMW, party lists in MMDs 1000AMWs, but expenditures under .5AMW can be given free of charge to candidates and do not count towards spending limit. Also media with out state capital may endorse lists and campaign for them free of charge and without application towards spending limits.
LUXEMBOURG	(1) Parties must disclose some information only if they are registered as non-profit associations (instead of parties). (6) Parties, parliamentary groups, and groups of candidates (not individual candidates) receive state funding.

Table 3:1: Disclosure Regulations for Parties and Candidates in Legislative Elections, Continued

MALTA	(1) Parties do not disclose. (3) Reports are viewable at Electoral Office for 3 weeks. (4) Reports due 31 days after election results are published. (6) No funding for parties. (7-8) For parties. (9) MTL600 for candidates.
MEXICO	(3) Legislation mandates reports on campaign finance reports be made public; IFE puts the reports on the internet. (4) Annual reports due 60 days after December 31. Electoral reports due 60 days after the election. (6) Parties receive annual and electoral subsidies. (9) There are spending limits on propaganda and media for each district, but not for general party activities.
NETHERLANDS	(2) Parties are required to publish itemized reports. (5) Expenditure is disclosed to Ministry, but it is disclosed to the public by the political parties. No information on level of detail or compliance with publicity. (6) Parties and party organizations (institutions) receive public funding, but use of funds for campaigns is prohibited.
NEW ZEALAND	(1) SMD candidates file reports; list candidates do not. (2) Candidates also must keep records of all items over NZ$50. Candidates do not have to declare contributions from political parties. (3) Available on the internet for at least a period of time. (4) Parties report within 50 work days of electoral results. Candidates report within 70 days of the election. (5) Candidates report, though no information exists about level of detail. Data by category is available online. Parties report items over NZ$1000.
NORWAY	(1-5) This may not reflect regulatory changes from 2004/2005. (see Lov 06-17-2005, 11-24-2005) (6) Direct funding for parties and parliamentary groups; the use of parliamentary groups' funding in campaigns is prohibited.
PERU	(1) Candidate income/expenditure is to be reported and accounted by parties. (4) During campaign periods, parties are required to submit bi-monthly reports. (7-9) Donation and spending limits apply to candidates, and expenditure and income by candidates is applied towards party limits.
POLAND	(1) Only independent candidates file. (5) No information about level of disclosure or about what is disclosed to the public and where.
PORTUGAL	(5) Parties report in categories. (6) For parties.
SLOVAKIA	(2) Post-electoral reports have categories, with names of contributors. Annual reports have itemized contributions. (3) Ministry of Finance posts electoral reports on internet for 6 months. Annual reports are online, posted by the National Council. (4) Post-electoral reports are due 30 days after election. Parties also file pre-electoral reports that estimate expenditures (only). (5) Parties disclose expenditure annually and after elections (30 days after election). They also provide pre-electoral estimates of expenditure.
SOUTH AFRICA	(5) Parties are required to report how they spend the public subsidy.

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Table 3:1: Disclosure Regulations for Parties and Candidates in Legislative Elections, Continued

Country	Regulations
SOUTH KOREA	(1) No information about whether all candidates file or just those in the SMD tier. (3, 5) Party expenditure disclosed by category in NEC report. (6) For parties.
SPAIN	(2) The law says parties submit "detailed" reports. (3) Reports (or summaries) are available on the Tribunal's report, which is published on internet. (4) Election reports are due between 100 and 125 days after the election. (5) Parties disclose expenditure post-electorally and annually. No information about the level of detail. (6) For parties. (9) There are spending limits per year and per electoral period.
SWEDEN	(1) By voluntary agreement, parties disclose their finances. (6) For parties.
SWITZERLAND	(1) There is no disclosure requirement. (6) However, parliamentary groups receive state funding.
TAIWAN	(1) No information whether all candidates file or just those in the lower tier do. (3) Ombudsman Yuan receives reports. (5) Parties and candidates disclose expenditure by items for expenditures over NT$20000. No information about what is disclosed to the public.
UNITED KINGDOM	(2) Contributions are itemized if they are above £5000 and accepted by party headquarters, above £1000 and accepted by party branch, or above £200 and from unidentified source; otherwise they are disclosed in categories. Northern Ireland parties exempt. Section 62 donations are donations given by a particular individual to many branches; these are aggregated in party reports, but details are not disclosed. During elections, all items over £5000 are itemized. (3) Candidates' reports are viewable at local electoral offices. (5) Candidates report 35 days after electoral results. Parties report weekly during campaigns, otherwise quarterly.
UNITED STATES	(4) Disclosure is monthly during campaign periods, otherwise quarterly.
URUGUAY	(6) For parties.

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CHAPTER 2

CAMPAIGN FINANCE IN AN OPEN LIST ELECTORAL SYSTEM:

THE CASE OF CHILE

2.1   Introduction

To run electoral campaigns, candidates need money. But just how much is a matter of degree, and it is thought that candidates who compete in the "open list" system of proportional representation demand quite a lot. The reason stems from the within-list competition for votes: to best their listmates, who tend to be from the same or similar political parties, candidates must rely on more personalized connections with voters, the development of which requires intensive, costly campaigns (Samuels, 2001; Cox and Thies, 1998; Chang and Golden, 2007). This demand may make for expensive legislative elections, but campaign spending also depends on the supply of campaign contributions, which means that the effect of introducing or increasing within-list competition is conditional on the economy's interest in helping candidates compete against their own listmates. Where this interest is low, the effect of within-list competition on spending may be nil or even negative.

Chile provides a case in point. I argue that in Chilean elections, the candidates in the closest within-list contests ("intralist marginals") have lower supply than other competitive candidates, as contributors tend to favor candidates who are either electorally "safe" or involved in close interlist contests. More generally, I argue that Chile's campaign finance markets vary across electoral districts with the locus of

electoral competition—that is, whether the real contest in a district is within or between lists. I take the supply and demand of campaign finance to be a function of the expectations about which candidates and lists will be competitive and the interests of various suppliers in the outcomes of those contests. In this model, therefore, the "amount" of within-list competition is determined by the expected closeness of the race and not (say) the number of competitors on a list. In fact, Chilean lists have no such variation since the electoral system limits each list to two names and each district to two winners. Across districts, however, there is variation in the intensity of competition occurring within and between the two main multiparty coalitions that run lists, the left-leaning *Concertación* and the right-leaning *Alianza por Chile*.[1]

The model predicts that candidates will differ in their pressures to raise and spend money, and in particular that intralist marginals experience relative shortages due to their high demand and low supply. Analyzing the official campaign finance disclosures of major-coalition candidates to the 2005 Chamber of Deputies, the lower chamber of Chile's Congress, I find that the shortages are sufficient to create no spending differences between candidates in close within-list contests and other competitive candidates. In the case of Chile, therefore, within-list competition does not increase campaign spending.

To illustrate that this stems from a more limited supply of contributions, however, I focus the analysis on candidates' campaign income. The theory provides two hypotheses about the types of contributions that comprise candidates' campaign

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[1] At the time of this writing, Chile is preparing for another round of legislative elections, with some changes to the coalitions as described in this paper.

income disclosures. First, because they experience high demand *and* low supply, intralist marginals are inclined to spend more of their *own* money on their campaigns. Second, to the extent that intralist marginals raise less money from contributors**,** the difference is expected to lie in candidates' *public* donations, not their *secret* donations. This distinction stems from a feature of Chilean campaign finance law that is unique among the world's regulatory frameworks: a system to hide from candidates the identities of their contributors. Intended to protect politics from the corrupting influence of money, the system of secret contributions was introduced in a sweeping campaign finance reform in 2003 and was first used at the national level in the 2005 elections. Notwithstanding the question of why contributors would want to make their donations through this system—an interesting question on which I will reflect—my model suggests that intralist marginals will be unattractive to access-motivated suppliers who want to donate publicly. Using a multi-equation statistical analysis (using Seemingly Unrelated Regression) of the campaign income data in the 2005 candidates' disclosure reports, I find support for both hypotheses. In addition, the estimates show that intralist marginals' greater own spending does not fully compensate for their fewer public contributions, which again indicates that the within-list competition does not increase campaign spending. In open list systems, the supply of campaign finance matters.

The paper is structured as follows. In the following section, I explain how Chile's electoral system structures candidates' and contributors' expectations about the outcomes of legislative elections and use these to elaborate a theory about candidate-level differences in campaign fundraising and expenditure. Next, I discuss the official

campaign finance data produced by Chile's disclosure regulations and examine the levels of campaign expenditure reported by Chamber candidates. In the fourth section, I test my hypotheses about the effects of within-list competition on candidates' sources of campaign income. A final section concludes and an appendix provides additional information about Chile's campaign finance regulations.

2.2   Competition and Campaign Finance in Chile's OLPR System

Under OLPR electoral rules, legislative seats are allocated proportionally to multi-candidate lists whose votes equal the sum of the votes obtained by all candidates on the list.[2] Then, to allocate seats to specific candidates, a list's X seats are given to the top-X vote-getting candidates on the list. Because the lists are "open" for voters to determine which candidates get elected from each list, the system leads to electoral competition both across and within lists. Although candidates on the same list (listmates) can also benefit from working cooperatively, to the extent that they are interested in winning seats for themselves, they will compete against each other for votes.

Chileans call the version of OLPR they use to elect its members of congress the *binominal* system, for it elects two representatives per district and limits each list

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[2] That is, voters vote for individual candidates. Although Chile does not, some OLPR systems (e.g., Brazil) allow a "list-level" vote in which a voter votes for the list instead of a particular candidate. For the system to be OLPR, however, such list-level votes have no bearing on intralist outcomes.

to two names.[3] Seats are allocated to lists based on the D'Hondt divisor system, which means that the first and second lists (i.e., the lists with the greatest and second-greatest number of votes in a district) each receive one seat unless the first list wins twice as many votes as the second list, thus winning both seats or "doubling."[4] To prevent a double, therefore, the second-placed list needs only half as many votes as the first list. In this case, the candidate with the most votes on each list is elected. If the first list doubles, both of its candidates win seats.

This system creates a significant bias in favor of the second list, as it can win as many seats as the first list for as few as half as many votes. In fact, the system was designed for this purpose. Specifically, it was designed to help the right—which was expected to be the second-largest political movement—after the transition to democracy from Pinochet's military regime.[5] To this day, most electoral districts have more left-leaning than right-leaning voters, but rarely are there enough for the left list to double (provided that the right runs a single list), so the bias remains in favor of the

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[3] Chile uses the same binominal system to elect both the 120-member Chamber of Deputies and the 38-member Senate. Throughout, however, I discuss and analyze only the larger Chamber of Deputies. I exclude the Senate due the small number of districts (19 in any given election) and the large differences in campaign spending across the chambers, which stem from differences in the value attached to legislative seats, the size of the districts, etc.

[4] D'Hondt divides a list's total by increasing integers after each seat is allocated, beginning with two after the list's first seat. Since Chile uses two-member districts, the divisor never goes above two, and so the rule can be described as determining whether the first list doubles the second list or not.

[5] The malapportioned electoral districts provide another systemic bias in favor of the right (Rojas and Navia, 2005).

multiparty coalition on the right, the Alianza, and against the coalition on the left, the Concertación. Of course, the dominance of these two coalitions over other contenders—the Alianza and Concertación have won nearly all congressional seats since the first post-Pinochet elections in 1989—also stems from the binominal system because their lists, which appeal to the two sides of the main divide in Chilean public opinion, are most likely to take the two seats in each district. Put differently, the electoral system and the strength of the two coalitions makes it highly likely that in any given district the Alianza and Concertación will each win a single seat and that they will do so somewhat easily, with little threat from each other or from other contenders.

However, there are a select few districts where the electorate is overwhelmingly in favor of one of the coalitions (usually the Concertación), making a double a possibility.[6] The frequency of these districts is shown by Figure 2.1, which provides the Concertación's percent of the two-coalition vote for the 2001 and 2005 Chamber elections. The figure shows that in each election, the Alianza was close to doubling in only one district (Las Condes), where they succeeded in keeping the Concertación at less than one-third of the two-coalition vote. By contrast, the Concertación was close to doubling in several districts. In 2005, they doubled in six districts—two more than the previous election, after picking up three doubles and losing one.

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[6] There are also a few districts where a third list is competitive for a seat. In the 2005 election, only one candidate got elected who was not on an Alianza or Concertación list.

Of course, that most districts are relatively safe for each of the coalitions does not mean that there is not fierce *intralist* competition. Because the coalitions almost always nominate candidates from different parties as running mates, this intralist competition is almost exclusively interparty competition.[7] But the electoral competition creates incentives for the parties of each coalition to converge ideologically (Magar et al., 1998), so that the programmatic differences between listmates are small and that other factors—such as candidates' personal reputations—loom large. Indeed, in a district that will provide a coalition in a single seat, a popular candidate matched with an unknown listmate is certain to provide no real contest but instead a safe seat for the former, while the nomination of two "high quality" candidates will produce an intra-coalitional duel. Certainly, the nomination of two strong candidates also affects a coalition's chance of success in the interlist contest, but that will also depend on the popularity of the candidates on the other lists.

To be sure, parties and coalitions are aware of these scenarios, and thus pay very close attention to nominations. It stands to reason that in districts where a coalition expects to be marginal for a seat, coalitional interests take precedence (Siavelis, 2005). Each coalition would want to nominate two strong candidates as

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[7] There is no necessity for coalitions to run lists with candidates from different parties. In 2005, however, no list included two members from the same party.
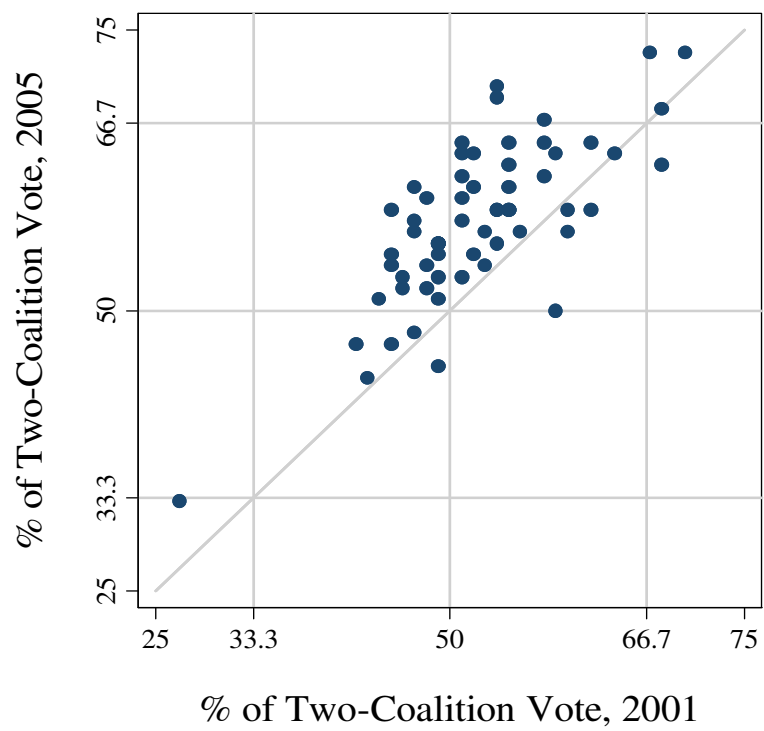
Figure 2.1: Concertación's Percent of the
Two-Coalition District Vote, 2001 versus 2005

well as discourage their candidates from focusing too much on intralist vote pluralities and consequently—as in a Prisoner's Dilemma—losing the interlist contest to the other coalition. This can be accomplished by nominating candidates with significantly different levels of electoral support, such that it is clear which candidate will be the "interlist marginal" and which will be the "puller" (the stronger candidate on a list that is marginal for two seats) or "pusher" (the weaker, non-competitive candidate on a list at the cusp of winning one seat or nothing). The coalitions can also promote electoral cooperation by providing selective incentives, including campaign contributions, valuable positions in the legislature, or—in the event the candidate loses the election—a position somewhere in the executive branch.[8]

In districts where each coalition is certain to win one and only one seat, however, sub-coalitional interests dominate nomination politics, producing either an unavoidable intra-coalitional duel or, when one candidate is paired against an unthreatening listmate, a plum spot for a particular party. Naturally, parties differ in which of these scenarios they prefer. Parties that command greater electoral support should prefer intra-coalitional battles as they can be expected to win a large number of seats. In the interest of coalitional unity, however, they may cede some districts to their smaller partners by nominating weak candidates (though it will still be difficult to negotiate *how many* and *which* districts will be ceded in this way). As a result, the

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[8] According to Carey and Siavelis (2005), this kind of "insurance policy" is routinely used by the Concertación to induce high-quality candidates to run as the weaker running mate on lists with Concertación double-potential (made credible because they were expected to control of the government) (cf. Navia and Garrido, 2005).

candidates who have easy, uncompetitive contests tend to be from the coalitions' smaller parties (Siavelis, 2005). This is particularly the case for the Concertación since one party—the Christian Democratic Party (PDC)—outperforms the multiple parties that occupy the less-conservative wing of the coalition, the Socialist Party of Chile (PSC), the Radical Social-Democratic Party (PRSD), and the Party for Democracy (PPD). The Alianza, by contrast, consists of only two parties, the larger and more conservative Independent Democratic Union (UDI) and the National Renewal (RN) party.

To generalize, the binominal system, together with the current levels of support for the parties and coalitions, makes for a set of elections with varied degrees of interlist and intralist competitiveness. In most districts, there is little real competition between the coalitions, but then there is often fierce competition within one or both coalition(s). And in districts where the lists do fight to achieve/prevent a double, it is often easy to determine which listmates are marginal and which listmates are the non-marginal pushers or pullers. A graphical representation of these various types of candidates is given in Figure 2.2. The horizontal axis is a list's percent of the two-list vote,[9] meaning that listmates would be separated only by vertical distance. The figure illustrates that there are two types of interlist marginals (regions shaded red): in the upper left are those on lists that are marginal for one seat only ("1SM lists") and in the lower right are those that are on lists that are marginal for two seats ("2SM lists"). It

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[9] More specifically, the horizontal axis is the percent of the top two lists' combined vote. Note that if it were the percent of the district vote, the 33% and 67% markers would not be relevant thresholds.

also shows that candidates that are intralist marginal (blue) can simultaneously be marginal on the between-list dimension (purple).

2.2.1   *The Campaign Finance Marketplace*

For present purposes, the varying locus of competition across districts is important because it leads to variation in the supply and demand of campaign finance across candidates, which I argue goes as follows. First, candidates who expect to be in close contests (marginals) demand more money than candidates who expect to win easily (safe winners), but there are not other significant demand-side differences among the various types of candidates. This means that a candidate's demand is determined primarily by his own electoral prospects and not his list's, and therefore that there are no demand-side differences between intralist marginals and interlist marginals or between pullers and other safe winners.[10]

Second, I assume that suppliers of campaign contributions—other than candidates themselves—are predominantly of two types: *access* and *ideological*. Access suppliers support candidates in order to later have some influence over policy, or at least to have their voices heard by legislators. For this reason, they prefer likely winners to marginals. Ideological suppliers, by contrast, seek to affect the composition of the legislature. Because the main ideological divide in Chilean elections is between the coalitions, ideological contributors are mainly attracted to lists that have the

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[10] OLPR systems also allow the possibility that candidates demand money in order to help their listmates.
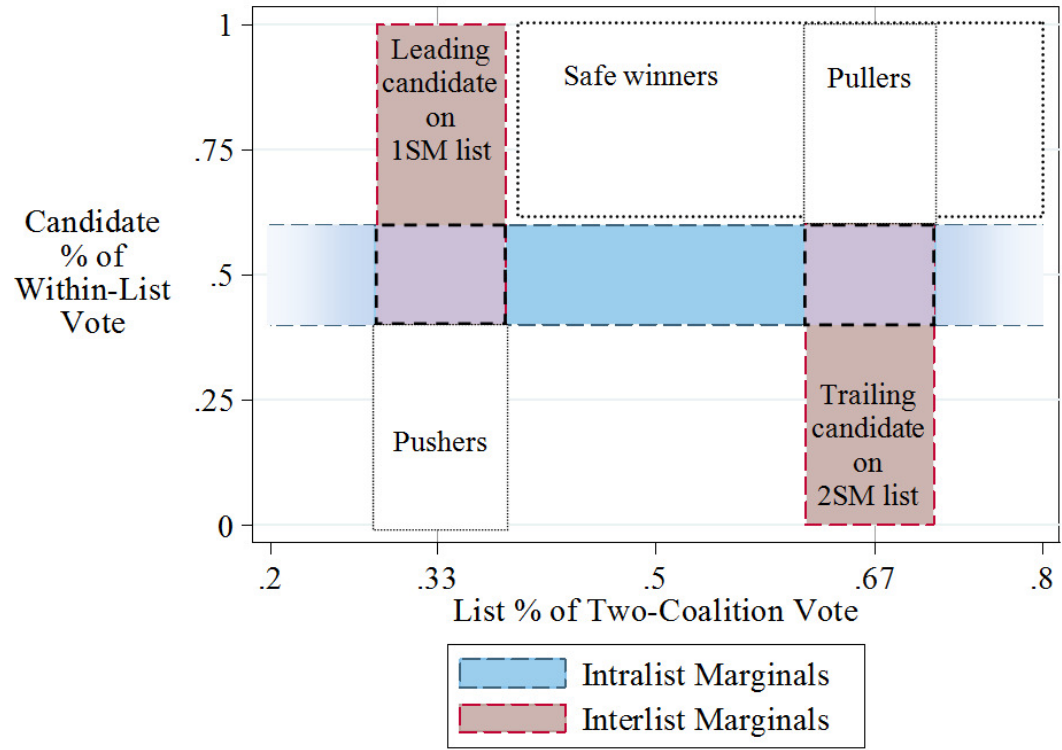
Figure 2.2: Candidate Types for Hypothetical Within-List and Between-List Vote Percentages in the Binominal System

potential to pick up or drop a seat.[11] This is not to deny that there are sometimes meaningful ideological differences between listmates; nor is to suggest that where inter-coalitional competition is low candidates will not collect any ideologically-motivated contributions. Rather, it is to assume that the quantity of ideological contributions depends first and foremost on whether a seat is up for grabs between the Alianza and Concertación. Because they are attracted to lists, ideological suppliers have alternatives regarding which candidates they can support: the marginal candidate or her pusher or puller listmate. It is reasonable to suppose that between the two, suppliers will tend to prefer the stronger listmate only because these candidates are more certain to win.

Put together, some candidates will have greater demand for finance than others, and some candidates will be more attractive to contributors than others. As a result, we might observe significant differences in spending across the types of candidates, a possibility I explore below. However, greater spending can only be predicted for candidates who have *both* higher demand and higher supply than another type of candidate, and yet no two types differ in this way. For example, despite having high higher demand than non-marginal safe winners, intralist marginals may spend no more or perhaps even less because, being less attractive to access suppliers, they have

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[11] Although ideological contributors can be expected to prefer the right-leaning Alianza, this is not the same thing as if *all* ideological suppliers preferred the Alianza, in which case marginal Concertación lists would attract no ideological contributions.

greater difficulties raising money.[12] In this way, this theory contrasts with most OLPR accounts, which suggest that the introduction or increase of within-list competition will lead to more campaign spending because candidates demand more money to compete with their listmates (e.g., Carey and Shugart, 1995; Cox and Thies, 1998; Samuels, 2001). In effect, these arguments assume that the supply of contributions will be sufficiently forthcoming to allow demand variation to affect spending.[13] This may be correct in some cases, but this does not mean that the supply effect (or lack thereof) is no less important to the result.[14] And where the assumption is incorrect, our theoretical expectations as well as our empirically-driven inferences will be amiss.

Though a different framework is required for comparative statics about campaign spending, the theory does have clear implications for candidates'

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[12] Put the other way around, candidates who have safe seats or candidates who are on marginal lists have an easy time fundraising than intralist marginals.

[13] It deserves mention that these studies link OLPR to spending via intra*party* competition, not intra*list* competition. However, this does not make my point irrelevant. Again, wherever campaign spending is said to be "high" as a result of intraparty competition, then the supply side of the market must be part of the explanation. Moreover, even though it has no intraparty competition, the Chilean experience is relevant for elections with intraparty competition, for at least two reasons. First, Chilean within-list contests are to a significant degree about candidates' personalities and reputations, like many intraparty contests. Second, though it is seldom emphasized, in many OLPR systems with intraparty competition (e.g., Brazil, Finland) many (if not most) lists also feature interparty competition.

[14] To my knowledge, no one has tested the link between within-list competition and spending. Cox and Thies (1998) test the link between intraparty competition and spending in Japan and find a positive correlation, but the electoral system in use was a non-list system (called the single non-transferable vote).

fundraising. In particular, it suggests that candidates will differ in the types of contributions that will constitute their campaign income, which is required by law to be disclosed in various categories (as discussed below). Two of these monies are likely to vary across the different types of candidates. The first is candidates' own money—i.e., the amount of their own money that candidates spend on their campaigns. We can assume that, other things being equal, candidates will *not* spend their own money if they have either ample supply or low demand, so that candidates with relative campaign finance shortages are likely to spend more of their own money. If we take non-marginal safe winners as a reference category, this leads to two hypotheses (as shown in Table 2.1): (H1) Intralist marginals *will* spend more of their own money, and (H2) Interlist marginals and pullers *will not* spend more of their own money.[15] These two combine for a third hypothesis (H3): relative to candidates on marginal lists, intralist marginals *will* spend more of their own money. I will test all three of these hypotheses, but the first and the third are the most important because they relate to my argument about within-list competition, supply limitations, and campaign spending.

"Public" contributions are also likely to vary across candidates, at least between intralist marginals and non-marginal safe winners. Public contributions are ordinary donations from individuals or businesses that candidates must itemize (amount and source) in their reports. They differ from "secret" contributions, which cannot be itemized as their size and source have been hidden from the candidates

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[15] This follows because even if they have more demand, they will have more supply, and so should be able to raise contributions rather than spend their own money.

Table 2.1: Expected Effects of Margins on Campaign Contributions Relative to a Non-Marginal Safe Winner Candidate

Relative competitiveness / Type of candidate	Demand	Ideological supply	Access supply	Prediction
Smaller within-list margin:				
Intralist marginal	High	Same	Low	H1: More own money
Smaller between-list margin:				
Puller	Same	High +	Same	
2SM Interlist marginal	High	High –	Low	H2: No more own money
1SM Interlist marginal	High	High	Low	

when transferred from an intermediary, *Servel* (short for *Servicio Electoral*, the agency that administers Chile's elections). For present purposes, the two-track system of income is useful because access contributors are much more likely to contribute publicly.[16] Therefore: (H4) *if* intralist marginals raise less money from contributors than non-marginal safe winners, then the difference should appear in different amounts of public contributions, not secret contributions. In other words, if (despite their higher demand) intralist marginals raise less money than non-marginal safe winners, then it should be because of the supply advantages of the latter, which should materialize only in the public contributions. This hypothesis makes no claims about what types of contributors will use the secret system. Indeed, we might question why anyone would make a secret contribution—a question to which I will return. It does, however, suppose that there is no reason for the amount of secret money to vary between these two types of candidates.

2.3   Campaign Finance Regulations and Data

Before testing these hypotheses, Chile's campaign finance regulations require some consideration. Most of the existing regulations, including the disclosure requirements and limits on spending and contributions, were introduced in a campaign finance reform in 2003 (*Ley No 19.884 Sobre Transparencia, Limite y Control del*

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[16] This follows *if* the system of secret donations works as intended, and candidates do not know who supports them secretly. The system is designed to prevent candidates from knowing their contributors, but candidates may still have a good idea about who has financed their campaigns, though they would be unlikely to reveal that information if their contributors wish to remain secret.

Gasto Electoral) and used for the first time at the national level in the December 2005 elections. The reform was sweeping in scope, but the most innovative part was the system for secret donations—indeed, Chile is the only country in the world to use such a system. Modeled on the system in Ackerman and Ayers' *Voting with Dollars* (2004), the idea behind the secrecy is to prevent any corrupting influence of campaign donations on legislative behavior—if candidates do not know and cannot verify who gives them money, then as policymakers they will be disinclined to provide favors in return (or so it is hoped). Its operation is straightforward: contributors first deposit money with Servel and then direct it to make the contribution to a particular candidate.[17] Servel transfers money to candidates' accounts weekly, each week withholding a random portion of the week's contributions for the following week's transfer. The system thus effectively disguises the sources and sizes of each contribution,[18] however just how well it works to sever the link between contributors and candidates is unknown. The system was widely used in the 2005 election, accounting for 34% of all money raised by Chamber candidates.

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[17] There is no limit on the amount of secret contributions that a candidate can receive, although each contribution is required to exceed $667 and the total amount per donor (per candidate) must be less than either $26,700 or 10% of the candidate's spending limit, whichever is lower. A donor's total secret contributions are also limited per group of candidates per chamber. See the appendix for more information.

[18] This feature was almost revoked just prior to the 2005 elections, after Congress passed a law that would have prevented the random withholding from each week's transfer. However, this change was not implemented due to a technical error in the wording of the law.

The disclosure regulations stipulate that candidates—more precisely, their official "election agents"—submit campaign income and expenditure reports thirty working days after the election. All campaign income (including "in kind") must be disclosed in candidates' reports, although the sources of small donations (less than $667 per donor) can remain anonymous, unless they are from candidates themselves or their political parties.[19] Of course, with secret donations, candidates can only list the date and amount of the transfer from Servel. For all other "public" contributions, candidates must specify the amount of the donation, the name and identification number of the donor, and a description (cash or in-kind service). Because candidates' own spending must be public, and because there are no limits on the individual or total amount of public contributions, the reports should accurately indicate the amount of own money spent by candidates, especially since with their own money candidates are allowed to exceed their spending limits. The incentives to lie about other sources of income are also low, given that the spending limits are rather high (shown below) and the fines are not draconian. Of course, it is still possible that reports contain inaccuracies, but there is also no reason to think that the reports are systematically inaccurate in ways that will artificially confirm my hypotheses (cf. Cox and Thies, 2000).

Table 2.2 shows descriptive statistics for several variables from these reports (each in 1000's of dollars) for candidates in the two major coalitions. Because

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[19] Anonymous contributions also cannot exceed 20% of a candidate's spending limit. The requirement that candidates' disclose their own contributions even if they are less than $667 is not specified by law, but in the guidelines drawn up by Servel.

candidates must return any unspent campaign income to contributors,[20] their *Total Income* is in most cases identical to their total campaign spending (correlated at .998), and so I will refer to the two as if they were one in the same.[21] Note that while the average candidate spent $71,780, the typical UDI candidate spent substantially more than the candidates of other parties. Also note that there are significant cross-party variations in party money and secret money.[22]

2.3.1 Categorizing candidates

In order to compare campaign income and expenditure across the different types of candidates, we must first ascertain the expected within-list and between-list competitiveness of each candidate. The best way to do this would be to use opinion

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[20] This regulation states that if candidates cannot identify their donors, they should return their unspent money to their political parties or to Servel. One possible consequence is that a candidate who raises more money than he demands may simply spend it, when he otherwise might save it for a future election, which would implicate the inferences I make below about candidates' expenditures.

[21] An overwhelming majority of candidates reported spending the same amount that they raised, and only two candidates returned over 1.5% of their contributions, one of whom (Alberto Cardemil) had raised all of his money via secret contributions, with the total surpassing his spending limit.

[22] In Table 2.3, *Party Money* is the total contributions from the candidates' party as well as unpaid services that the candidate has indicated are to be reimbursed to the party (see the appendix.) In all cases, contributions from parties were from the candidate's own party, although some independents did receive party contributions. The Socialists gave "large" party contributions (>10% of the spending limits) to *all* of their incumbents, and the Radicals did the same with almost all of theirs. Only 16 of the remaining 210 candidates received comparably-sized contributions from their parties.

Table 2.2: Reported Campaign Income of Alianza and Concertación Chamber Candidates

Coalition/Party	# cand.	# elected	Total Income		Secret Money		Own Money		Party Money	
			Avg	Max	Avg	Max	Avg	Max	Avg	Max
Concertación										
Party for Democracy (PPD)	27	21	72.4	124.9	11.0	66.9	13.3	55.1	2.7	10.5
Christian Democratic Party (PDC)	56	20	66.2	253.4	22.1	124.3	4.3	38.1	4.7	57.1
Socialist Party of Chile (PSC)	21	15	67.6	152.4	8.9	59.0	2.5	11.5	34.5	61.0
Radical Social Democratic Party (PRSD)	9	7	61.0	114.4	1.0	7.6	9.7	21.2	22.2	62.9
Alianza										
National Renewal (RN)	50	19	62.1	191.2	25.8	131.5	8.1	133.3	3.4	55.2
Independent Democratic Union (UDI)	59	33	91.6	236.7	47.1	152.9	4.7	100.3	7.3	22.9
Both coalitions	240	119	71.8	253.4	26.0	208.3	6.6	133.3	8.1	62.9

Source: Servel (www.servel.cl). Data are for the 2005 legislative election. Currencies are in $1000 dollars (rounded to nearest $100) at the November 2005 exchange rate (525 CP=1USD). The total number of candidates exceeds those for the six parties because of independent candidates on Alianza and Concertación lists.

polls or expert surveys conducted throughout the campaign; but, unfortunately, no systematic, district-level polling of this type was conducted. An alternative approach is to try to predict each candidate's type according to some pre-campaign criteria, such as the results of the previous election. However, this task is more difficult than it would seem. Although the results of the previous election can provide decent predictions for how each *list* will perform (see Figure 2.1), good predictions about the prospects of each *candidate* require information about the quality of all candidates and lists in the current and previous election, as well as information about the coming or going of other lists. This information is easy enough to put together for any electoral district, but it is difficult to incorporate the information in a model that well-predicts the competitiveness for all candidates across a variety of districts, particularly when the number of districts is rather small.

Therefore, I use the actual electoral results as proxies for the expected results. Of course, this method introduces a slight endogeneity problem due to the reciprocal relationship between campaign finance and electoral performance, but this should not be overly problematic for analyzing types of campaign income. Still, I will confine the analysis to incumbents, which diminishes the potential problem because incumbents are much more likely to exhibit the necessary demand-side variation.[23] By contrast, very few non-incumbents are likely to be so secure as to have low demand for finance.

To appreciate this distinction, consider Figure 2.3. The graph shows for incumbents and challengers in the two main coalitions spending as a percent of the

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[23] In the United States, incumbents in close races spend more money than those who win easily, a pattern said to be driven by different demand for funds (Jacobson, 1978).

candidate's spending limit alongside *Margin*—the *fewest* number of votes (as a percent of the district vote) that either (a) a winning candidate could have ceded to competitors in order to lose or (b) a losing candidate could have taken from competitors in order to win.[24] For Alianza and Concertación candidates, *Margin* ranges from about -16 to 24, with large negative (positive) values indicating the candidate lost (won) a seat by a large margin, and values closer to zero indicating the candidate won/lost by a narrow margin. The figure makes apparent two things. First, few non-incumbents won by wide margins. Second, as we move from the middle of the figure to the right (i.e., from marginal candidates to safe winners), the lowess line (a regression similar to a running average) for incumbents shows a larger drop in incumbents' spending. (This occurs until a point, at least, when spending increases again.) We also see that all of that the highest-spending incumbents are all somewhat marginal, while many safe winners spend little by comparison. That this pattern is more pronounced among

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[24] In most cases, *Margin* is the percent of the vote that separated a candidate from either his listmate or from a competitor on the nearest opposing list. But this is not always so. For example, the *Margin* for a candidate who received the most votes on a list that doubled would be the number of votes the second list could take from her to beat the double and—if her votes still exceed her listmate's votes—the number of additional votes the listmate would need to take from her in order to have the within-list plurality. Though I analyze only Alianza and Concertación candidates, *Margin* is constructed using the full field of candidates and lists. In some cases, therefore, a candidate's closest competitor is on a list other than the main two.
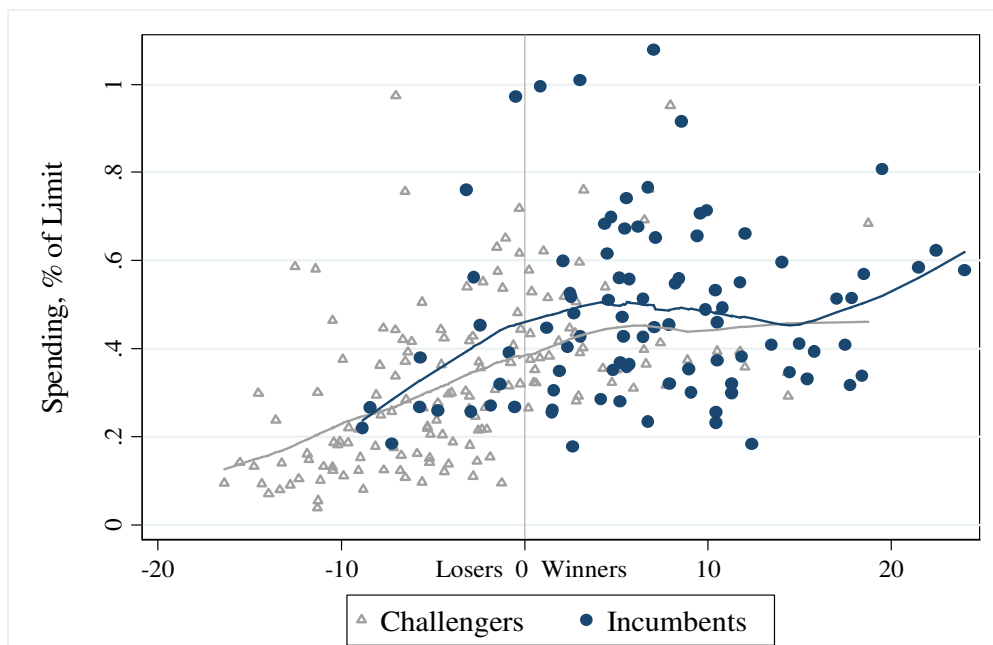
Figure 2.3: Margins and Spending for Concertación and Alianza
Incumbents and Challengers

Notes: X-axis is Margin. Lines produced by lowess function.

incumbents than non-incumbents is evidence that it is less common for non-incumbents to have the luxury of being able to win without spending as much as they can.[25]

There is one more observation to note of Figure 2.3: most candidates spend between 20% and 80% of their spending limits, with only 8 candidates exceeding 80% of their limit.[26] This implies that the limits are not so low as to significantly constrain spending, to induce lying, or to motivate suppliers to give to candidates' listmates.

2.4   Campaign Spending

Do the different types of candidates spend different amounts of money? Do candidates in close within-list contests spend more than other candidates? In this section, I briefly examine these questions. In Figure 2.3, we have already seen some evidence that marginal incumbents often spend more than safe winner incumbents, but the graph does not differentiate between interlist marginals and intralist marginals or between pullers and other safe winners. So consider Figure 2.4, which shows spending by Concertación candidates while highlighting lists that have candidates in the shaded

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[25] Although not shown, there is another reason for this pattern. As mentioned earlier, candidates in the smaller Concertación parties tend to get more safe seats. Because these also happen to be the left-leaning parties that attract less money, there is a relationship between increasing safety and decreasing spending.

[26] The two candidates whose income exceeded their limits did not illegally spend beyond their limits: one returned excess donations to Servel while the other's over-expenditures were smaller than the amount of own money he spent on the campaign.

areas *Margin*=[-5,5] and *Margin*>11.[27] That is, with one candidate very safe and the other on the cusp of winning and losing, these are 2SM lists, with a puller and an interlist marginal. The candidates in the shaded region on the right who are not paired with their listmates are non-puller safe winners because they won by large margins but did not have marginal listmates. Likewise, candidates in the middle shaded region who are not paired with another candidate are intralist marginals (i.e., their listmates are also in the shaded region).

Figure 2.4 thus allows one to get a sense of whether pullers spend more/less than other safe winners and whether interlist marginals spend more/less than intralist marginals. It neither case, however, is there a noticeable disparity in expenditures. It is noteworthy, however, that quite a few interlist marginals spend very little, despite their marginality. Curiously, these candidates tend to be matched with higher-spending pullers. (To see this, note that the high-spending interlist marginals are paired with the lowest spending pullers, with lines that have negative slopes, in contrast to the low-spending interlist marginals.) Might this be evidence that pullers only demand money when their listmates cannot raise money? Or that interlist marginals demand less when their (puller) listmates spend more? Either is possible, but it is perhaps more likely that the lower-spending marginals were merely those who were thought least likely to win, so suppliers gave overwhelmingly to the pullers. Or the apparent difference may simply be the result of ideological or partisan differences across sets of candidates—

[27] Both cutoffs are arbitrary, with the latter chosen because it corresponds to the safest 20% of the Concertación incumbents. Note that the graph still includes non-incumbents in order to highlight all listmates whose candidates lie in the two shaded regions.

indeed, the highest spenders in both categories were predominantly of the Concertación's most right-leaning party, the Christian Democrats.[28] Regardless of which of these factors are most at play, it is apparent that intralist marginals do not clearly outspend other types of competitive candidates, be they interlist marginals, safe winners, or pullers.

The same is true in the Alianza, as Figure 2.5 makes apparent. In the figure, two sets of criteria determine if a candidate is an interlist marginal (who are marked with a solid circle and connected to their listmate by a line): either (a) they lie in the marginal region and their listmates do not, or (b) they are the leading candidate on a list for which both candidates lie in the marginal region but neither of whom won a seat (so, these candidates are really marginal on both dimensions). Therefore, all other candidates in the marginal region are (only) intralist marginal. Again, we see that these candidates do not outspend other types of candidates. In Chile, more within-list competition does not lead to more campaign spending.

2.5   Campaign Income

According to my theory, intralist marginals experience relative shortages, which make it more difficult for them to raise and spend money. Campaign spending data do not allow for a good assessment of this theory, however, as their spending could be limited for lack of demand. Therefore, I analyze candidates' campaign income and test H1-H4. The first three hypotheses were about the amount of their own

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[28] One of the high-spending interlist marginals, Eduardo Díaz, was an incumbent as well as a recent convert from the Alianza.
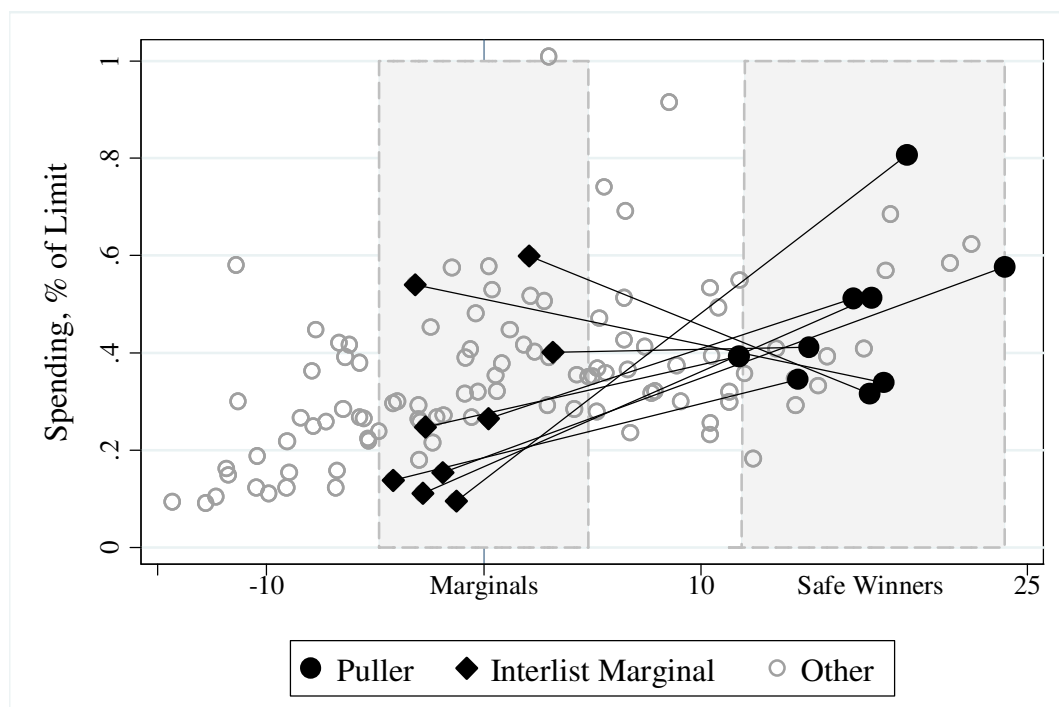
Figure 2.4: Spending by Concertación Pullers and Interlist Marginals

Notes: X-axis is Margin. Shaded areas indicate marginal and safe winner
candidates. Lines connect listmates.

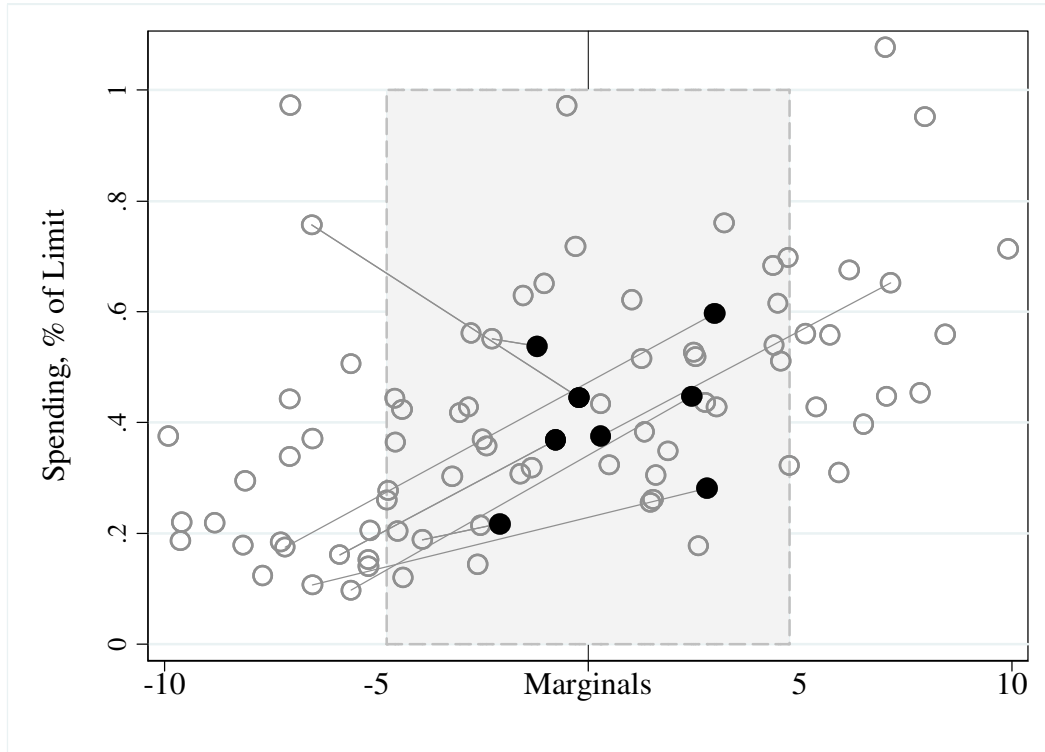**Figure 2.5:** Spending by Alianza Interlist Marginals and Intralist Marginals

Notes: X-axis is Margin. Lines connect candidates on marginal lists. Shaded region highlights marginal candidates. Solid circles correspond to interlist marginals: candidates who were marginal and either (a) had a listmate outside the marginal region or (b) were the leading candidate on a list that won no seats.

money candidates spend on their campaigns, and H1 and H3 predict that intralist marginals will spend more than non-marginal safe winners and candidates on marginal lists, respectively. I will focus the most on these hypotheses since they most closely relate to my argument about within-list competition and supply limitations.

Figure 2.6 provides a look at incumbents' own spending by coalition. Like Figure 2.2, the figure shows two electoral margins, the list's percent of the two-coalition vote (horizontal axis) and the incumbent's percent of the within list vote (vertical axis). The bands highlight regions where candidates are interlist or intralist marginal, and the circles correspond to *Own Money*, given as a percent of campaign income and weighted across candidates so that larger circles appear for candidates with larger percentages of own spending. (X's appear for candidates with *Own Money* = 0.) H1 says that candidates closer to the mid-point of the vertical axis spend more own money than candidates above or below, and H3 says that candidates in the blue region will spend more than interlist marginals (red regions) and pullers (region not highlighted). For each coalition, something approximating these patterns is apparent, though it is more observable for the Alianza candidates given that by far the largest own money spenders were intralist marginals. In fact, one Alianza incumbent, Gonzalo Ibañez of the UDI party, spent over $100,000 of his own money, almost twice as much as the next highest candidate. As an intralist marginal, Ibañez was the type of candidate that was expected to spend a lot of his own money. Because he is such an outlier, however, I will exclude him from the statistical tests.
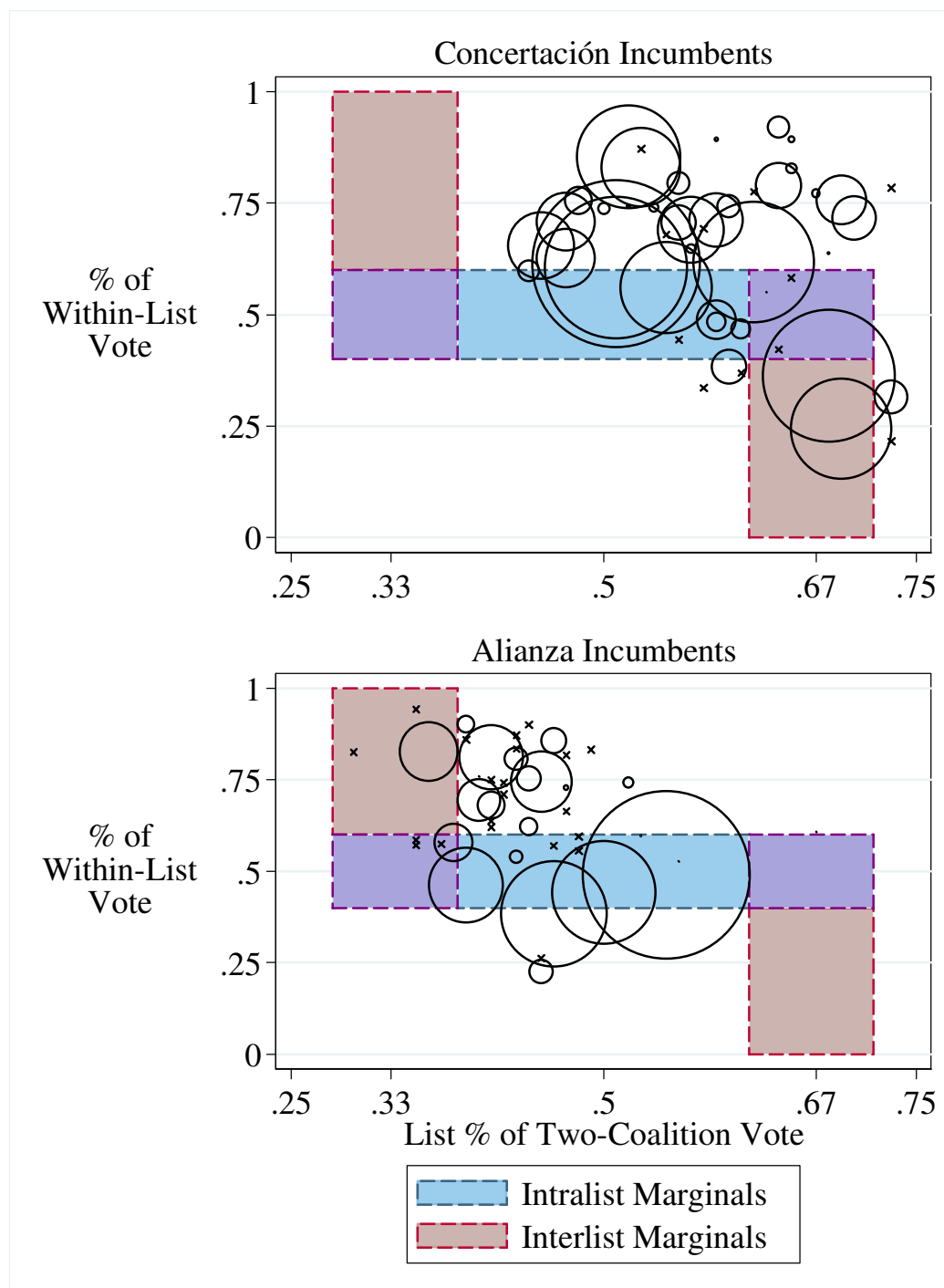
Figure 2.6: Incumbents' Own Money (as a Percent of Campaign Income, Weighted) and Within-List and Between-List Margins

2.5.1 Statistical Model

To test H1-H3, I estimate the following two candidate-level equations simultaneously using Seemingly Unrelated Regression (SUR):

$$Own\ Money_i = \beta_0 + \beta_1 * Within_i + \beta_2 * Between_i + u_{1i} \qquad (2.1)$$

$$Other\ Money_i = \delta_0 + \delta_1 * Within_i + \delta_2 * Between_i + u_{2i} \qquad (2.2)$$

In these equations, *Own Money* is a candidate's own spending and *Other Money* is all his other campaign income (both in US$1,000's), *Within* is absolute value of the difference in the percent of the district vote received by two listmates, and *Between* is smallest percent of the district vote that separated a list from winning or losing a seat or an extra seat.[29] Both margin variables are strictly positive, with smaller values corresponding to smaller margins.

With this construction, H1 predicts $\beta_1 < 0$. That is, as *Within* decreases, we move from safe candidates to intralist marginals and expect an increase in own spending. Likewise, H2 predicts $\beta_2 = 0$, or that decreasing between margins (moving from safe winners to interlist marginals and pullers) does not lead to more own spending, and H3 predicts that $\beta_2 > \beta_1$, indicating that a unit decrease in interlist margins does not produce the same increase in *Own Money* as unit decrease in intralist margins. Note that small values on *Between* correspond to *two* types of candidates:

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[29] Therefore, the operationalization of each of the variables is slightly different than the data presented in Figure 2.5, which uses *Own Money* as a percent of campaign income and different electoral margins. The difference has no substantive effect on the results, however. Like *Margin*, *Between* is constructed using the full set of lists in the district.

pullers and interlist marginals.[30] Since my theory and argument provide little reason to differentiate between them, there is no reason to reconstruct the model for that purpose.[31]

If intralist marginals indeed face campaign finance shortages, then the most likely outcome estimate for *Within* in equation (2.2) is $\delta_1 > 0$. If this occurs, it provides additional support for the idea that own money is used as a substitute for lacking contributions. Indeed, this is the main motivation behind my two equation approach over some alternative, such as a single-equation regression of *Own Money* on *Within* and *Between*. This alternative would allow use of the Tobit model, which combines a latent variable probit with OLS in order to prevent the model from generating predicted values with *Own Money*<0 (and is therefore appropriate for datasets like this one, which has no observations with *Own Money*<0 and many with *Own Money*=0). However, because my goal is not to predict own spending but to find evidence for a cross-candidate relationship between margins and own spending, this advantage is not great. More importantly, with the single-equation approach one might find a negative relationship between *Within* and *Own Money* without knowing whether intralist marginals actually raised less money from other sources (even if *Own Money*

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[30] Small values of *Between* will not correspond to pushers because I restrict the analysis to incumbents.

[31] However, an easy way to distinguish between these two types of candidates is to estimate the model separately for each coalition: in the Alianza, small values of *Between* will correspond to interlist marginals (except for one candidate on the Las Condes list), and in the Concertación, small values of *Between* will correspond mostly to pullers, although there are some incumbents on 2SM lists who are intralist marginal.

is given as a percent of campaign income). The two equation approach, by contrast, allows us to examine both types of contributions simultaneously, and therefore can provide better evidence for a substitution effect.[32]

The reason to estimate equations (2.1) and (2.2) simultaneously with SUR is that there is likely to be correlation in the errors across the two models, in which case SUR makes for more efficient estimation (compared to OLS). Cross-equation error correlation is likely because any omitted variable that affects a candidate's *Other Money* is also likely to affect his own spending and vice versa due to their mutual substitutability. For example, a wealthy candidate may raise do less fundraising and spend more *Own Money* simply she has more disposable income.[33] Another reason for correlation is the possibility for mal-alignments between the independent variables and the actual expectations that drive campaign financing. Although the margin variables ought to be decent proxies for the expectations that drove campaign fundraising, they are not perfect; and those imperfections would likely cause a candidate to be an outlier in both equations. With SUR, the parameter estimation will account for how these sources of error influence both regressions.

I did not yet discuss δ_2, for which the theory provides no clear prediction. If anything, we might expect $\delta_2 > 0$ because of the combination of high demand and high supply from ideological suppliers. However, this is not a strong prediction, and

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[32] Still, the results of the OLS and Tobit single equation models described in the text (available from the author) mirror the results shown here.

[33] However, more wealth might also mean more wealthy friends and thus more campaign contributions.

because the two equations do not differentiate interlist marginals from their listmates (pullers and pushers), I will remain agnostic.

2.5.2   Results

Table 2.3 provides the results of two specifications of the two equations, each using only incumbents.[34] The first two columns show the results of a specification which includes both coalitions and a single control variable: a dummy to distinguish Alianza from Concertación candidates. The indicator shows that Alianza candidates spend on average $7,000 less of their own money on their campaigns and receive about $29,000 more in all other campaign contributions. Perhaps this is not a mere coincidence, and Alianza candidates spend less of their own money because they raise more from contributors. Of course, it is a similar mechanism that drives my theory; and indeed, we see a similar tradeoff (at a similar rate of substitution, even) on the coefficients for *Within*: for each 1% of the district vote that two listmates are more intralist marginal, they lose an average of $1,084 in campaign contributions and spend on average an additional $338 out of their own pockets. Both coefficients are in their expected directions, and the latter (β_1, in the shaded region) is statistically significant, supporting my main hypothesis (H1). The difference between β_1 and β_2—the coefficients on *Within* and *Between* in the *Own Money* equation—is also in the hypothesized direction and statistically significant, thus supporting H3. The only result

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[34] Again, all estimates exclude the own money outlier, Ibáñez. In addition, I exclude Eduardo Díaz, who was the only independent on a Concertación list. He had recently defected from the Alianza (see note 28), and spent a large amount of his own money to finance his campaign.

Table 2.3: SUR Results of Within-List and Between-List Margins on Two Sources of Incumbents' Campaign Income

	(1)		(2)	
	Own Money	Other Money	Own Money	Other Money
Within	-0.338*	1.084	-0.315*	2.011***
	(0.19)	(0.86)	(0.17)	(0.70)
Between	0.519**	-0.656	0.289	0.355
	(0.25)	(1.10)	(0.22)	(0.89)
Alianza	-6.823***	29.09***	-1.323	7.019
	(2.11)	(9.39)	(3.00)	(12.3)
UDI			-1.440	22.88**
			(2.70)	(11.1)
PSC			0.871	-23.81
			(3.56)	(14.6)
PRSD			-8.466**	-12.69
			(4.09)	(16.8)
PPD			14.55***	-23.03**
			(4.41)	(11.5)
Board			-7.143**	34.75***
			(3.02)	(12.4)
Spending Limit			0.058***	0.494***
			(0.02)	(0.077)
Constant	8.944***	62.17***	-4.719	-39.81**
	(3.18)	(14.1)	(4.79)	(19.6)
R-squared	0.14	0.10	0.43	0.48
N	90		90	
Corr. errors	-0.03		-0.07	
Breusch-Pagan χ^2	0.074		0.477	

Dependent variables in US$1000's. Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Excluded category in set (2) corresponds to Christian Democrats (PDC).

that is at odds with the predictions is the coefficient on *Between* (β_2) in the *Own Money* equation: it is positive (p<.10) rather than zero. This suggests that interlist marginals and pullers spend less own money than safe winners, in contrast to H2. However, we will see that this difference disappears with some additional control variables.

In the second specification, I include (a) indicators for each political party except the RN (which is included in *Alianza*) and the PDC (the excluded category), (b) the candidate's *Spending Limit* in US$1000's, and (c) *Board*, a variable set to one for any candidate that had at any time served on the Chamber's three-member directing board (*Mesa Directiva*), a distinction reserved for candidates in the majority (i.e., Concertación). The results for the second equation show that each unit decrease in *Within* leads to an average loss of $2,011 in campaign contributions (p<.01), which is partially offset by a corresponding increase $315 in self-made contributions (p<.05). As mentioned, the effect of smaller between-list margins on *Own Money* is now statistically indistinct from zero, though it is still significantly greater than β_1, the effect of within-list margins on *Own Money*. All together, the results support each of the hypotheses, H1-H3.

Statistical significance notwithstanding, it might be alleged that the magnitudes of the effects are rather small. In dollars and cents, this has some truth. But in terms of the theoretical mechanisms that drive the theory, the results are quite meaningful. Consider that more own spending is just one behavioral consequence of a relative shortage (another would be more fundraising effort), and that there is the possibility of filling shortages with other sources of money (e.g., political parties). That we see

statistically significant differences in candidates' income profiles—and with so few observations, and with the most supportive observation not included—indicates that the theory is well-founded and that the locus of competition in a district has a strong effect on campaign fundraising.

2.5.3   *Public versus Secret Contributions*

The data have shown that intralist marginals not only spend more of their own money than non-marginal safe winners (H1), but they also raise less money from contributors. I hypothesized that this difference—were it to occur—would stem from variation in public rather than secret money. To test this hypothesis, I estimate a three equation model identical to the first set of equations except that *Other Money* is parsed into *Secret Money* and all other income, the overwhelming majority of which is *Public Money*.[35] In addition, I have included a dummy for PDC candidates in place of the set of dummies for the smaller Concertación parties, which now jointly comprise the excluded category.

Table 2.4 provides the estimates from two specifications of this model. The first estimates—using incumbents of both coalitions and given in the first three columns—show that smaller within-list margins are associated with less money through both public and secret tracks, but the decline in *Public Money* is indeed more extreme and statistically meaningful. In addition, while *Within* is clearly the most important factor associated with *Public Money* (except perhaps spending limits), it is

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[35] A small portion of the money was reported as "anonymous" contributions.

far from the most significant predictor of *Secret Money*. In fact, the coefficients in the *Secret Money* equation suggest something quite different: a strong ideological effect, with candidates on the right receiving more money. The coefficients indicate that relative to candidates in the smaller Concertación parties, PDC candidates average an additional $18,000, while RN candidates (i.e., non-UDI Alianza candidates) average an additional $37,000 and the more right-leaning UDI candidates reap $19,000 on top of that.

This result suggests an answer to the question about what types of suppliers would choose to donate secretly: they are the ideologically-motivated donors, who happen to tend toward the right. Of course, we might still wonder why they would make secret and not public donations. But two possibilities seem likely. The first is that businesses, who tend to prefer Alianza candidates, aim to hide their donations from the eyes of the Concertación government out of fear of retaliatory discrimination. The second possibility is that there are ideological suppliers who aim to support candidates in close within-coalition contests, but also want to keep their contributions secret because they want to help the coalition in general, or at least they reason that it is better not to be exposed as a partisan who seeks to divide the coalition.[36] In either case, the potential adverse consequences need not be great for the secret system to hold appeal—it provides a simple and easy way to obviate such concerns altogether.

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[36] If this is correct and *Secret Money* is related to partisan or ideological differences within and across coalitions, then it might seem surprising that it is not also related to either of the margin variables. However, the margin variables are unlikely to capture the ideological effect precisely because they are meant to capture *all* types of partisans, and not only those on the right.

Whether these are actually the reasons why secret donations and not public donations vary with partisanship, the data here cannot say. But the notion that intralist marginals would receive lots of ideological contributions (via the secret system or not) was not part of my theoretical model. At this point, there is not much reason to doubt this assumption, given that otherwise we would not expect to see a strong relationship between within-list margins and own money. But to ensure that this remains the case when the partisan differences between listmates are taken into account, I provide a second specification of the three equation model, this time estimated with only the Concertación incumbents and including the interaction term *Within*PDC*. If ideology or partisanship has a strong differential effect on the ability of the more conservative intralist marginal to raise contributions, and those contributions travel through the secret system, then *Within* should be larger than *Within*PDC* in the *Secret Money* equation. The results are supportive: the secret money equation shows that for each drop in the percent of the district vote separating listmates, non-PDC candidates *lose* \$804 secret dollars while PDC candidates *gain* \$1365 – \$804 = \$561 secret dollars. But neither effect is statistically different from zero, and the difference between the two effects is also not statistically significant. Meanwhile, the two types of Concertación intralist marginals are similar when it comes to other types of money, they both lose public donations and they both spend more of their own money.[37] Therefore, it seems that while ideological contributors may target some intralist marginals, and that this causes some difference in the secret contributions raised by

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[37] The own money difference between non-marginal and intralist marginals among Christian Democrats is less significant, but the coefficients show that latter still spend more own money.

Table 2.4: SUR Results of Within-List and Between-List Margins on Three Sources of Incumbents' Campaign Income

	(1) All incumbents			(2) Concertación only		
	Own$	Secret$	Public$	Own$	Secret$	Public$
Within	-0.395**	0.759	1.175***	-0.813**	0.804	0.641
	(0.18)	(0.68)	(0.41)	(0.36)	(0.78)	(0.52)
*Within*PDC*				0.663	-1.365	1.282
				(0.58)	(1.25)	(0.83)
Between	0.256	0.416	-0.130	0.230	-0.0745	-0.791
	(0.23)	(0.87)	(0.53)	(0.39)	(0.82)	(0.55)
PDC	-10.03***	17.89*	3.288	-17.66***	30.67**	-11.28
	(2.69)	(10.1)	(6.13)	(6.63)	(14.2)	(9.42)
Alianza	-11.35***	37.20***	-9.341			
	(3.04)	(11.4)	(6.93)			
UDI	-1.363	19.18*	3.779			
	(2.92)	(11.0)	(6.66)			
Board	-6.90**	27.71**	5.552	-4.760	23.01**	6.645
	(3.22)	(12.1)	(7.33)	(4.31)	(9.24)	(6.13)
SpendingLimit	0.055***	0.168**	0.321***	0.091***	0.0354	0.405***
	(0.020)	(0.076)	(0.046)	(0.035)	(0.075)	(0.050)
Constant	6.705	-35.32*	-23.23**	5.165	-7.453	-26.80**
	(5.12)	(19.2)	(11.7)	(8.18)	(17.5)	(11.6)
R-squared	0.33	0.35	0.42	0.39	0.33	0.61
N	90			47		
Breusch-Pagan χ^2	7.86*			8.35*		

Dependent variables in US$1000's. Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

right-leaning versus left-leaning candidates, but that the donations are not substantial enough to cause significant differences in any type of income. This includes candidates' own spending—an expense which intralist marginals of all parties remain disproportionately inclined.

2.6   Conclusion

I have argued that the structure of electoral competition in Chile produces many fierce intra-coalitional contests which few people prefer to support with campaign contributions. The consequence is that intralist marginals face relative campaign finance shortages. I have provided evidence for this argument with an analysis of candidates' campaign income, principally the how much of their own money candidates spend on their campaigns.

Of course, the theory has implications that reach well beyond candidates' own spending. One is that within-list competition is not destined to beget more campaign spending—a result that is at odds with what is commonly believed about open list systems. Another implication is that intralist marginals may be more likely than other candidates to flaunt campaign finance regulations such as donation limits or prohibitions.[38] They are also likely to spend more time and effort fundraising and to receive more financial or other campaign support from their political parties. Because each of these provides a means to fill a candidate's unmet demand (in addition to own

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[38] This jibes with Chang and Golden (2007), which posits that candidates in OLPR systems have a high demand for funds and are therefore more likely to engage in corruption to obtain their desired level of campaign contributions.

spending), it is possible that none may be so utilized as to produce differences in behavior that are observable in the aggregate. However, this also means that any clearly observable differences—such as those shown above—are strong testaments to the theory's validity.

Still, it is telling that intralist marginals would find it necessary to spend their own money. This need not be the case: if the economy is interested in financing candidates in competitive intralist contests, then those candidates should be able to raise the funds they need. To restate the point, the demand for campaign finance alone does not determine the amount of money spent on electoral campaigns—supply matters.

Of course, this only begs the question of why suppliers would or would not want to support candidates' campaigns. No doubt, the answer lies in the magnitude of the returns suppliers expect to receive for their investments, however those returns might materialize (e.g., access, influence, consumption). In Chile, I have argued, candidates in close within-list contests are less attractive to suppliers than other types of candidates for reasons of ideology and/or access, and this because of the implications of those electoral outcomes in Chile's current political setting. In other times or places, the supply side of the market may allow candidates with greater demand to raise more money, even if it is only to help them best their listmates.[39] Where this is the case, however, it must be that whatever factor motivates candidates'

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[39] For possible links between within-list competition and an increasing supply of contributions, see Cox and Thies (1998, p. 269) and Samuels (2002).

demand—in this case, within-list competition—does not also cause a reduction in supply that is large enough to prevent an increase in campaign spending.

In the study of which factors lead to expensive elections, then, we must attend to both the demand and supply effects. But we must also consider the effects on *various* types of supply. This is not only because it is these that determine the net changes in political contributions, but also because they may have consequences that go beyond levels of spending. Indeed, the preeminence of one type of supplier or another has the potential to affect legislative activity, voter behavior, and more. The supply side of the campaign finance marketplace, and how it is influenced by factors such as within-list competition, is thus a worthwhile agenda for future research.

2.7   Appendix: More Campaign Finance Regulations

In addition to those discussed in the text, the following are regulations regarding campaign finance in Chilean legislative election. (For still more information on Chile's regulations, see Fuentes, 2003, 2004; Valdés, 2005; and Díaz Rioseco *et al*., 2006.)

(a) There are limits on contributions by type of contribution. These and all other limits are based on the *unidad de fomento* (UF), an inflation-adjusted consumer price index which, at the November 2005 exchange rate, was about $33. The text and subsequent notes provide details in dollars.

(b) Candidates cannot accept contributions from foreign sources, non-profit organizations, and businesses that receive a certain amount of their income from the state.

(c) Candidates are prohibited from purchasing television time.

(d) Political parties are provided free television time. Time is distributed half to the parties in the government and their allies and half to all opposition, and each portion is to be divided among parties and candidates according to their agreed-upon distribution, or, if they cannot agree, according to their representation in Congress.

(e) Each candidate receives a pre-electoral disbursement from the state of $0.33 for each vote obtained by their party in the previous congressional election. Independent candidates, as well as parties that did not compete in the previous election, receive an amount based on the number of votes for worst-performing party. The subsidy is augmented after the campaign to $1 per vote obtained, unless this

amount exceeds the candidate's declared expenditures, and only to pay for expenses that are still unpaid. Based on the performance of the average Alianza or Concertación Chamber candidate, $1 vote translates into a subsidy of about $25,000, or 13.7% of the median district's spending limit. For the 2004 municipal elections, these reimbursements were paid directly to service providers, but this was changed for the 2005 legislative elections—now, except for reimbursements to financial institutions for credits, they are paid directly either to candidates or their political parties. Candidates indicate in their disclosure reports which items they would like reimbursed to themselves (and to whom).

(f) The limits on campaign spending are determined by the number of registered voters in the relevant electoral district. For Chamber candidates, the median limit is roughly $181,000.

(g) Servel levies fines for non-compliance with spending and contributions limits in proportion to the degree limits were exceeded. Servel can only levy fines based on the information in the disclosure reports and in the receipts that candidates are required to retain—it cannot conduct wider investigations.

(h) There is an official campaign period, before which campaigning is prohibited. The prohibition is not fully observed: many candidates begin their campaigns early (Participa, 2005).

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CHAPTER 3

INTRAPARTY COMPETITION, VOTE EQUALIZATION AND

THE EFFECTS OF CAMPAIGN SPENDING

3.1   Introduction

In many of the world's legislative elections, candidates compete for votes against candidates affiliated with other political parties and simultaneously against their copartisan running mates. Scholars have argued that this intraparty competition affects the value of various electoral "assets" and therefore also electoral behavior. The most well-known of these theories holds that candidates' personal reputations with the electorate are more electorally valuable when there is intraparty competition (and when there is more intraparty competition), and therefore that we ought to observe a correlation between intraparty competition and candidates' effort in building their personal reputations (Carey and Shugart, 1995).[1]

Two things are missing from these theories, however. The first is some sense of how much the assets matter to overall electoral results. That is, because the theories do not consider how much such assets help candidates vis-à-vis *other-party* competitors they have little to say about how much they determine overall electoral results. Second, the literature's emphasis on intraparty competition has ignored the possibility that copartisans might also cooperate, undertaking activities that limit the intraparty effects and maximize the interparty effects of candidates' assets.

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[1] Other examples include Cox and Thies (2000) and Chang and Golden (2007).

In this chapter, both of these issues are front-and-center. I argue that the degree to which various assets affect intraparty versus interparty contests is a function of the strategies parties employ to maximize legislative seats. Under certain electoral rules, parties can win more seats if the votes obtained by their candidates are not too unequal. Towards this end, parties can take several steps, including "bailiwicking" electoral districts so that each copartisan has "rights" to certain portion of the district and coordinating the party's supporters so that equal portions cast their votes for different candidates. One consequence of these strategies is that candidate-level assets—such as personal reputations, incumbency and campaign finance—are less relevant for determining which copartisans win more votes. The reason for this is that equalization involves shifting votes from stronger to weaker candidates; and so the greater the party's success at equalizing votes the less that various assets differentiate the electoral performance of copartisans. Put differently, equalization reduces the extent to which candidates' assets affect the vote shares of same-party (SP) competitors relative to other-party (OP) competitors, meaning that the extent to which assets affect the electoral prospects of *parties* versus *copartisans* is variable and determined in part by parties' equalization activities.

In presenting this argument, I first discuss why some electoral systems foster intraparty competition and why two of those systems—the so-called single transferable vote (STV) and the single non-transferable vote (SNTV)—give parties incentives to equalize the vote. I then estimate the effects of campaign spending by both SP and OP competitors on candidates' vote shares for the 2002 Irish parliamentary elections, which used STV and where parties undertook substantial

efforts to equalize votes across copartisans. For comparison, I estimate similar quantities for the 2005 elections in Chile and review similar estimates that were obtained for Japan in Cox and Thies (2000). In neither of these countries' elections did parties undertake actions to equalize the vote. In Chile, there would be no reason to as the electoral system creates no equalization incentives.[2] And while Japan used SNTV, there is no evidence that the dominant Liberal Democratic Party (LDP) ever explicitly sought to equalize the vote. A comparison of the three pairs of estimates shows that relative to a country's OP spending effects, the SP effects are smallest in Ireland—just as we would expect given the greater cooperation among copartisans in Irish elections.

The campaign spending effects I estimate may seem peculiar. This is because spending effects are normally taken from the perspective of a focal candidate, as in the vote-share gain that the spender receives per dollar. Here, by contrast, the effects are from the perspective of the spender's competitors. In this "relational" conceptualization, the expenditures of each candidate has multiple effects—one for each of his/her competitors. For the most part, the estimation of relational spending effects is no different than estimating other spending effects, and I use the standard instrumental variables and two-stage least squares (2SLS) regression approach.[3]

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[2] Among countries with its type of system, Chile has the best data for estimating the effects of spending (see Chapter 1). As discussed below, however, Chilean elections feature competition between and across coalitions rather than between and across parties.

[3] Because campaign spending estimates can be highly dependent on method and model, I obtain estimates using a second, dyadic approach in Chapter 4. There, observations are not candidates but competitor-to-competitor comparisons. This approach offers an intuitive way to estimate SP and OP

The chapter is organized as follows. The next section discusses the main argument about electoral systems, equalization incentives, and the relational effects of electoral assets. The third section discusses my general empirical strategy for estimating relational effects of campaign spending. The next three sections discuss the electoral systems and political circumstances in each of Ireland, Chile, and Japan, along the way estimating the SP and OP effects of campaign spending for Ireland and Chile. The final section concludes.

3.2   Electoral Systems, Intraparty Competition and Vote Equalization

When an electoral system specifies that an electoral district will elect more than one candidate, it allows for a party to win more than one seat in that district. To do so, of course, a party must run more than one candidate. If the electoral system lets voters cast votes for individual candidates and those "preference votes" influence which copartisans get elected, then there will be intraparty competition for votes. Most electoral systems with multi-member districts (MMDs) fit this category, the most well-known being the single transferable vote (STV), the single non-transferable vote (SNTV), and open list proportional representation (OLPR).[4]

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spending effects: with a simple interaction term, we can obtain estimates of the effects of within-dyad spending differences for each of two types of dyads—SP and OP.

[4] The only electoral system in which voters cannot express a preference vote for an individual candidate is the "closed list" system, where votes are cast for ordered lists of candidates and candidates are elected according to their rank on the list.

There is a growing literature attending to the consequences of this intraparty competition, which can be roughly summarized as follows: intraparty competition leads personal reputations to matter more because these help candidates defeat copartisans (who share a party affiliation), and thus candidates ought to expend more energy developing personal reputations with voters.[5] A variety of campaign activities are good for building personal reputations in these contexts, including campaign advertising and vote buying. Legislative activities, such as position-taking and credit-claiming, especially for locally-targeted pork barrel projects, also help cultivate personal reputations when candidates compete against copartisans. So, where personal reputations matter more, candidates should engage in more of these activities; and because these activities are closely connected with campaign finance—e.g., advertising and vote buying are costly and pork barrel projects are often helpful for fundraising—the amount of money spent in legislative elections may move in tandem

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[5] The main article here is Carey and Shugart (1995), where three mechanisms influence how much candidates must differentiate themselves from their copartisans: (1) district magnitude, which increases the value by increasing the amount of intraparty competition (its correlate), and (2) the degree that votes either "pool" among copartisans or are exclusive to individual candidates, and (3) the number of votes the voter may confer on candidates, with personal reputations having less weight when voters can cast multiple votes for multiple candidates. Closely related is Shugart et al. (2005), which states that candidates with better personal reputations ought to get receive more votes, but the argument is less about intraparty competition than the number of candidates. In Chapter 1, I argued that the difference in the value of personal reputations has more to do with the presence of any intraparty competition instead of its amount.

(though the previous chapter argued that it may not).[6] Although the theories differ in some respects, such as whether personal reputations accrue value as a result of any or more intraparty competition, their electoral consequences do not: candidates with better reputations, strategies and financing are advantaged vis-à-vis their copartisans.

Absent from this body of theory, however, is any consideration of how much those assets help candidates vis-à-vis other-party (OP) competitors. From the emphasis in the literature, we might assume that some asset (say, spending) has large consequences for which copartisans win seats and minimal consequences for which parties win seats.[7] But this is by no means certain. Consider that whenever a party is interested in maximizing seats, it has an interest in taking steps to minimize the extent to which spending affects intraparty contests. If those steps diminish the electoral prospects of certain candidates, there will be some conflict between the candidates and their parties. But this does not mean that parties will be unable to induce any cooperation.

My argument is similar. When a party uses campaign strategies designed to equalize the vote across a slate of candidates, it diminishes the within-party differences between its candidates, thus mitigating the intraparty effects of its candidates' assets. To explain, I first discuss why a party would want to equalize the vote.

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[6] See Cox and Thies (1998, 2000), Chang and Golden (2007), and Samuels (2000, 2002).

[7] This result would be relevant for the regulation of political finance. For example, if spending affects primarily intraparty contests, then spending limits would have little bearing on attempts to "level the playing field" between well and poorly-funded parties.

3.2.1   *The incentives to equalize*

Of the major electoral systems used for legislative elections, two give parties incentives to equalize the vote: SNTV and STV. SNTV is the equivalent of the Anglo-American plurality rule system albeit for MMDs: voters can cast one vote for one candidate and the top M vote-winners win the district's M seats (with M being the district magnitude, the number of seats to be elected in a district). In this system, it is possible for a party to have enough votes to elect one or more candidates but elect fewer because its votes are unequally distributed across candidates. An example of this is shown in Table 3.1. With 150 combined votes, Party A could win both seats (and deny Party B a seat) if its votes were spread equally across its two candidates because 75 votes a piece is greater than the combined 70 votes for Party B. If Party A anticipated this, they ought to have devised a means to equalize votes across candidates. Instead, they commit an "equalization error" by winning too few seats for what their votes could have allowed.

Although its votes are also unequal, Party B does not commit the same error because it cannot improve its electoral prospects by equalizing the vote. In fact, with greater vote equalization (and the distribution of votes across Party A's candidates unchanged), it would *lose* a seat. In this way, Party B commits an "overnomination error" by running too many candidates for the amount of votes it can command.[8] While the error is not costly in this example, any party that anticipates a distribution of the vote like Party B would be wise to nominate only one candidate. Together, two

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[8] For more on nomination errors, see Cox and Niou (1999).

Table 3.1: Vote Equalization "Error" Under SNTV, M=2

	Candidate	Votes	Elected?
Party A	1	100	Yes
	2	50	No
Party B	3	60	Yes
	4	10	No

things are critical to a party's success under SNTV: nominating the right number of candidates and equalizing the vote (or, more accurately, avoiding situations in which the distribution of votes across its candidates is too unequal given the amount of votes obtained by other parties/candidates). Further, all parties that do not commit overnomination errors have incentives to equalize the vote among all of its candidates (provided that they have run more than one candidate).[9]

The same imperatives exist in STV systems, albeit to a lesser degree. Like SNTV, STV elects the top M candidates per district, but the allocation of seats is determined not simply by plurality rule but according to how voters rank order the candidates. On STV ballots, voters place numbers next to candidates' names indicating their order of preference, from 1 (first preference) to N (lowest preference) for all N candidates running in the district (though a full ranking is not necessary for the vote to be valid in most systems). After the first preference votes are tallied for the candidates the details of STV systems differ, but all use some procedure in which (1) candidates are removed from the count by being declared eliminated, after which all of their accumulated votes are transferred to candidates still in the running according to the next order of preference on the votes, and (2) candidates are removed from the count by being declared elected for surpassing a quota, after which any "surplus votes" above that quota are transferred to other candidates still in the running.

This system gives parties incentives to equalize the vote because candidates can be eliminated from the count too early for vote inequalities, but the likelihood that

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[9] Parties who do commit overnomination errors may have incentives to equalize the vote among at least a subset of candidates.

poor equalization leads to errors usually depends on how frequently votes transfer within the party. To see this, consider a party that grossly overnominates for a given district. If a party's supporters tend to rank all of the party's candidates higher than all candidates in other parties, then the overnomination will be inconsequential because the votes of eliminated candidates will transfer to copartisans, with the result equivalent to the scenario in which the party simply ran fewer candidates. However, if supporters also tend to give high ranks to candidates of other parties, then running too many candidates may cause candidates to be eliminated too early only to see their votes transfer to candidates in other parties. Therefore, equalizing the vote and/or nominating the right number of candidates matters in STV as it does in SNTV, but the frequency of equalization errors is lesser under STV because votes can (and often do) transfer within the party. Parties can afford to be less vigilant about nominations and equalization under STV, but they cannot ignore it entirely.

Despite their differences, both systems contrast with other electoral systems that use preferential voting and MMDs. The most well-understood of these is OLPR, in which (a) the number of seats won by each party is determined by the total number of votes cast for all their candidates (added together on a list) relative to the same for other parties and (b) for parties (lists) that win seats, they are allocated to the candidates who won the greatest number of votes. Here, therefore, parties maximize their seats simply by bringing as many votes to their list as possible, with the distribution of votes among listmates being irrelevant to party success. Under OLPR, parties can let intraparty competition go uninterrupted, at least up until the point that it

reduces the likelihood that voters will vote for any of the party's candidates.[10] Therefore, unlike SNTV and STV, we would not expect to observe parties undertaking any effort to equalize the vote under OLPR rules.

3.2.2 *Equalizing the vote*

Simply because a party in a STV or SNTV system might be rewarded for equalizing the vote does not mean that they will take any steps to do so; nor does it mean that that they will have any success if they do. If a party lacks the power to control which candidates can run using its name, for instance, attempts to "manage" the vote may be undermined by spoiler candidates. More generally, the party's ability to select and reward cooperative candidates, to detect and punish "defectors," and to ease the process of equalization will impinge on their success at equalizing votes. Of course, where parties lack any powers to influence their membership, they are less likely to resemble cohesive, ideologically-oriented coalitions (interested in maximizing seats) and more likely to be mere conglomerations of self-interested individuals (with weak collective goals). In other words, there is likely to be a relationship between parties' incentives to equalize and their abilities to take steps towards equalization. But it is also clear that parties with more to lose from poor

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[10] Note that OLPR also gives no incentives for parties to limit nominations. Rather, parties benefit from running as many candidates as possible, so long as each additional candidate brings more votes to the list than s/he takes away.

equalization are likely to undertake more (and more extreme) measures to equalize the vote, and they are likely to have greater success at their implementation.[11]

One way a party can try to equalize the vote is by running candidates that are "complementary," each attracting votes from different but equally-sized subpopulations of the district. If potential nominees already tend to have different sub-district "bailiwicks"—as a result of localism or social-demographic heterogeneity within electoral districts—then equalizing involves nominating a set of candidates who have different voter bases and who, when nominated together, can be expected to obtain relatively equal vote shares. Of course, parties can also groom candidates so that they have different bases of support. The party in the legislature can do this by helping members from the same district distinguish themselves with policy successes and committee assignments that mesh with different district subpopulations.

During campaigns, a party may pursue equalization by coordinating its candidates' campaigns, rationing its supporters' votes, or both. A party can coordinate its candidates' campaigns by subdividing districts into areas that can provide equal numbers of votes and assigning to each candidate exclusive campaigning "rights" to an area/group. To coordinate its supporters, the party can ask each of equally-sized groups of supporters to cast their votes (or first preference votes) for a particular candidate. If voters are willing, any criteria can be used to map voters to candidates, including voters' addresses or birthdates. Of course, rationing and bailiwicking

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[11] We can posit, therefore, that parties who are either more ideologically extreme or closer to majority or "blackmail" status will be more likely to employ equalization strategies and more likely to be successful in doing so.

strategies are not incompatible with the efforts to equalize via the nomination and grooming of candidates—a party might use all of the methods in order to better equalize the vote.[12]

3.2.3   Equalization and the effects of assets

The fundamental claim in this chapter is that when a party takes steps to equalize the vote, it diminishes the electoral effect of its candidates' electoral assets. By the "electoral effect" of an "asset," I mean the vote share gain a candidate accrues for something that would be expected to provide electoral advantage, such as incumbency or campaign spending, relative to the counterfactual situation in which the candidate does not have (as much of) the asset.[13]

The reason that equalization matters is simple: it inherently involves minimizing the advantages of stronger candidates. So if some asset—say, incumbency—typically gives candidates an electoral advantage over their competitors, the party's attempt to equalize the vote will involve transferring votes from their

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[12] Of course, the use of some strategy does not mean votes will be (somewhat) equal. Many factors will promote or impede success, the most important of which is the amount and quality of information available to parties about their likely level of support in the district, the quality of their candidates, and the actions of other parties. For this reason, districts with more voters and more candidates are provide greater equalization difficulties; and because more parties and candidates run in districts with larger district magnitudes, we can expect poorer equalization where M is larger (Cox and Niou, 1999, p. 362).

[13] These effects could be denominated in other terms, such as the probability of winning.

incumbents to their non-incumbent running mates.[14] My claim that the *effect* of an asset is smaller with equalization is something that cannot be proven without accurate observations of four states of the world, three of which will always be unobserved counterfactuals: the performance of a candidate with and without an asset (with the difference determining the effect of the asset), each under two levels of equalization effort. But, so long as some asset would otherwise lead some of a party's candidates to win more votes than its other candidates and the party's equalization strategies will tend to level (rather than exacerbate) those differences across candidates, then they will also inadvertently reduce the average "effect" of that asset. These conditions are not demanding, as it is usually rather easy for a party to determine which of its candidates are stronger and how to manage the vote in the direction of equality.

It is significant that the reduction in the vote share gain for asset-holding candidates does not benefit all other competitors equally—the beneficiaries are primarily copartisans and not the candidates of other parties. This means that my argument is best appreciated by taking a *relational conceptualization* of the electoral effects of assets, which measures effects as the vote share *taken from competitors* rather than the vote share accrued to asset holders. In relational terms, the argument is that *equalization leads to a greater reduction in the same-party effects* (SPE) of assets than it does for the other-party effects (OPE) of assets:

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[14] For this example, we would expect the within-party variance in the distribution of votes across incumbents and challengers to be smaller for (a) parties that engage in more attempts to equalize and (b) the average party in electoral systems that give greater incentives to equalize. The latter is exactly what was found by Johnson and Hoyo (n.d.).

Proposition 1: *When a party acts to equalize the vote, its candidates' assets (e.g., incumbency, campaign spending) take less vote share from competitors and especially same-party competitors. Therefore, from the perspective of competitors, equalization causes the vote-share denominated causal effect of the asset to reduce more substantially for the average same-party competitor than for the average other-party competitor.*

The remainder of this essay aims to test this proposition for one asset: campaign spending. That is, my goal is to establish that a change from one state of the world (low equalization effort) to another (high equalization effort) changes the effects of campaign spending, with larger changes to SPEs than to OPEs. My research design consists of comparing the difference in estimated SPEs and OPEs for different elections, with the expectation that the former will be smaller relative to latter where parties took more steps to equalize the vote.

It is worth noting that the focus on relationally-conceptualized effects provides benefits in addition to theoretical proximity: it allows a fuller account of the electoral importance of assets because it can illustrate how much assets matter for both within-party and across-party contests.

3.3   Cases and model

Again, I test Proposition 1 by estimating the SP and OP effects of campaign spending for different elections with different amounts of equalization effort. This research design requires (1) accurate campaign spending data for at least two elections

whose parties vary in the amount they act to equalize the vote and (2) a statistical model that can obtain good estimates of spending effects. For (1), I use elections from different countries: Ireland 2002, Chile 2005 and Japan 1969-1990 (8 elections). I only estimate SPE and OPE for Ireland and Chile. Since campaign finance reforms in 1997 (Ireland) and 2003 (Chile), which introduced the legal requirement that legislative candidates disclose their campaign finances, both countries publish official candidate-level campaign finance data. By comparative standards, these data exhibit a high degree of detail and completeness (see Chapter 1). For Japan, I use the estimates obtained by Cox and Thies (2000), whose statistical model serves as the basis for my own.

With STV and strong parties, Irish elections see parties undertaking frequent attempts to equalize the vote. Both Chile and Japan contrast. Chilean elections use OLPR, providing no incentives to equalize. Therefore, I expect that SPE will be smaller relative to OPE for Ireland than the analogous quantities for Chile. I say "analogous" because Chilean political parties do not run multiple candidates per district. For present purposes, however, the two long-standing electoral coalitions are sufficiently similar to parties, each running multiple candidates per district on a single list.[15] Despite using SNTV, Japan contrasts with Ireland because it seems that parties—or at least the dominant Liberal Democratic Party (LDP)—did little to

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[15] For availability of campaign finance data as well as for facilitating 2SLS analysis, Chile provides the best-available OLPR case. Likewise for Ireland among SNTV/STV countries—it is currently the only country with equalization incentives that collects and makes publicly available a sufficient amount of campaign finance data.

explicitly equalize the vote. Therefore, other things being equal, I expect that the ratio of SPE to OPE will be larger for Japan than it is for Ireland. I explain the equalization and other circumstances for each country in more detail below. First, I discuss the model and estimation.

3.3.1 Estimating the effects of campaign spending

A typical candidate-level model of campaign spending effects would take a candidate's vote share as a function of her own spending and other candidates' spending, as in (1):

$$V_i = \alpha_i + \beta_i S_i + \sum_{k \neq i} \beta_k^i S_k + \varepsilon_i \tag{1}$$

Where,

V_i = the vote share for candidate i,

α_i = the share of the vote candidate i would receive if there were no expenditure by any candidates,

S_i = the amount of money spent by candidate i,

β_i = the estimated relationship between candidate i's expenditure and her vote share (expected to be positive),

S_k = the amount of money spent by competitor k,

β_k^i = the estimated relationship between competitor k's expenditure and candidate i's vote share (expected to be negative),

ε_i = the error term for candidate i. (Assume $\varepsilon_i \sim N(0, \sigma^2)$).

Although (3.1) posits different spending effects (β_k^i) for all competitors, it is easily modified to obtain effects that vary by competitor type. To estimate our quantities of interest, we split the competitors into those who are SP or OP relative to i, denoted S_{sp}^i and S_{op}^i. The coeffients on these terms—β_{sp}^i and β_{op}^i—will correspond to effects of spending by SP and OP competitors on i's vote share:

$$V_i = \alpha_i + \beta_i S_i + \beta_{sp}^i \sum S_{sp}^i + \beta_{op}^i \sum S_{op}^i + \varepsilon_i \qquad (3.2)$$

3.3.2   Endogenous spending and the 2SLS solution

Because spending is not exogenous but in part determined by (expected) vote shares, OLS estimates of (3.2) will contain "simultaneity bias." It is possible that, unlike most attempts to estimate spending effects, which focus on obtaining a reliable estimate of a single spending effect, simultaneity bias is less of a problem here because we are predominantly concerned with estimating *two* spending effects (SPE and OPE) and comparing their magnitudes. If each estimate should be similarly biased, then the bias would be of little concern.

To overcome simultaneity bias the usual approach is to use instrumental variables (IVs) and two-stage least squares (2SLS) regression. This approach involves finding variables that are both (a) highly correlated with the endogenous regressor (spending) but still (b) have no relationship with the endogenous regressand (votes).[16] If one (or more) of these IVs are found, then the estimated relationship between it and

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[16] More precisely, the instrument must be partially correlated with the endogenous regressor in a reduced form model that includes also all the exogenous variables as regresssors (Wooldridge 2002, p. 84).

the dependent variable can be taken as the effect of the endogenous independent variable on the dependent variable (since, by itself, the instrument is uncorrelated with the dependent variable). The 2SLS approach does this by estimating two regressions simultaneously: a first stage regression in which the endogenous (spending) variable is regressed on all of the exogenous variables and the IVs and a second stage (structural) regression in which the main dependent variable (vote shares) are regressed on the predicted values of the first stage regression.

The main challenge is finding good IVs. Here, this problem is exacerbated because (3.2) has three endogenous variables (each of the spending terms) and 2SLS requires IVs for each. However, if we have at least one IV, there is still a way forward. Because each of the three endogenous terms are based on the primary quantity we need to instrument—a candidate's spending—we can instrument for the focal candidate's spending in the first stage regression and use the predicted values to "construct" the other two endogenous terms for use in a separate second stage, if only we abandon the simultaneous estimation of the two stages. The problem with this approach is that the standard errors in the second stage regression will be incorrect (usually, they are too small). But, if we are willing to accept over-confidence in the estimates, then we can use the predicted values for the candidate's spending to construct the terms for SP and OP competitors. This is the approach taken by Cox and Thies (2000), and I follow it.[17]

This procedure is as follows. First, I estimate a first stage regression in which spending is made a function of the exogenous variables and an instrumental variables

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[17] The focus in Cox and Thies (2000) is on spending effects from the perspective of the focal candidate.

(IVs). The predicted values of this regression, given by (3.3), are $\widehat{S_i}$, which is renamed $Ownhat_i$:

$$Ownhat_i = \widehat{S_i} = \alpha_i + \theta_1 IV_i + u_i \qquad (3.3)$$

If the 2SLS estimator were used (which I do as a robustness check), (3.3) is estimated simultaneously with (3.4):

$$V_i = \alpha_i + \beta_i Ownhat_i + \varepsilon_i \qquad (3.4)$$

For the "separate stage" approach, I use the predicted values of (3.3) to construct *SPhat* and *OPhat*, which correspond to the sum of the *Ownhat*'s for *i*'s SP and OP competitors. These are then included in the second stage regression:

$$V_i = \alpha_i + \beta_i Ownhat_i + \beta_{sp}^i SPhat_i + \beta_{op}^i OPhat_i + \varepsilon_i \qquad (3.5)$$

The challenge of finding good IVs remains. With regard to campaign spending and votes, there are rarely any variables that fulfill the two requirements and are still sufficiently correlated with spending to avoid "weak instrument bias" (see Stock and Yogo, 2005). Cox and Thies (2000) note that, in the analysis of MMD elections, district-level variables might suffice because they might both correlate with spending but have no necessary relation to the electoral fortunes of individual candidates. If this were enough, then there would be suitable IVs for both Chile and Ireland since levels of expenditures vary across districts in both countries (in part due to spending limits, which are tied to the district magnitude in Ireland and to the number of voters in the district in Chile). However, district-level variables cannot instrument for differences in spending *within districts*, which is arguably the more important variation to instrument when (as below) the analysis includes multiple candidates per district.

However, one variable that can serve as a good IV for both Ireland and Chile is partisanship. In both countries, parties differ in their fundraising abilities. At the same time, candidates in parties with higher average expenditures do not necessarily have higher average vote shares because vote shares are highly determined by which and how many candidates are nominated by each party or coalition. For Chile, partisanship is sufficient as an IV since parties do not run multiple candidates per district. Therefore, using the multiparty electoral coalitions as the "parties" to estimate SPE and OPE and the parties as instruments allows the IV approach to proceed.

For Ireland, partisanship cannot be the only IV because parties run more than one candidate per district, and we need at least one IV to differentiate between candidates. Unsurprisingly, however, variables that correlate with sub-party differences in spending, such as incumbency or seniority, also correlate with differences in copartisans' vote shares. My solution is to use two operationalizations of essentially similar variables, one to control for differences in vote shares and the other to instrument for spending, reserving for the latter the set that is expected to better correlate with spending differences. This method may introduce some multicollinearity, but compared to the use of district-level IVs, it more closely conforms to what is demanded in order to properly estimate the effects of campaign spending in electoral districts.[18]

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[18] Note that there will almost always be some multicollinearity in models of campaign spending since spending correlates with other variables. The degree to which multicollinearity is a statistical problem can be assessed by analyzing the "variance inflation" among the variables. For these analyses, this diagnostic test did not reveal major issues.

3.3.3 Non-independent observations

The models do not yet account for candidates' baseline vote shares. These depend on various district-level factors, such the number of candidates in the district, which determines the average vote share in the district, and various candidate-level attributes, such as partisanship and candidate quality. To control for district-level factors, I simply include district dummies, D_k, which obviates the need (and ability) to use other district-level variables. It also makes the model equivalent to the "fixed effects" transformation in which the independent variables correspond only to the *within-district* differences in vote shares. For candidate-level factors, I include a vector of candidate level variables X_{ic}. With coefficients γ_c and γ_k and a constant γ_0, I therefore substitute the following for α_i:

$$\alpha_i = \gamma_0 + \gamma_c X_{ic} + \gamma_k D_k$$

To correct for autocorrelation—which occurs in any model that uses more than one candidate per district because each candidate's vote share is necessarily related to those of her competitors—I "cluster" the data by district. Clustering takes into account correlation among the residuals of clustered observations and to adjusts the standard errors on coefficient estimates in the appropriate direction. This procedure is appropriate for my analyses because they have a large number of clusters (districts) relative to candidates.[19]

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[19] Four additional methodological notes. First, the model does not explicitly account for the compositional nature of the dependent variable—that each candidate's vote share must be between 0 and 100% and the vote shares of competitors must sum to 100 (see Katz and King, 1999; Jackson,

3.4   Ireland

In this section, I estimate the SP and OP effects of campaign spending for Ireland using the campaign expenditures reported by candidates after the 2002 parliamentary elections. These elections were largely expected to return the government to power, composed of a coalition between Fianna Fáil (FF), the party of then-Taoiseach (Prime Minister) Bertie Ahern, and the Progressive Democrats (PD). In fact, due to the popularity of Ahern and robust economic growth Ireland had experienced during the previous term, most analysts were predicting that FF would win a majority of the seats in the Dáil (parliament) and thus form the post-election

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2002; Tomz et al., 2002, and Chapter 5). Second, the models do not allow for diminishing marginal returns or different returns for various candidates (e.g., incumbents versus challengers). They could be modified to account for these effects, but the modifications would have to apply to each of the three spending terms, and they would not be simple. Because two of the spending terms are summations of individuals' (instrumented) spending, they cannot simply be squared or made into logarithms—the common approaches to account for diminishing returns—because when summed together, they will no longer be transformations of the spending terms. Such a transformation would constitute the "forbidden regression" (Wooldridge, 2002, p. 236-7). Third, the models contain some duplication of information, as the right-hand side of the equation uses the spending by *all* competitors in the district in every observation (see Chapter 5). Lastly, when the causal effects of some electoral asset are understood as the vote share gain a candidate receives, the estimate of the effect will be biased by the number of candidates running in a district except when only certain candidates are included in the model or the independent variables are modified (see Chapter 5). Because this analysis conceptualizes effects from the perspective of competitors, and because the analysis hinges on the relation between SPE and OPE, the bias is of lesser concern than it would be elsewhere.

government by themselves. In the event, they did not win a majority. After the election, they formed another government with the PDs and a few independents.

Irish parties are interested in maximizing their seats in the Dáil because seats matter to which party or coalition will form the government (and to the allocation of portfolios in governments) and because the parties are not mere vehicles for self-interested politicians, but strong, programmatic, and ideologically-defined coalitions. The programmatic distinction is more pronounced among the smaller parties (e.g., Sinn Féin, Labour, the PDs, and the Greens) than among FF and the main opposition party, Fine Gael (FG), whose platforms are less distinguishable. But FF and FG have great political differences nonetheless—since their formation after Irish independence, they have always served as the primary opposition to each other, never governing together.

Irish elections use STV with magnitudes ranging from 3 to 5. With these magnitudes, the larger parties (mostly FF and FG) can potentially win more than one seat per district. To do so, of course, they have to run more than one candidate, and this means they will have incentives to equalize their candidates' first preference votes. But do they have the ability? It would seem so. Parties exert significant central control over which candidates are nominated in each district (Galligan, 2003) and the difficulty in equalizing is not too given that the number of would-be equalizers few in number (usually two or three).[20]

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[20] In the 2002 elections, 55% of the candidates that ran with any copartisans had only one, while 39% had two and the remaining 6% had three.

It is no surprise, then, that we observe the larger parties attempting to equalize the vote. For 2002 as well as for other elections, this began at the nomination stage, in which the parties deliberately ran candidates with different geographies of support within the electoral districts (Galligan, 2003, note 11).[21] We also observe parties attempting to bailiwick the districts, assigning different portions to different candidates. There is no systematic data about how often this occurs, but the schemes are well-known, receiving mention in the media and electoral analyses and are discussed freely by candidates and parties (see Gallagher, 2003). After the 2002 election, FF candidate Seán Fleming (2003, p. 58) remarked:

> In the constituency [Laois-Offaly] there is an obvious natural divide of the territory based on the county boundaries. The Laois candidates canvass only in Laois and the Offaly candidates do likewise in Offaly. In Country Laois we also have a divide within the county between the two candidates based on electoral areas to ensure a reasonable division of the votes between the two Laois candidates. This had delivered two Fianna Fáil seats in Laois in 1997 and we hoped the same formula would work again in 2002.

Lastly, we observe parties attempting to ration the vote, sometimes even by taking ads in newspapers that tell their supporters to vote based on the location of their residence in the district (see Gallagher and Marsh, 2008, p. xxxvii).[22] Again, there is no

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[21] In some elections, Irish parties make pre-electoral pacts with each other in which they arrange transfer deals, with candidates asking their voters to give their second vote to a particular competitor of another party. However, it does not seem these have ever included equalization strategies. Regardless, no such pacts occurred in 2002, especially between FF and FG.

[22] In some districts, the parties seem to adopt a "transfer" strategy in which they ask their supporters to cast their first vote for the leader and then their second vote for a particular member(s) of the party (see Gallagher and Marsh 2008, p. xxxix). The transfer strategy makes sense where the party leaders run

systematic data on how much this occurs or how much it affects voter behavior, but the attempts are not infrequent.

Because parties undertake these efforts to equalize, my theory would expect that the effects of campaign spending will be disproportionally OP (or less SP), at least relative to what they would be if there were fewer attempts to equalize the vote. However, my main prediction will regard the differences between this pair of estimates and those for other countries.

3.4.1   Variables for Ireland

To estimate SPE and OPE, I include in the analysis only FF and FG candidates who ran in districts where both parties ran at least two candidates. That is, independents and candidates from all other parties are excluded, as are districts where either FF or FG ran only one candidate. The dependent variable in the structural (second stage) regression is a candidate's share of the first preference votes cast for all candidates in the district, *V*. The endogenous, dependent variable in the first stage regression is a candidate's reported campaign *Spending* expressed in 2005 dollars.[23]

I mentioned earlier that parties spend at different levels, but this is not necessarily related to the performance of individual candidates. Because they were the governing party that was expected to return to government (and possibly a majority), it

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because parties want their leaders to have little electoral uncertainty and to have the prestige of winning a large number of first preference votes.

[23] The expenditure data is available online from the Standards in Public Office Commission (sipo.gov.ie). Electoral data are from ElectionsIreland.org.

is not surprising that it is the FF candidates that spend more than the FG candidates. But even when FF candidates spend more than FG candidates, it does not mean that the FF candidates will obtain more votes—the vote shares of individual candidates will also be a function of how many candidates run under the party label and which other parties are fielding quality candidates in the district. Therefore, my first IV is a simple dummy variable—denoted *FF*—for Fianna Fáil candidates.

More often than not, however, FF candidates win more votes than FG candidates. But we can expect that this is also likely to happen in districts that are both more heavily populated by FF supporters and where FF runs fewer candidates. To account for this, I include as a control variable *Party Previous*, which is the total number of FF first preference votes obtained in district in the previous (1997) election divided by the number of FF candidates running in the analyzed (2002) election *minus* the same quantity for FG candidates. Because this variable does not vary within districts, I set it equal to zero for FG candidates. Therefore, with district dummies and only FF and FG candidates included in the analysis, the variable captures the amount by which the average FF candidate should be advantaged relative to the average FG candidate.

The remaining variables I include are meant to instrument/control for differences in spending/vote shares within a party's candidates. Each variable accounts for the difference in experience or quality of candidates, distinguishing incumbents from non-incumbents, experienced non-incumbents from inexperienced non-incumbents, and so on. The variables I include as controls in the structural equation (on vote share) are *Incumbent* and *Leader*, the former being a dummy for candidates

that were incumbents in the outgoing Dáil and the latter being a dummy for candidates that were either ministers in the outgoing government or Michael Noonan, the leader of the FG opposition.[24] Both variables are expected to have a positive relationship with *V*, indicating that incumbents get more votes than non-incumbents and leaders get more votes than non-leader incumbents (since all candidates for whom *Leader*=1 are also *Incumbent*=1).

As an IV, I include *Rank*, which is the "track" rank of candidates in party slate in this order from highest to lowest: ministers in the outgoing government, incumbents, candidates who served the 1997-2002 term in the Seanad (Senate), non-Seanad non-incumbent candidates who have served terms as local councilors, and then other (inexperienced) candidates. The track ranking means that of the candidates in party slate, the candidate at the bottom of the rank is coded *Rank*=1, the next candidate(s) in the ranking is coded *Rank*=2, and so on with "equal" candidates given the same rank. So, if a party ran two incumbents and a minister in one district, the incumbents would each be coded *Rank*=1 and the minister would be coded *Rank*=2. The same ranking would occur if the party ran two inexperienced candidates and either one previous councilor, one Seanad member, one incumbent, or one minister.

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[24] Party leaders are included in the variable because parties are less likely to equalize with leaders, wanting them to win and get a large personal vote. But this does not mean that the differences in spending between the leader and his copartisans will be as extreme. Indeed, Noonan spent only 2.7% more than his running mate but received more than twice as many personal votes. The other party leader, Bertie Ahern, is not included because FF did not run two candidates in his district.

Of course, this ranking is somewhat arbitrary.[25] But it should serve the purpose for which it is intended: (a) to correlate with variation in spending within a party slate while avoiding complete collinearity with the variables in the structural equation (i.e., *Incumbent* and *Leader*) and (b) to be a better fit with the endogenous variable than (say) a battery of indicator variables for different levels of experience. The reason *Rank* is a better fit stems from the fact that strong candidates are likely to spend more when they face stronger copartisans. That is, there might always be a substantial difference in spending between a minister and his non-incumbent copartisan, but the difference is likely to be more pronounced when there is another incumbent copartisan in the mix (when the minister faces a more serious threat). Relative to including several indicator variables, it also makes for more efficient estimation in the first stage regression.

As a third and final IV, I interact *Rank* with *FF* to capture different relationships between *Rank* and spending for the two parties.

3.4.2   Results for Ireland

The results of three regressions are given in Table 3.2 (district dummies not shown). The first column reports the results using the 2SLS estimator for a reduced form version of structural equation in which there is no spending by SP and OP competitors. This helps assess the results of the separate stage approach (below) and

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[25] I construct *Rank* in this way because each "step" correlates with within-district spending differences among copartisans. Two of the components—Seanad membership and local council experience—are used as separate IVs in the 2SLS models of Benoit and Marsh (2008), Benoit and Marsh (2009).

allows use of the 2SLS diagnostics in Baum et al.'s (2007) *ivreg2* command for *Stata*, each of which assesses the validity of the IVs from a statistical point of view. The diagnostics confirm that the instruments identify the endogenous variable, though they are likely to produce some "weak instrument bias." The weakness of the instruments is no doubt related to the fact that the first stage regression (shown in the second column) also includes *Rank*, *Incumbent* and *Leader*, none of which are individually statistically significant in the model. However, the identification is important, signifying that the IVs are jointly significant. Indeed, the three IVs are significant at the p<.01 level in the first stage regression.

The results of the separate second stage regression appear in the third column. There are three things to note about the coefficients. First, all three spending terms are statistically significant and in the direction we would expect, with spending by other competitors (*SPhat* and *OPhat*) decreasing a candidate's vote share and the candidate's own spending (*Ownhat*) increasing his vote share. Second, we see that the coefficients on *SPhat* and *OPhat* are smaller than *Ownhat*, which is appropriate given that spending by other competitors should affect all the candidates in the district and not simply the focal candidate. Third, the coefficient on *Ownhat*—which indicates that each *unanswered* increase in US$10,000 buys 5.3% of the district vote—is about half the size of the coefficient on *Spending* in the first column. This is appropriate (or, at least, not inappropriate) because we know the model in first column is incorrect in that it does not control for the effect of other candidates' spending. Together, the model produces sensible estimates for the effects of campaign spending.

Table 3.2: The Estimated Effects of Spending on Vote Shares in the 2002 Irish Parliamentary Elections

	TSLS: 2nd Stage		OLS: 1st Stage		OLS: 2nd Stage	
	Beta	S.E.	Beta	S.E.	Beta	S.E.
Spending variables						
SPHAT					-0.19***	[0.07]
OPHAT					-0.27***	[0.03]
OWNHAT					0.53*	[0.29]
SPENDING	1.07***	[0.33]				
Instrumental variables						
FF			-0.64	[1.69]		
RANK			0.37	[1.21]		
FF*RANK			1.67	[1.06]		
Control variables						
PARTY PREVIOUS	0.0013***	[0.0005]	0.0007	[0.0005]	0.0014***	[0.0004]
INCUMBENT	0.47	[1.03]	1.40	[1.20]	1.27	[1.13]
LEADER	-0.87	[2.40]	1.71	[2.26]	0.27	[2.17]
Constant	0.77	[3.95]	10.05***	[1.48]	19.08***	[1.87]
Observations	163		163		163	
R-squared	-		0.466		0.674	

Robust standard errors with clustering by district in brackets. *** p<0.01, ** p<0.05, * p<0.1. The dependent variable is a candidate's vote share (V) in the structural equation and campaign *Spending* in the first stage regression. Coefficients for district dummies are not shown.

A fourth observation to take from the results in the third column is the relationship between *SPhat* and *OPhat*: each dollar spent by same-party competitors takes fewer votes from the focal candidate than each dollar spent by other-party competitors. The estimates indicate that the effect of SP spending is about 70% as harmful as spending by OP competitors, though the difference does not reach standard levels of statistical significance. Given the literature on intraparty competition, the result is surprising—we might otherwise expect candidates' spending to affect primarily within-party contests. And the result is substantively important: campaign spending in Irish elections has as large (or larger) an effect on the partisan composition of the Dáil as on which copartisans get elected.

3.5   Chile

Legislative elections in Chile are dominated by two multiparty coalitions, the Concertación and the Alianza, who together have won nearly every seat in Congress since the return to democracy in 1989. In the 2005 elections to the Chamber of Deputies—the election analyzed here—they took all but one of the 120 seats, with the Concertación renewing its majority status by winning 65 seats. The left-leaning Concertación is currently composed of four parties, the Christian Democratic Party (PDC), the Socialist Party of Chile (PSC), the Party for Democracy (PPD), and the Radical Social Democratic Party (PRSD), while the right-leaning Alianza currently has two parties, National Renewal (RN) and the Independent Democratic Union (UDI). In addition to partisans, both coalitions sometimes run independent candidates.

Due to the ideological differences between the coalitions regarding the role of the state in the economy and the historical differences between the coalitions on Pinochet's military regime, both of the coalitions are interested in maximizing seats in Congress (even though its political power is somewhat dwarfed by that of the presidency). The electoral system in which the coalitions compete for seats is a version of OLPR that elects two candidates per district and limits lists to two names each. With the D'Hondt method of seat allocation, this means that the lists with the greatest and second-greatest number of votes each win a seat unless the first (plurality) list obtains twice as many votes as the second list, in which case it wins both seats ("doubling" the other lists). If one list should win both seats, both listmates win seats; if a list wins one seat, it goes to the listmate with the greatest number of personal votes.[26]

Because in most districts there are enough supporters for each of the coalitions to ensure that each will one seat, the task of maximizing coalition seats boils down to winning the marginal seat in a small number of districts—those where one of the coalitions (usually the Concertación) has enough supporters to potentially double. However, because the number of seats won by each coalition depends only on the number of votes won by each list and not on how votes distributed within lists, there is no need for coalitions to engage in any efforts to equalize the vote. Of course, the coalitions will want to nominate strong candidates and possibly also pairs of listmates

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[26] Some OLPR systems, like Brazil's, allow voters to cast a vote for the list instead of a preference for an individual candidate. Chile's does not.

that can that can attract different types of voters, but seat maximization does not require that listmates draw relatively equal amounts of votes.

In the majority of districts, however, there is enough support for each of the two coalitions to practically guarantee that each will win one and only one seat, so long as each runs a single list.[27] In these districts, there is little the coalitions can do to win an additional seat, and so the main electoral competition is within lists. This does not guarantee that intense intra-coalitional battles are inevitable, although that is the frequent result. Rather, parties will sometimes run weak candidates in order to give an easy victory to their coalition partner in return for the same courtesy in another district. Because each of the coalitions has a dominant party—the PDC and UDI can each command a larger share of the popular vote than their coalition-mates—the trades can be somewhat one-sided, with the dominant party "standing down" to allow a victory for a smaller party in one district and then running strong candidates in other districts where they hope to win (no matter who is the running mate) (see Siavelis, 2005). This means that the small parties are more likely to receive plum spots, and more often than not this these are reserved for their incumbents. This is particularly the case in the Concertación, where the greater number of parties and more fractionated within-coalition support requires agreements for each of the parties to secure their "share" of seats (Siavelis, 2005).

Each of these factors complicates the attempts of predicting vote shares and estimating the effects of campaign spending. But they should not obscure the point

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[27] This means that the coalitions have incentives to run a single, coalition list in each district. In this way, the electoral system helps maintain the two coalitions as the dominant forces in Chilean politics.

that, like political parties, Chile's electoral coalitions have an interest in running multiple candidates and in maximizing seats, but they take no steps to equalize the vote, as the OLPR electoral system gives no such incentives. Therefore, we would expect the effects of campaign spending to be disproportionally intra-coalitional or "SP" (to equate the within-coalition effects with within-party effects) relative to the counterfactual in which there is significant equalization effort. This counterfactual is not observed, so the Irish case is used instead. That is, I expect the ratio of SPE to OPE to be larger in Chile than Ireland.

3.5.1 Variables for Chile

To obtain estimates for the effects of campaign spending in the Chilean election, I analyze the candidates running in the two main coalitions for all districts—with 60 districts and two candidates per coalition, this is 240 candidates. As with the analysis of Ireland, the dependent variable in the structural equation is *V*, a candidate's share of the district vote (including all candidates), and the dependent variable is a candidate's reported *Spending* expressed in 2005 dollars.

For control variables, I use:

Coalition Vote = the percent of the two-coalition vote obtained by the coalition in the district in the previous (2001) Chamber election,

Incumbent = 1 if the candidate served in the outgoing Chamber and ran in the district in which they previously ran (i.e., candidates that served in the outgoing Chamber but ran in different districts are coded *Incumbent*=0),

Leader   = 1 if candidate had previously served on the Chamber's Mesa Directiva (directing board), all of whom are Concertación candidates,

Alianza   = 1 for candidates on Alianza lists,

Small Party   = indicates if the candidate ran under a party label other than UDI or PDC.

As a final control variable, I interact *Small Party* and *Incumbent* because incumbents in the small parties are more likely to be given plum spots, and therefore will probably spend little and yet still win a large vote shares. This means the interaction term should have a positive coefficient in the structural equation.

For IV's, I use party dummies. Because of their different appeal to businesses and their ideological positions regarding the role of the state in the economy, the parties differ in their abilities to raise campaign finance, with UDI candidates having the easiest time of it and the left-most parties (PRSD and PSC) having the greatest difficulties (see Chapter 2). But these differences in expenditures will not always correspond with the differences in candidates' vote shares. For instance, the vote shares of PRSD and PSC candidates vary considerably despite the fact that they all spend little. Part of the reason for this has been foreshadowed—the PRSD and PSC candidates who tend to win lots of votes tend to be incumbents in districts where the PDC has ran a weak candidate, and thus high spending is unnecessary. The other reason is that PRSD and PSC candidates raise most of their money from their parties, who support their candidates in roughly equal measure (see Chapter 2). This suggests two available IVs: *PRSD-PSC*, a dummy for these partisans, and its interaction with

Incumbent, which will capture spending differences for incumbents versus non-incumbents in these parties versus those in other parties. My account suggests that the the interaction term will be negative, indicating that incumbents from either PRSD or PSC will raise less money than the incumbents of other parties.

With *PRSD-PSC*, *Alianza*, and *Small Party* in the first stage regression, I need only two more IVs to account for other partisan differences among candidates. The first I use is *Independent*, which is an indicator for candidates (in either coalition) that ran without party affiliation. In the Concertación, this means *Small Party* will correspond to PPD candidates; it also means that PDC candidates will be the excluded category. The second is an interaction between *Alianza* and *Small Party*, which distinguishes RN candidates from UDI (and PPD) candidates. Because *Small Party* is already interacted with *Incumbent*, including *Alianza*Small Party* means that two additional interaction terms ought to be included as well: *Alianza*Incumbent* and an interaction of all three variables. These are not entirely necessary—they could be excluded and thus forced to equal zero. But I include them because they aid interpretation of the coefficients.[28]

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[28] Because the first stage regression includes *Incumbent* and *Leader* and because the coalitions do not run lists with two candidates from the same party, the use of party dummies as IV's will instrument for differences among all the candidates. So there is no need for a variable like *Rank*. Note, however, that because very few Chilean lists include two incumbents, the *Alianza*Incumbent* term is analogous to the *FF*Rank* term from above.

3.5.2   Results for Chile

The results are given in Table 3.3. As before, I report the results of a reduced form of the structural equation using the 2SLS estimator along with the first and separate second stage results. As before, the diagnostics for the first stage regression indicate that the IVs identify the endogenous variable, but that there may be some weak instrument bias.

The results of the first stage regression are largely as expected, if difficult at first to interpret. To start, consider a few of the simple variables: incumbents spend more than non-incumbents, Alianza candidates spend more than Concertación candidates, and Mesa members (*Leader*) spend more than other Concertación incumbents. Then, in the Concertación, PRSD and PSC non-incumbents spend more than other non-incumbents (*PSRD-PSC + Small Party*), while PRSD and PSC incumbents spend less than other incumbents (*PSRD-PSC*Incumbent + Small Party*Incumbent*). (Thus, what is true for PRSD and PSC candidates is also true, albeit to a lesser degree, for PPD candidates relative to PDC candidates, the excluded category). In the Alianza, RN candidates spend less than UDI candidates, be they non-incumbents (*Alianza > Alianza + Small Party + Alianza*Small Party*) or incumbents (*Alianza + Incumbent + Alianza*Incumbent > Alianza + Incumbent + Alianza*Incumbent + Small Party + Small Party*Incumbent + Alianza*Small Party*Incumbent*). As a group, the IVs are statistically significant at p<.05, indicating that endogenous variable is identified.

Table 3.3: The Estimated Effects of Spending on Vote Shares in the 2005 Chilean Chamber of Deputies Elections

	TSLS: 2nd Stage		OLS: 1st Stage		OLS: 2nd Stage	
	Beta	S.E.	Beta	S.E.	Beta	S.E.
Spending variables						
SPHAT					-0.10***	[0.03]
OPHAT					-0.00	[0.04]
OWNHAT					0.11	[0.10]
SPENDING	0.31***	[0.10]				
Instrumental variables						
PRSD-PSC			14.68	[17.54]		
PRSD-PSC*INCUMBENT			-15.46	[22.23]		
INDEPENDENT			-6.39	[14.33]		
ALIANZA*SMALL PARTY			-23.20	[19.89]		
ALIANZA*INCUMBENT			5.01	[19.12]		
ALIANZA*SMALL PARTY *INCUMBENT			16.92	[35.24]		
Control variables						
ALIANZA	-8.41***	[1.85]	20.98**	[9.75]	-4.58**	[2.19]
COALITION PREVIOUS	0.08	[0.08]	0.33	[0.26]	0.23***	[0.09]
SMALL PARTY	2.48	[1.61]	4.51	[18.53]	2.97	[2.12]
SMALL PARTY*INCUMBENT	8.44	[5.25]	-23.16	[28.52]	4.78	[4.53]
INCUMBENT	-0.37	[4.86]	30.97**	[15.09]	4.40	[5.27]
LEADER	0.28	[5.97]	29.35	[19.63]	5.12	[5.99]
Constant	6.33	[5.01]	36.42	[23.46]	12.74*	[7.33]
Observations	240		240		240	
R-squared	-		0.510		0.512	

Robust standard errors with clustering by district in brackets. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. The dependent variable is a candidate's vote share (V) in the structural equation and campaign *Spending* in the first stage regression. Coefficients for district dummies are not shown.

The results of the second-stage regression are also as expected: *Small Party* candidates and *Small Party* incumbents generally do better at winning votes than dominant parties when controlling for spending; a candidate's own spending helps his vote share; and spending by SP and OP competitors diminishes the candidate's vote share. The coefficient on *Ownhat* is smaller when controlling for competitors' spending, exactly as was found for Ireland. The coefficient on *Ownhat* indicates that a candidate receives 1.3% of the district vote for each *unanswered* increase in $10,000. This figure is considerably smaller than what was found for Ireland, perhaps as a result of stronger partisan ties in Ireland or the fact that there voters are allowed but a single vote instead of a ranking.

The final observation to take from the results in Table 3.3 is that spending by SP competitors has a much larger reductive effect on a candidate's vote share than spending by OP competitors (their equality can be rejected at the p<.10 level). This indicates that campaign spending primarily affects which candidates top their lists, with spending by the opposition having little effect on a candidate's vote share (in fact the coefficient is barely different than zero and not statistically significant). These results are not surprising, but they contrast sharply with the Irish results, where spending by OP competitors had a larger reductive effect on a candidate's vote share than spending by SP competitors. The difference, I argue, is because of the equalization attempted by Irish parties that does not occur among Chilean coalitions.

3.6   Japan

As another point of comparison, I compare my estimates with those in Cox and Thies (2000), which estimated but did not compare SPE and OPE. Their model is similar to the one I have used except that their IV's are district-level variables. Before discussing their results, I will explain the electoral context they analyzed.

During the period 1969-1990, the years analyzed by Cox and Thies, Japan used SNTV to elect members to the House of Representatives, the lower chamber of Japan's parliament. At each of the eight elections held during this period, the conservative, fractionated Liberal Democratic Party (LDP) won a majority of seats. Of course, to do this, they had to average a majority of the seats in each electoral district, for which magnitudes ranged from 2-6. To win those seats, the LDP had to ensure that it nominated the right number of candidates and that the votes of its candidates were not too unequal.

Although there is a large literature analyzing Japan's SNTV elections, including a good deal about the LDP's struggles and successes in nominating the right number of candidates per district (see Cox and Niou, 1999), there is to my knowledge no indication that the LDP ever took any direct steps in order to equalize the vote. This is not to say the LDP did not take steps to help its candidates develop their own personal support networks (called *koenkai*)—it seems that the LDP's distribution of committee assignments and making of budgetary policy were both influenced by the need to help candidates cultivate and maintain their koenkai (McKean and Tatebayashi, n.d., McCubbins and Rosenbluth, 1995). Beyond this, however, it seems that the LDP rarely if ever took any steps to smooth out differences in candidates'

votes. One reason for this may be that these steps produced a sufficient degree of vote equality that within-party bailiwicking or rationing agreements were unnecessary.[29]Another reason may be that the LDP thought their majority status was sufficiently secure, and thus they could afford to lose some seats here and there. A third reason might be the inter-factional nature of within-party competition, causing within-party equalization agreements to be too difficult to implement and enforce.

Regardless of the reason, if it is accurate to claim that LDP candidates did not take steps to equalize but instead fought tooth-and-nail against one another, then there would be no corresponding reduction in SPE relative to OPE, and we would expect that the ratio of SPE to OPE to be larger in Japan than in Ireland. The results in Cox and Thies (2000) show this to be the case for each of the eight elections for which they estimated the effects of campaign spending. In two years, *OPhat* (which they denote Othhat) was positive, indicating that spending by OP competitors helped the average LDP candidate's vote share, while *SPhat* (which they denote Cophat) was strongly negative. For the remaining years, in which both *OPhat* and *SPhat* were both negative, *SPhat* was always larger; on average, spending by SP competitors took five times as many votes from the focal LDP candidate as spending by OP competitors. It seems campaign spending in Japan largely determined which LDP candidates were elected and had a much smaller effect on the composition of parliament. The contrast with Ireland is striking.

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[29] Indeed, the data in Johnson and Hoyo (2009) suggest that the within-LDP distribution of the vote had less variance than the same in Ireland, despite the explicit attempts to equalize votes in the latter.

3.7   Conclusion

In multicandidate elections with intraparty competition, a candidate's electoral assets (including campaign spending) do not necessarily hurt his copartisans the same as his other-party competitors. Put the other way around, the spending of copartisans and other-party competitors do not necessarily affect a focal candidate's electoral prospects equally. This means that in order to understand the substantive impact of campaign spending, one cannot simply analyze how many votes candidates receive for their expenditures—one must also determine how many of those votes come at the expense copartisans instead of other-party competitors. The findings of this kind of relational approach are also important information for campaign finance reformers, since the consequences of spending limits and public subsidies for candidates' campaigns will depend on the degree to which campaign spending affects interparty versus intraparty contests.

The conclusion of this paper is that electoral assets and campaign spending mean different things in different elections—in some places, they determine primarily which copartisans win seats, elsewhere they determine primarily the interparty composition of legislatures. My estimates have shown this variation to be great between Ireland, where spending primarily affects other-party competitors, and Chile and Japan, where spending primarily affects copartisan competitors or listmates. I have also provided an explanation for why the effects should vary in this way: equalization. When parties undertake steps to equalize the vote, as they do in Ireland's STV elections, they inherently diminish the intraparty effects of candidates' assets, and this is reflected in the degree to which campaign spending affects candidates' vote

shares. This argument should shift attention from the effects of campaign spending to parties' incentives to equalize the vote. But equalization is not the only factor that may affect the incidence of campaign spending effects across competitors. As it examines the relational effects of spending for more elections, future research should therefore attend to more factors that affect the incidence of campaign spending effects across competitors.

Future research should also pay more attention to parties' incentives and attempts to equalize the vote, especially since we can have no clear ex ante expectation about the effects of equalization incentives on within-party behavior. Just as it makes sense to presume that cooperation would limit the deleterious consequences of intraparty competition (e.g., particularism and campaign spending), we can also imagine that cooperation would exacerbate those consequences as candidates seek to hedge against the increased vulnerability they assume for being good partisans.

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CHAPTER 4

A DYADIC APPROACH TO ESTIMATING THE RELATIONAL

EFFECTS OF CAMPAIGN SPENDING

4.1   Introduction

In this chapter, I consider an alternative way to estimate the relational effects of electoral assets. This is to transform the data so that observations correspond to competitor-to-competitor *dyads* and variables correspond to *differences* between competitors' vote shares, spending, etc. When candidates are paired with competitors, there will be two types of dyads: SP and OP. A simple interaction between dyad type and the spending difference variable can therefore allow comparison of SP versus OP spending effects.

It is the simplicity and intuitiveness of this approach that is the main motivation behind this chapter. But the dyadic analysis of multicandidate electoral data may hold greater promise. I noted in the previous chapter that many of the methods used to analyze these data are complicated by intraparty competition, partial contestation, and/or difficulty controlling for cross-district variation in candidates' expected vote shares. For the dyadic analysis, these are less problematic because every observation has a built-in point of reference—i.e., one candidate is compared to another within the observation.[1] Because I only make dyads from candidates who are

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[1] Of course, the analysis will still compare dyads of different districts, but there is less reason to think that uncontrolled district-level factors will cause mis-measurement when observations are dyads.

competitors in the same district, the dyadic approach also explicitly incorporates the electoral dependence between competitors. So, if candidate-centered approaches like those in Chapter 3 tend to treat individuals as if their electoral behaviors and performances were completely independent, the dyadic transformation makes it so the relationships between competitors are the main subject of analysis.[2] Indeed, dyadic data *is* relational data. This is why it is routinely used to analyze the relationships among states (e.g. Bremer 1992; Barbieri 1996; Morrow et al. 1998; Mansfield et al. 2002) or among individuals in social settings (see Kenny et al. 2006), and why it may seem odd that is has never between used to study the relationships among electoral competitors.

My main concern in this chapter is with the viability of the dyadic approach and not with simply obtaining a new set of estimates. I proceed as follows. First, I explain and derive two dyadic models of relational spending effects. The models will prove to be identical, but I derive them separately to illustrate their underlying intuition (first version) and their relation to the candidate-level model in the previous chapter (second version). Second, I estimate separate subtypes of the model to show that they produce similar results.

My main conclusion is that the dyadic approach is sound and deserving of future development. In this chapter, its greatest weakness does not stem from its data structure but from its application: estimating spending effects, it still faces an endogeneity problem. Because introducing a dyadic approach proved too much for

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[2] The previous chapter used fixed effects and clustering, so it did not treat competitors as independent observations.

one chapter that already has a long argument and needed to discuss and overcome issues of endogeneity, I chose to relegate the dyadic analysis to this chapter, where I can focus on showing its compatibility with the candidate-level approach.

At one stage of testing the dyadic model, I used fake data in which assets were randomly assigned and exogenous. The dyadic model worked appropriately, but I discovered that the measurement of causal effects in electoral data is biased by variation in the number of candidates across districts—something which existing research that attempts to measure campaign effects for multicandidate data has not recognized. I illustrate this problem and its solution in the next chapter.

4.2   Dyadic Model #1

As already mentioned, the basic idea of the dyadic approach is to take the difference between two candidates' vote shares expressed as a function of the difference in their expenditures and an interaction term to obtain separate SP and OP effects, as in equation 4.1:

$$SPREAD_{ij} = \delta_0 + \delta_1 S_{ij} + \delta_2(S_{ij} * OP_{ij}) + \delta_3 OP_{ij} + e_{ij} \tag{4.1}$$

In 4.1, $SPREAD_{ij}$ and S_{ij} are *dyadic* variables that correspond to differences between values in the candidate-level variables. Specifically, $SPREAD_{ij} = V_i - V_j$ (i.e., the difference in vote shares for candidates i and j) and $S_{ij} = S_i - S_j$ (i.e., the difference in spending between candidates i and j). OP_{ij} is a *dyad-level* variable, in this case an indicator as whether i and j are from the same (=0) or different (=1)

parties. Ignoring issues of endogeneity, δ_1 and $\delta_1 + \delta_2$ provide estimates akin to SP and OP effects of campaign spending, respectively.

At a general level, consider some of the features of this approach. First, the model entails a shift of perspective from levels (e.g., the size of spending or vote shares) to differences or spreads between candidates, such as how much more i spent than j. Second, with each candidate paired with each of her competitors once—so that if there is a dyad ij there is not also the dyad ji—there will be N*(N-1)/2 dyads for a district with N candidates. This means that each candidate will be in multiple dyads, which may exacerbate issues of observational non-independence (discussed below). Third, unless the pairing of candidates is done in a way so that the first candidates in the dyad are likely to systematically differ on the outcome variable from the second candidates, the expected value of the outcome variable for each dyad will be zero. And fourth, the dyadic model obviates the use of most district level variables because these do not vary between candidates in the same district.

Now consider something specific to 4.1: the model includes spending only by i and j (hereafter denoted ij), and nothing by other competitors. This is appropriate insofar as the spending by other competitors affect ij equally. However, when we posit that a candidate's expenditures can affect competitors at two different rates (i.e., SP and OP), this exclusion is only justifiable when ij are SP, and this because all other competitors (besides ij) are either SP or OP to *both* candidates, whose spending will then affect the two candidates equally. When ij are OP, spending by other competitors will affect the candidates unequally, with the expenditures of i's copartisans affecting

V_i at the SP rate and V_j at the OP rate. The reverse would be true for all of j's copartisans, and all competitors that are OP to *both ij* can be excluded.

Even when they do affect the dyad, we might be able to exclude other candidates' expenditures from the model with little effect on the coefficient estimates because they will be orthogonal to $SPREAD_{ij}$, sometimes disproportionally influencing V_i and other times disproportionally influencing V_j. However, because we can anticipate how other candidates' expenditures will affect ij, we can include them with a simple adjustment:

$$SPREAD_{ij} = \delta_0 + \delta_1 S_{ij} + \delta_2 (S_{ij} * OP_{ij}) + \delta_3 OP_{ij}$$

$$+\delta_4 (S_{sp}^j - S_{sp}^i) + \delta_5 (S_{op}^j - S_{op}^i) + e_{ij} \qquad (4.2)$$

I have added two terms, one corresponding to the difference in ij's SP competitors' (excluding ij themselves) expenditures (given by $S_{sp}^j - S_{sp}^i$), the other corresponding to their difference in OP competitors' expenditures, both of which will be zero for SP dyads. The reason I have subtracted the expenditures for i's competitors from those of j's competitors in each term and not vice versa is because the coefficients on S_{ij} correspond to the *vote-getting* effects of i's versus j's expenditures, while the corrective terms are meant to correspond to the difference in what ij's SP and OP competitors *take* from ij. In other words, if I constructed the terms in the reverse order, we would expect their coefficient estimates to be the inverse of those on the main spending terms. Reversing the order of the subtraction means the magnitude and polarity of certain coefficients will be the same, or $\delta_4 = \delta_1$ and $\delta_5 = \delta_1 + \delta_2$. Substituting these gives:

$$SPREAD_{ij} = \delta_0 + \delta_1 S_{ij} + \delta_2(S_{ij} * OP_{ij}) + \delta_3 OP_{ij}$$

$$+\delta_1(S_{sp}^j - S_{sp}^i) + (\delta_1 + \delta_2)(S_{op}^j - S_{op}^i) + e_{ij} \qquad (4.3)$$

If we set $S_{sp}^{ji} = S_{sp}^j - S_{sp}^i$ and $S_{op}^{ji} = S_{op}^j - S_{op}^i$, we can rewrite the equation as:

$$SPREAD_{ij} = \delta_0 + \delta_1 S_{ij} + \delta_2(S_{ij} * OP_{ij}) + \delta_3 OP_{ij}$$

$$+ \delta_1 S_{sp}^{ji} + (\delta_1 + \delta_2)S_{op}^{ji} + e_{ij} \qquad (4.4)$$

4.3 simplifies further when we note that $S_{sp}^{ij} = S_{op}^{ji}$. The reason for this is simple: in controlling for all OP competitors' spending in S_{op}^{ji}, spending by candidates in parties other that P_i and P_j will drop within the variable, leaving only i's OP competitors that are j's SP competitors and vice versa. Switching the polarity and order of subtraction for the last spending term gives (the changes are highlighted):

$$SPREAD_{ij} = \delta_0 + \delta_1 S_{ij} + \delta_2(S_{ij} * OP_{ij}) +$$

$$\delta_3 OP_{ij} + \delta_1 S_{sp}^{ji} - (\delta_1 + \delta_2)S_{sp}^{ji} + e_{ij}$$

$$= \delta_0 + \delta_1 S_{ij} + \delta_2(S_{ij} * OP_{ij}) + \delta_3 OP_{ij} + (\delta_1 - \delta_1 - \delta_2)(S_{sp}^{ji})$$

$$+ e_{ij}$$

$$= \delta_0 + \delta_1 S_{ij} + \delta_2(S_{ij} * OP_{ij}) + \delta_3 OP_{ij} - \delta_2 S_{sp}^{ji} + e_{ij}$$

$$= \delta_0 + \delta_1 S_{ij} + \delta_2(S_{ij} * OP_{ij}) + \delta_3 OP_{ij} + \delta_2 S_{sp}^{ij} + e_{ij} \qquad (4.5)$$

4.5 could be simplified further by combining the third and fifth terms (since they have the same coefficient estimate), but this would disrupt the simple interaction between S_{ij} and OP_{ij}.

I now turn to consider a second model. At this point, I have already discussed many of the key features of both dyadic models, so I will not repeat them.

4.3 Dyadic Model #2

I now derive a dyadic model using the candidate-level model of the previous chapter. There, I gave the following as a standard model of spending effects:

$$V_i = \alpha_i + \beta_i S_i + \sum_{k \neq i} \beta_k^i S_k + \varepsilon_i \tag{4.6}$$

This was modified to give different SP and OP effects by splitting up the second spending term into two components:

$$V_i = \alpha_i + \beta_i S_i + \beta_{sp}^i \sum S_{sp}^i + \beta_{op}^i \sum S_{op}^i + \varepsilon_i \tag{4.7}$$

Recall that the SP and OP effects, β_{sp}^i and β_{op}^i, are expected to be negative and that β_i is something in-between SPE and OPE and is expected to be positive. These points will be important in a moment.

Making 4.7 dyadic is straightforward: subtract the equation for candidate j from the equation for candidate i, which makes the variables correspond to differences instead of levels, giving $SPREAD_{ij} = V_i - V_j$ and $v_{ij} = \epsilon_i - \epsilon_j$. This gives:

$$SPREAD_{ij} = \alpha_i - \alpha_j + \beta_i S_i - \beta_j S_j + \beta_{sp}^i \sum S_{sp}^i - \beta_{sp}^j \sum S_{sp}^j$$

$$+ \beta_{op}^i \sum S_{op}^i - \beta_{op}^j \sum S_{op}^j + v_{ij} \tag{4.8}$$

Since $\beta_{sp}^i = \beta_{sp}^j$ and $\beta_{op}^i = \beta_{op}^i$, we can set $S_{sp}^{ij} = \sum S_{sp}^i - \sum S_{sp}^j$ and $S_{op}^{ij} = \sum S_{op}^i - \sum S_{op}^j$, and express the SP and OP effects as single coefficients β_{sp}^{ij} and β_{op}^{ij}. Rewriting the other variables as $x_{hij} = x_{hi} - x_{hj}$ and $\beta_{ij} S_{ij} = \beta_i S_i - \beta_j S_j$ gives:

$$SPREAD_{ij} = \alpha_{ij} + \beta_{ij} S_{ij} + \beta_{sp}^{ij} S_{sp}^{ij} + \beta_{op}^{ij} S_{op}^{ij} + v_{ij} \tag{4.9}$$

As written, the coefficients β_{sp}^{ij} and β_{op}^{ij} correspond to vote-taking effects—the difference in what competitors outside the dyad take from the two members of the dyad. This is in contrast to the coefficient on the main spending term, which is a vote-winning effect. We can change the former coefficients in order to correspond to positive quantities simply by changing the order of subtraction in the dyad, as in:

$$SPREAD_{ij} = \alpha_i + \beta_{ij}S_{ij} + \beta_{sp}^{ji}S_{sp}^{ji} + \beta_{op}^{ji}S_{op}^{ji} + v_{ij} \qquad (4.10)$$

This change is helpful when we consider how 4.10 works for SP and OP dyads. When ij are SP, we know that the second and third spending terms will drop and the difference between ij will be equal to the SP spending effect, or $\beta_{ij} = \beta_{sp}$. Although terms do not drop in the case of OP dyads, a similar phenomenon regarding the coefficient on S_{ij} follows. Together, we have:

$$SPREAD_{ij} = \alpha_i + \beta_{sp}S_{ij} + v_{ij} \qquad\qquad if\ P_i = P_j \qquad (4.11)$$

$$SPREAD_{ij} = \alpha_i + \beta_{op}S_{ij} + \beta_{sp}^{ji}S_{sp}^{ji} + \beta_{op}^{ji}S_{op}^{ji} + v_{ij} \ \ if\ \ P_i \neq P_j \qquad (4.12)$$

These latest two equations illustrate that the coefficient on the focal candidate's spending in 4.10 varies between β_{sp} and β_{op}, depending on whether ij are SP or OP. Upon reflection, this should not be surprising given that the original, candidate-level model included β_i which was something in-between a SP effect and an OP effect. Of course, we could leave 4.10 as is and estimate β_{ij} as its own quantity. But this would be an odd approach, given that the inclusion of SP dyads helps in no way to estimate the main effects (unless done via 4.11, in which case it measures one effect) and *both can be estimated with only OP dyads* in 4.12.

However, if we want to maintain 4.10, we can add some term to differentiate the circumstances when *ij* are SP versus OP, as in:

$$SPREAD_{ij} = \alpha_i + \beta_{sp}S_{ij} + (\beta_{op} - \beta_{sp})(S_{ij} * OP_{ij}) + \beta_1 OP_{ij}$$

$$+\beta_{sp}^{ji}S_{sp}^{ji} + \beta_{op}^{ji}S_{op}^{ji} + v_{ij} \qquad (4.13)$$

4.13 should seem familiar—it is the same as 4.3, the model I gave in the "interaction term" approach. And, like the models above, 4.10 and 4.13 can be further modified by recognizing that $S_{sp}^{ij} = S_{op}^{ji}$, $S_{op}^{ij} = S_{sp}^{ji}$ and $\beta_x = \beta_x^{ji}$ This means we obtain an equation that is identical to 4.5:

$$SPREAD_{ij} = \alpha_i + \beta_{sp}S_{ij} + (\beta_{op} - \beta_{sp})(S_{ij} * OP_{ij}) + \beta_1 OP_{ij}$$

$$+(\beta_{op} - \beta_{sp})S_{sp}^{ij} + v_{ij} \qquad (4.14)$$

That the more recent model followed from the candidate-level model indicates that the intuition I gave for the first model (and its correction) was correct. The only "twist" in the making of 4.14 came at the very end, where I added the dummy variable OP_{ij} and its interaction with the spending term. But adding this variable to the model should pose no problems.

That the two models are identical is useful. It means that I can discuss the model and its results as if it were the first, interaction term model, the intuition of which is more easily conveyed.

4.4   Simultaneity Bias and Instrumental Variables

When the dyadic model is used to estimates campaign effects, the simultaneity bias that comes from endogenous independent variables is just as threatening as in the

candidate-level analysis, and the correctives are just as complicated. Again, we need

good instrumental variables, and again we need to use the "separate stage" approach in

order to construct the multiple spending terms on the right hand side of the equation.

In a previous version of this chapter, I used the same IVs as in the previous chapter,

only transformed so they were dyadic variables. In this version, I simply transform the

predicted values from the first stage regression of the candidate-level analysis in the

previous chapter.

4.5   Non-Independent Dyads

I mentioned that the dyadic approach may increase the bias from non-

independent observations because each candidate appears in more than one

observation. This non-independence differs from that which occurs because of the

relationships among candidates' vote shares, which creates non-independence both

within dyads (i.e., when a candidate has a larger vote share, the competitor with which

he is paired is likely to have a smaller vote share) and across dyads (i.e., the vote share

difference between two competitors has some relation to the vote share difference of

another two competitors in the district). The within-dyad dependence is not very

problematic—indeed, it is part of the motivation behind the dyadic approach. And the

across-dyad dependence can be addressed by clustering.

The non-independence that occurs because candidates appear in multiple dyads

is perhaps more bothersome, even if only because it is somewhat artificial. But there

are correctives, one of which is to simply exclude a variety of dyads so that each

candidate appears in only one dyad. This would mean that each candidate appears in

only one dyad, and therefore that the exclusion could only include all candidates for a district with an even number of candidates. Another "corrective" is a test to determine how much the observational non-independence affects estimates. Called the Quadratic Assignment Procedure (QAP) and developed by Hubert and Schultz (1976) and Krackhardt (1987),[3] the idea is to scramble the rows and columns of the dyadic matrix in order to obfuscate the relationship to be tested (i.e., the effects of spending on votes) but maintain the dependence among observations. One can then compare the estimates various scrambled datasets with those from the non-scrambled data. If the coefficient estimates using the original, non-scrambled data are significantly outside the range of estimates for which there is no relationship between the dependent and independent variables, then the estimates can be said to be legitimate, not manufactured by the observational non-independence. I mention this only to indicate that there are techniques to test if observational independence is problematic. I do not use the technique here.[4]

4.6   Model results

In this section, I report OLS estimates for the "interaction-term" dyadic models, both the simple version (4.1) and its correction (4.5), for both Ireland and Chile. Unfortunately, I cannot estimate the second set of dyadic models—i.e., those

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[3] See Simpson (n.d.), which describes his QAP package for Stata.

[4] I used the QAP procedure in a previous version of this chapter. Of the studies in international relations that use dyadic data with which I am familiar, none take any steps to assess the degree to which any sort of observational non-independence affects regression estimates.

derived from the candidate-level model—because for both countries, there are only two types of SP dyads (corresponding to the two coalitions or parties). This is problematic for models such as 4.10 or 4.12, which include three dyadic spending terms, because it allows us to perfectly impute one term from the other two.

I use four sets of data from the previous chapter: the reported and instrumented (predicted) spending for each country. The models that use the instrumented spending are similar to the second stage regressions from the previous chapter—they use the same data, only they have been transformed into a dyadic structure. The same caveat is necessary here that was necessary there: that adding or transforming the variables in the second-stage regression is not fully faithful to the 2SLS approach. Here, the second stage includes three variables that are not direct dyadic transformations of variables in the first stage regression: the dummy corresponding to OP dyads (OP_{ij}), its interaction with the spending difference ($S_{ij}*OP_{ij}$) and the differences of other candidates' spending (S_{sp}^{ij}).

The variables are the same as described in the previous chapter, except that they are made dyadic. So, the variable *Incumbent* from the previous chapter is now *Incumbent*$_{ij}$ = *Incumbent*$_i$ – *Incumbent*$_j$, thus taking values of 1 (when i is an incumbent and j is not), -1 (the reverse) or 0 (i and j are either both incumbents or both not incumbents). Other variables are constructed similarly. I cluster the data by district.

I provide the results for Chile first, shown in Table 4.1. The first two columns use candidates' reported spending and only include the spending variables and the interaction. The results in the first column should be interpreted as follows: the

coefficient on S_{ij} indicates that for each unit increase ($1000) in i's spending over j's spending (i.e., an *unanswered* increase in spending), i's vote share will increase by .2% relative to j's vote share—if they are SP. If they are OP, then the same unit spending difference will translate into about a .13% difference in vote share (.199-.068). When the model controls for spending by candidates outside the dyad—given in the second column—the vote share spread for a given spending spread is less pronounced for OP dyads, being about .11% vote share spread. But the change is not large, supporting the point I made above that the simpler model offers a good approximation of the appropriate model. Notice that the coefficient on S_{ij} is unchanged. This is as it should be because S_{sp}^{ij} is only non-zero for OP dyads. Notice also that the coefficients on S_{sp}^{ij} and $S_{ij}*OP_{ij}$ are nearly identical. This is also appropriate, as 4.5 was constructed so that both quantities correspond to OP spending effects (or, more precisely, the difference between SP and OP effects).

The third and fourth columns of Table 4.1 use the instrumented spending from the first stage regressions in the previous chapter, and therefore include the control variables used in those models. Again the coefficients do not change much when the additional spending term is included in column 4, and the coefficients on S_{sp}^{ij} and $S_{ij}*OP_{ij}$ in column 4 are nearly identical. In addition, the results conform to those I found in the previous chapter: spending by an SP competitor has a larger reductive effect on a candidate's vote share than spending by an OP competitor. Reading this conclusion from the dyadic results entails translating from spreads to levels: the coefficient on S_{ij} in column four indicates that more unanswered spending by a focal

candidate's SP competitor (i.e., reducing the value of the variable) will increase the competitor (j's) vote share relative to the focal candidate's (i's) vote share. An increase in spending by an OP competitor will do the same thing, but the effect will be about half as large (.224-.104).

Table 4.1: OLS Results of Spending Spreads on Vote Share Spreads for SP versus OP Dyads, Chile's Chamber Election, 2005

	Reported Spending		Instrumented Spending	
Model:	4.1	4.5	4.1	4.5
S_{ij}	0.199***	0.199***	0.239**	0.224**
	[0.025]	[0.025]	[0.097]	[0.098]
$S_{ij}*OP_{ij}$	-0.068**	-0.086***	-0.044**	-0.104**
	[0.026]	[0.023]	[0.018]	[0.040]
OP_{ij}	-1.327	-1.318	1.402	1.352
	[1.574]	[1.483]	[1.092]	[1.074]
S_{sp}^{ij}		-0.088***		-0.101**
		[0.023]		[0.040]
$Alianza_{ij}$			-6.911***	-4.590**
			[1.482]	[1.884]
$Coalition\ Previous_{ij}$			0.122*	0.231***
			[0.064]	[0.075]
$Small\ Party_{ij}$			2.671	3.106*
			[1.781]	[1.813]
$Small\ Party_{ij}*$ $Incumbent_{ij}$			6.254*	4.860
			[3.721]	[3.874]
$Incumbent_{ij}$			3.288	4.239
			[4.341]	[4.503]
$Leader_{ij}$			3.744	4.191
			[4.848]	[4.166]
Constant	0.204	0.204	-1.494	-1.515
	[1.387]	[1.389]	[1.152]	[1.156]
Number of dyads	360	360	360	360
R-squared	0.270	0.319	0.495	0.504

Dependent variable is the vote share *SPREAD*. Robust standard errors in brackets with clustering by district. *** p<0.01, ** p<0.05, * p<0.1.

I report the results for Ireland in Table 4.2. My conclusions about the model are the same: (1) models 4.1 and 4.5 provide similar results, (2) the second two spending terms in the 4.5 models are close to identical (though not as close as with Chile) and (3) the results conform with those from Chapter 3. On this last point, we see in column 4 that an increase in spending by a focal candidate's SP competitor will raise her vote share relative to i—for a unit difference, the change in SPREAD is about half a percentage point (.509). When the competitor is OP, however, the effect is *more* pronounced, with the focal candidate losing about three-quarters of a point in relative vote share (.509+.267). The difference between this result and the result for Chile again supports my argument: that SP effects are stronger relative to OP effects in Chile relative to Ireland. My explanation for this is the attempts of Irish parties to equalize the vote in their STV electoral system.

Table 4.2: OLS Results of Spending Spreads on Vote Share Spreads for SP versus OP Dyads, Ireland's Parliamentary Election, 2002

	Reported Spending		Instrumented Spending	
Model:	4.1	4.5	4.1	4.5
S_{ij}	0.445***	0.445***	0.672**	0.509
	[0.111]	[0.111]	[0.253]	[0.319]
$S_{ij}*OP_{ij}$	0.099	0.05	0.368**	0.267*
	[0.110]	[0.102]	[0.172]	[0.145]
$OPij$	-0.245	-0.27	-0.035	-0.054
	[0.544]	[0.541]	[0.572]	[0.578]
S_{sp}^{ij}		0.079		0.069
		[0.049]		[0.053]
Party Previous$_{ij}$			0.001***	0.001***
			[0.000]	[0.000]
Incumbent$_{ij}$			0.988	1.522
			[0.801]	[0.947]
Leader$_{ij}$			-0.056	0.72
			[1.941]	[1.963]
Constant	-0.319	-0.319	-0.761	-0.746
	[0.492]	[0.493]	[0.597]	[0.589]
Number of dyads	335	335	335	335
R-squared	0.254	0.273	0.478	0.486

Dependent variable is the vote share *SPREAD*. Robust standard errors in brackets with clustering by district. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

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CHAPTER 5

ON ESTIMATING CAMPAIGN EFFECTS WITH

MULTI-CANDIDATE ELECTORAL DATA

5.1   Introduction

In this note, I discuss issues related to the use of regression in order to estimate the effects of campaigns, campaign spending, or campaign assets (e.g., incumbency) with electoral data in which the number of candidates varies across districts. The use of regression implies particular problems that are unavoidable in research attempting to estimate the effects (i.e., vote share gains) of campaigns. In particular, it implies that we do not have experimental data where "treatments" have been randomly assigned but instead observational data that requires (imperfectly) controlling for non-random factors that affect the outcome variable.

The issues I discuss are not these inherent limitations, but rather the very controllable aspects of model specification, namely: (1) the decision we adopt about which candidates to include in the regression model and (2) how to properly adjust the dependent or independent variable to obtain unbiased estimates of the causal effect. The problems that motivate these issues stem from the compositional nature of electoral data—that all candidates receive a share of the votes—and the fact that one candidate's gain for some "treatment" means a loss to one or more of his competitors. If we do not account for this effect by either selecting only certain candidates or adjusting the variables in the model, we risk estimating the treatment's "spread" effect rather than its "boost" effect. The boost effect is a treated candidate's vote share gain

over his counterfactual vote share, while the spread effect is the vote share gain a candidate receives relative to his competitors. For instance, in a two-candidate race, a boost effect of 5% of the vote would imply a spread effect of 10%, as that is the net gain for the "treated" candidate vis-à-vis the competitor. In a five-candidate race, the same boost effect would translate into a spread effect of 6.25% (versus the average competitor) because the candidate's gain is dispersed among four competitors, each of whom loses one-fourth of 5%.

Clearly, there is a simple and straightforward relationship between the two effects. So why worry about them? One reason is simply to be precise about what type of effect we are talking about. Usually, it seems, researchers have sought boost effects, making conclusions such as "incumbency status gives an extra 6% in vote share" or "each thousand dollars of campaign spending gives a candidate an additional .1% of the vote." Often, however, their research designs imply that they have estimated spread effects.

The second reason is that spread effects are a function of the number of candidates running in the district, as I have already demonstrated. This means that (a) spread effects are not directly comparable across districts with different numbers of candidates and that (b) estimates of spread effects obtained using data in which the number of candidates varies across districts will be corrupted. For instance, if the data include ten districts with five candidates and one district with two candidates, and in each district there is one candidate with a treatment that gives a boost of 5%, then our estimate of the average spread effect might be something like (6.25*10 + 10*1)/11 = 6.59. This would be a poor estimate of the real spread effect because we know that it is

6.25 in ten districts and 10 in the eleventh district. If we sought to estimate the boost effect, this type of problem will not occur.

My focus is on multi-candidate elections which feature variation in the number of candidates per district because it is in those elections that spread effects are most problematic. Also, it is in the studies of these elections where the difference between the two types of effects as well as the problems related to spread effects have most escaped attention. In what follows, I discuss why a regression model might estimate spread effects and how to alter the specification in order to estimate boost effects. Sometimes, the modification is simple. For example, when there is only one treated candidate per district and when the counterfactual expected vote share is the average vote share in the district (i.e., no control variables are necessary), we can estimate boost effects simply by using only the treated candidates in the model. Alternatively, we can select a random candidate per district, but this requires that some accounting for how one candidate's treatment (negatively) affects other candidates. That is, the construction of either the causal variable or the dependent variable has to take into account the fact that there are still "treatment effects" for candidates other than the one who receives the treatment—i.e., they lose vote share. Other designs are considered, including estimating models by using multiple candidates per district (which introduce other issues, such as observational non-independence).

Other times, estimating boost effects it is not so easy, as we must make assumptions about how the gains for a candidate's treatment are distributed among his competitors. However, these complications are unavoidable; they occur regardless of the type of effects we aim to estimate.

The issues I discuss are not the most vexing obstacles to estimating causal effects. That distinction would be reserved for the inability to observe counterfactuals (the most obvious impediment to all causal inference) and the inherent imperfections that emerge from relying on observational data, including imperfect control variables, simultaneity bias (i.e., endogeneity), and mal-alignments between regression estimates and the features of compositional data (see Katz and King 1999).[1] These issues are discussed elsewhere. But the issues I discuss are serious. Fortunately, however, they can be avoided. To illustrate the problems and ways to avoid them, I describe how various regression specifications would measure causal effects under ideal circumstances—if we had a hypothetical natural experiment.

5.2   A natural experiment and a regression

Suppose we have data from a large number of electoral districts which vary in N_d, the number of candidates running in the district d, and therefore also in the vote share for the average candidate, $v_d = 100/N_d$. We can describe each candidate's "baseline" vote share by how far it deviates from this average (expected) vote share,

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[1] These requirements are that for each district, each competitor's vote share lies between 0-100% and the total vote shares for all competitors sum to 100%. Katz and King (1999) have provided a general statistical model to analyze multiparty elections and properly deal with compositional data (see also Tomz *et al.*, 2002, and Jackson, 2002). As a result, it avoids some of the issues discussed here. But the model is only fit for analyzing the relative performance of multiple political *parties*; it is inappropriate for elections where we want to analyze the performance of individual candidates separate from their political parties (e.g., where there is intraparty competition). So researchers continue to use the simple candidate-level regression models I discuss here.

$v_i^0 = v_d + \delta_i$. For our purposes, δ_i, will be random except that it is bounded (v_i must stay between 0 and 100) and that the δ_i for competitors are interrelated stemming from the fact that the vote shares of all candidates in a district sum to 100.

Further suppose that in each district there is one and only one randomly selected candidate who is given some amount of C, which has a positive, linear effect on his vote share,[2] and that we know which candidate receives C. The "effect" of C is defined as the *boost* in vote share that i receives for C_i, or the difference between his observed vote share, v_i^1, and the counterfactual v_i^0.

Since it is random which candidate in each district has $C_i > 0$, then we can think of C_i as a "treatment" in a natural experiment. However, because the outcome of this natural experiment is an election result, the treatment will not only give a boost to the treated candidate, but it will also have a "negative treatment effect" on the non-treated candidates (all of whom have $C_j = 0$): they lose vote share. I will return to this point.

If we observe candidates pre- and post-treatment vote shares, we can exactly calculate the vote-share-denominated *boost* effect of C, which more generally is called the "average treatment effect of the treated." But, *if we only observe the post-treatment vote shares* (as in an election result), we can easily *estimate* this effect with OLS regression because we know that post-treatment vote shares are only a function of two known quantities (C_i and N_d) and random error, which with a large number of

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[2] The results throughout would be unchanged if the effect were negative.

observations will be distributed (close to) normally.[3] However, this result is subject to two conditions.

First, our model must account for cross-district variation in candidates' expected counterfactual vote share, v_d. One, simple way to do this is to use as a dependent variable the deviation in a candidate's vote share from the district average, $d_i = v_i - v_d$, as in equation (5.1).

$$E[d_i] = \beta_0 + \beta_1 C_i + e_i \tag{5.1}$$

Alternatively, we could include v_d as a separate term in the model. This approach is inferior to the first approach because it relies on *estimating* the deviation from the known expected value of the average vote share, but it is useful if the effect of C should vary with v_d (or N_d, depending on how one chooses to understand it).[4] In this case, if we are willing to assume that the average change in the effect of C for a unit change in v_d is linear, we can estimate how C varies with v_d with an interaction term:

$$E[v_i] = \beta_0 + \beta_1 C_i + \beta_2 v_d + \beta_3 (C_i * v_d) + e_i \tag{5.2}$$

The second condition is that *unless* the model includes one and only one candidate per district and that candidate is the treated candidate (i.e., the "treated only" selection rule), some modification must be made to either the dependent or independent variable to avoid estimate bias stemming from variation in the number of

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[3] It will not be exactly a normal distribution given that δ_i is bounded. This result also depends on C_i being exogenous to v_i.

[4] Note that using N_d in the model does not accurately control for differences in v_d because of the non-linear relationship between N_d and v_d.

candidates per district. (Note that if the model does use only the treated candidates and if C is a dichotomous variable, then the model cannot be estimated as C would not vary. In this case, however, the average treatment effect could be taken as the constant term in 5.1.) The reason for this condition stems from the fact that the treatment has a negative treatment effect on the "untreated" candidates, so including them in the model (without some modification) leads the boost effect to be overestimated. To see this, consider what would happen if instead of the "treated only" rule we used a "single random candidate" per district.[5] The expected vote share for the average non-treated competitor would no longer be $E[v_i|C = 0] = v_d$ but $E[v_i|C = 0] = v_d - \beta_1 *$ $C_d/(N_d - 1)$, where β_1 is the boost effect of C, C_d is the amount of boost for the candidate in the district with $C_i>0$, and this product dispersed over all his $N_d - 1$ competitors. This different expected value leads the model to estimate a larger effect for a one unit change in C. This larger effect would be the *spread* effect.

Of course, because we know the expected vote share for the $C_i=0$ candidates, we can adjust our model so that the coefficient estimate corresponds to the boost effect. The adjustment can be made to either the independent or dependent variable, and for either the treated or untreated candidates. To modify the independent variable for the untreated candidates, substitute for C_i the sum of the treatment for *other* candidates in the district (which is zero for i, and C_i for all candidates, j), divided by the number of candidates in the district minus one. In other words, the untreated candidate gets a negative treatment effect equal to the magnitude of the treated

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[5] We would now have variation in C even when it is dichotomous.

candidate's boost effect shared equally across all of the treated candidate's competitors:

$$C_i' = C_i - \frac{\sum_d C_i}{N_d - 1}$$

Notice that $C_i' = C_i$ for the candidate with $C_i > 0$ and $C_i' = -C_d/(N_d - 1)$ for all candidates with $C_i = 0$. This substitution expands the range on the independent variable, from $C_i = [0, C_i]$ to $C_i' = [-\frac{C_d}{N_d-1}, C_i]$, which in turn leads to the appropriate reduction in its coefficient estimate, giving the boost effect instead of the spread effect. Substituting into (5.1) and (5.2) gives:

$$E[d_i] = \beta_0 + \beta_1 C_i' + e_i \qquad\qquad (5.3)$$

$$E[v_i] = \beta_0 + \beta_1 C_i' + \beta_2 v_d + \beta_3 (C_i' * v_d) + e_i \qquad (5.4)$$

Of course, these modifications would not be warranted if we were content estimating the spread effect. And why not be content, given that they are really just different ways to account for the same phenomena? I have already given the reason: the spread effect is a function of N_d while the boost effect is not. This makes the spread effect more difficult to interpret in all circumstances except for when it is based on data in which all districts have the exact same N_d. And, although boost effects do not measure the total electoral benefits candidates receive for C (which would be the vote share spread a candidate receives for the treatment), these can always be determined simply by knowing N_d.

There are other possible selection rules, but each would estimate the spread effect unless some there is some accounting for how the magnitude of C's boost is distributed across a different number of competitors. One rule is to select "one random

untreated" candidate. If the untreated candidates are averaged together to produce a single observation representing all the untreated candidates for the district—an "average untreated candidate" (AUC)—two other rules are "AUC only" and "either the treated or the AUC." In the case of "one random untreated" and "AUC only" rules, C will not vary in the model, but the spread and boost effects could still be estimated.

5.3   Analyze >1 observations per district?

An important point of the previous discussion is that if there is only one treated candidate per district and all other variation in candidates' vote shares is random, we need only one observation (candidate or AUC) per district to estimate the average effect of C. In fact, *if we include more than one observation per district, we only introduce problems*. First, we introduce autocorrelation among observations. Because competitor's vote shares are not independent, their errors in the model will be (negatively) correlated, and the standard error of the estimate to be too large. (For this, however, there is an econometric fix: "clustering" the data by district.)

Second, we will have included multiple observations with the exact same information in terms of our two variables, v and C. Ordinarily, including more observations helps improve confidence in our estimates. In this case, it leads to overconfidence. The problem only increases the more observations per district we include in the model.

Furthermore, if we include different numbers of observations per district, then the statistical model will give disproportionate influence to those districts for which we have included more observations. This would be inappropriate given that we know

there is only one effect per district. Note that the problem is not be avoided by using the "fixed effects" transformation—i.e., treating the data as a panel and using the "within estimator." This is because the average within effect obtained by the fixed effects model is the not the average of several within-group effects (each being a within-district average), but rather an average within-effect determined from the population of observations in the model.[6]

Of course, there are circumstances in which using more than one observation per district might be warranted. In particular, if there are multiple treatments per district or if we must control for other factors that affect vote shares (because not all other deviations in vote shares is random). These are considered in turn.

5.4   More treatments per district

If there is more than one treated candidate a new issue emerges: we can no longer measure the causal effect—no matter the selection rule—unless we introduce some assumption about how one candidate's treatment affects his treated versus his untreated competitors. So far, we have not needed any assumption of this kind because we know that i's gain for C_i is distributed only among i's competitors—collectively, they must lose as much as i gains. When there are multiple treated candidates,

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[6] I reach this conclusion after finding that fixed effects estimates differed for two fake datasets that were identical except for one dataset duplicated the observations for a single panel (district). By duplicating the set of observations for a single district, the estimated magnitude of the within-effect for that district should not change. But using the whole set of districts, the estimated within-effect changes, thus indicating that the fixed effects model does not produce the average of several within-district effects.

however, we cannot adjust for how much the untreated candidates lose unless we also know how much one's treatment affects other treated candidates (or vice versa).

There are a number of assumptions that we might use. One is that the gains for each $C_i > 0$ candidate come only at the expense of the $C_i = 0$ candidates. In this case, our modification will take subtract the combined treatment effect for all treated candidates from all untreated candidates. In other words, we know $E[v_i | C = 0] = v_d - C_d/(N_{C=0} - 1)$, where $N_{C=0}$ is the number of untreated candidates. With this, we can modify our models by substituting C_i^* for C_i:

$$C_i^* = \begin{cases} C_i & \text{if } C_i > 0 \\ \dfrac{-\sum_d C_i}{N_{C=0} - 1} & \text{if } C_i = 0 \end{cases}$$

Note that C_i^* is equivalent to C_i' when there is only one C>0 candidate per district.

An alternative assumption might be that the losses for i's gain are distributed evenly to all competitors, regardless of whether they are also treated. With this assumption, we can calculate each candidate's expected vote share as a function of their own treatment (C_i) and the combined treatment of all other treated candidates $(C_i - \sum_d C_i)$ in $N_d - 1$ proportions. This means we can substitute C_i° for C_i:

$$C_i^\circ = C_i + \frac{C_i - \sum_d C_i}{N_d - 1}$$

C_i° is equivalent to both C_i^* and C_i' whenever there is only one treated candidate in the district. Otherwise, it is equivalent to C_i', in which each candidate's expected vote share is determined by his own C_i less one portion out of $(N_d - 1)$ of the combined treatment for all other treated candidates.

Of course, there are many other assumptions we could make about how losses are distributed. We might say that one candidate's treatment causes all competitors to lose equal proportions of v_i^0 or that one candidate's treatment causes each competitor to lose a proportion of vote share that depends on his ideological distance from the treated candidate. Neither these nor other assumptions prevent us from estimating the effect of C, so long as the assumption fully accounts for how one candidate's gain is distributed over treated versus untreated competitors and can be incorporated into the model by modifying the dependent or independent variable. The main challenge may be choosing the best assumption. To select one assumption over another requires we know something about *how* the causal variable gives vote share to the treated candidates (or takes vote share from her competitors).

Once an assumption is adopted, there is still the question about what candidates to include in the statistical model. It would seem that in most cases there is no necessary reason we must include more than one candidate per district, and that all of the previous selection rules are available so long as there is accounting for how treatments affect treated and untreated candidates alike.[7]

5.5   And the non-experimental world?

It goes without saying that in real elections, things that boost vote share, such as campaign effort and assets, are not assigned randomly as if they were the products of a natural experiment. Because non-random assignment means there are correlations

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[7] In the multi-treatment context, we can use the "average treated candidate" as an observation. This is the same as the AUC but for the treated candidates.

between the main causal variable and other variables that affect electoral performance, we require control variables. Adding control variables to the model should be easy, *unless* (a) we also intend to determine the *casual* effects of those factors on candidates' vote shares, (b) if those control variables need be interacted with the causal effects we aim to estimate, or (c) the causal variables are endogenous to the dependent variable. Unfortunately, our chances of avoiding all three issues are not great.

Regardless, researchers (including this author in Chapter 3) still aim to (imperfectly, of course) estimate the causal effects of assets on electoral results, and they do so by using the observed electoral data and by using multiple candidates per district in the model, including those that do not have the asset whose effect is to be estimated. My analysis suggests that practitioners of this approach should consider whether it is wise to include more than one observation per district, whether the selection rule that is chosen implies spread effects, and how the model should be modified to get boost effects.

The need to control for a large number of factors that affect competitors' vote shares is not a strong reason to include more than observation per district, as those phenomena can always be incorporated into a single observation. In fact, it would seem that the only reason *not* to condense the model to one observation per district is that it reduces the number of observations at the same time that it expands the number of independent variables, therefore undermining the ability of saying something that is *statistically* meaningful. Clearly, however, such testimony would be more apparent than real.

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