The effects of intra-party democracy on party competition

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In loving memory of

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Summary

Politics within parties can have major effects on what parties do and how they represent citizens. Nevertheless, there is little theoretical and empirical cross-country research on the effects of intra-party politics on party behavior. This dissertation aims at advancing this research branch by developing a framework for analyzing the effects of intra-party democracy on party behavior.

The underlying argument is that party members are policy-seeking and grant party leaders little leeway to compromise on party ideals. If a party is internally democratic, these policy-seeking members will be able to hold party leaders accountable. Hence, intra-party democracy affects what parties do.

Using this argument, the dissertation's first paper shows that internally democratic parties respond to shifts in their voters' policy positions while in two-party systems internally undemocratic parties respond to shifts in the overall electorate (i.e., the median voter position).

The second paper formalizes the argument to predict how intra-party democracy affects whether parties position close to the political center or their party members. It argues that not only the center of a party's preferences but also its dispersion matters if a party uses some kind of limited internal democracy. Preference dispersion allows for positions closer to the center. The paper presents

empirical evidence for this claim and also shows that internally democratic parties position close to their party members and internally undemocratic parties position proximate to the political center.

The third paper argues that coalitions with internally democratic parties are more likely to terminate early because these parties are less likely to compromise when policy shocks (inevitably) arise.

Overall, the dissertation's findings have direct implications for party competition, institutional design, and political representation of citizens by political parties. The results suggest directions for highly promising and relevant future research.

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Unfortunately, three of my grandparents cannot read these lines even though each of them would have rejoiced doing so. I dedicate this thesis to them.

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1 Introduction

Politics within parties can have tremendous effects on the choices parties and governments make. In 1997, for instance, Tony Blair's British Labour Party shifted its policy significantly toward the political center. This resulted in a landslide election victory and the first change in government in 18 years. Prior to Blair's election as party leader, which initiated the policy shift, the party had strengthened its intra-party democracy. Under the old intra-party rules, a moderate like Blair would not have been elected party leader (Quinn 2004, 134-135).

There are a number of case studies that describe similar effects of intra-party democracy on party behavior in great detail. However, there is surprisingly little scholarship about the cross-party and cross-country effects of intra-party democracy. At most, there is a theoretical expectation that intra-party democracy constrains party behavior (e.g., where parties position, with whom they form governments, what policies they promote, and so on) (Strøm and Müller 1999, 17-18). However, questions such as how much does intra-party democracy constrain party behavior, or do these constraints apply in all arenas parties compete in (e.g., competition for votes or government formation) remain unanswered.

My dissertation contributes by starting to answer these questions. Developing a theoretical framework for intra-party politics, I analyze the effects of intra-party

democracy on policy responsiveness (Do parties respond to changes in the general electorate's opinion or to changes in their members' opinions?); policy proximity (Do parties position proximate to the political center or their party members?); and coalition survival (How long should we expect governing coalitions—comprised of internally democratic parties, internally undemocratic parties, or a mixture of the two—to last?) in three empirical papers.

The first paper shows that internally democratic parties respond to changes in their median party member's ideal policy position, whereas internally undemocratic parties respond to shifts in the median voter position (i.e., the political center) in two-party systems. The second paper formalizes the first paper's theoretical argument and applies it to party policy proximity to the median voter position or the median party member position. The results indicate that internally democratic parties position closer to the median party member than to the median voter position and *vice versa.* Moreover, it finds that hybrid parties (i.e., parties that are neither fully internally democratic nor fully internally undemocratic) position closer to the median voter positions as the heterogeneity of party members' preferences increases. This is because vote-seeking party members have the opportunity to ally with policy-seeking party members whose policy ideals coincide with the vote-seeking ideals. The third paper scrutinizes the effect of intra-party democracy on coalition government survival. It finds that coalitions including internally democratic parties are less stable than coalitions without these parties.

These three papers significantly enhance our understanding of the effects of intra-party politics on party policy proximity, policy responsiveness, and coalition survival. Moreover, they make important contributions to the literature on political representation of citizen preferences in democracies.

Below, I describe the three papers, their main findings, and contributions to their particular subfields before discussing the general implications for party politics research and political representation in democracies.

1.1 Intra-Party Democracy and Party Responsiveness

The first paper deals with the question of whether a party responds to shifts in the median voter position or to shifts in the median party member position when shifting its own policy position. The argument is straightforward: In internally democratic parties, by contrast to internally undemocratic parties, more selectors choose the party leader. Therefore, the share of selectors that candidates for party leadership can "bribe" with office is smaller than in undemocratic parties. This results in most selectors caring about the party's policy position. Hence, party leaders cannot compromise on policy in order to appeal to the general electorate. This implies that internally democratic parties' policy positions shift with their median members' policy positions (and not with the general electorate). Internally undemocratic parties, however, shift with the median voter position (and thus the general electorate and not their party members) because selectors coincide with office-holders. I theorize this latter effect to be distorted by party-system size. Data from six European democracies in the period 1975-2003 support these hypotheses.

To the best of my knowledge, this paper provides the first study of how intra-party institutions affect parties' policy positions. This is an important contribu-

tion because it helps to understand the channels through which "leadership accountability" (Strøm and Müller 1999, 17-18) or "party organizational strength" (Schumacher et al. 2013) affect party behavior.

Also, this paper extends work on the niche party argument (Adams et al. 2006; Meguid 2005, 2008) which claims that some parties (e.g., Greens, Nationalists or Communists) respond to their members (and not to the genereal electorate) for ideological reasons. This paper argues and shows empirical evidence that it may be internal democracy and not ideology that makes niche parties respond to their supporters rather than to the general electorate (Ezrow et al. 2011).

1.2 Intra-Party Democracy and Policy Proximity

The second paper deals with the question whether intra-party democracy affects how close parties position to the median voter position or their median party member's position. To capture the chaos of multi-party competition that affects parties' policy positions, I formally model competition within parties under different institutional settings as well as its links to competition for votes between parties. Since this game is not solvable analytically, I turn to simulations to obtain predictions.

I argue that rank-and-file party members are policy-seekers and party elites are office-seekers. Internally undemocratic parties position close to the median voter position because this is electorally beneficial. Intra-party democracy, however, diminishes party elites' power and hence internally democratic parties position at the median party member position.

Moreover, I derive that for hybrid parties that are neither internally democratic nor internally undemocratic, the dispersion of preferences within the party determines where the party positions. This is because there still is a significant share of office-seekers who choose the party leader, yet, they are not enough to elect a party leader on their own. As a consequence, they ally with those policy-seeking party members whose ideals are the closest to the vote-maximizing position. As dispersion of policy preferences within a party increases, the party is, thus, less constrained by policy-seekers. Hence, more dispersion of party members' policy preferences allows parties to position closer to the political center. This effect is conditional on parties being internally neither fully democratic nor fully undemocratic.

To test these hypotheses empirically, I develop an Empirical Implications of Theoretical Models (EITM) framework that directly estimates the relationship between independent and dependent variables as theorized by the formal model. Relying on data from 58 parties in ten countries in the period 1964-2010, I am able to show evidence in line with all three hypotheses.

This paper makes two very important contributions. First, it provides the first model of intra-party constraints that is capable of making precise predictions of party behavior for competition between parties. Previous work on intra-party politics does not model competition between parties (see Caillaud and Tirole 1999, 2002; Crutzen et al. 2009; Dewan and Squintani 2014). Integrating these arenas helps to make clear cut predictions that can be tested empirically (as I do in this paper).

Second, the paper introduces both theory and empirical evidence of why preference heterogeneity within parties matters if a party is neither internally democratic

nor internally undemocratic. This fact has been overlooked by the literature so far. This study suggests that not only the center of party members' preferences but also their distribution about the center matters.

1.3 Intra-Party Democracy and Coalition Survival

The third paper shifts the focus from parties' policy positions to the government-level. Are coalitions including internally democratic parties more or less stable than coalitions without these parties? I argue that they are less stable because intra-party democracy reduces a party's policy horizon size (Warwick 2006). Policy horizons identify the policies in the political space a party is willing to support when in government. As a result, the agreement area (i.e., the set of policies that *all* coalition parties can agree on) is smaller if an internally democratic party is included in the coalition, *ceteris paribus*.

Agreement area size matters because if a policy shock occurs, the government's policy position is shifted. Only if the new policy position is still in the agreement area, the government will survive. This becomes more likely as a coalition's agreement area increases in size. I, thus, hypothesize that additional internally democratic parties destabilize coalition governments.

This hypothesis is tested using data from 13 democracies in the period 1946-2002. The results clearly support the hypothesis. Also, the conclusion is robust to a list of alternative model specifications and modeling strategies.

The paper makes at least three notable contributions. First, it develops and tests for the first time a theory of intra-party democracy and government survival.

Up until now, these theories focused on party policy positions (Schumacher et al. 2013; Meyer 2013).

Second, it extends knowledge from country studies on intra-party democracy and government survival by showing that intra-party democracy matters across countries and political systems (Bäck 2008; Pedersen 2010).

Third, it adds to the empirical literature on intra-party politics and government survival the idea that not only party factions but also intra-party democracy matters (Druckman 1996; Saalfeld 2009; Chambers 2008).

1.4 Implications for Research on Political Parties and Intra-Party Politics

The project's major contribution to the general research on party politics is the theoretical argument how intra-party democracy constrains party behavior. The empirical evidence in line with the theory's predictions strengthens our belief that the theory captures reality well. Moreover, there are several more specific aspects by which this study advances research on party politics.

First, it formalizes the theoretical thoughts on the link between intra-party democracy and party behavior in party competition. This procedure helps to formulate a clearly institutional theory of how intra-party democracy constrains party behavior (Schumacher et al. 2013; Panebianco 1988; Strøm and Müller 1999). In this form, the model can be easily used to derive predictions with regard to many other aspects of party politics (e.g., coalition bargaining or policy-

making). This facilitates major progress in theoretical and empirical party politics research.

Second, this study contributes by improving measures of intra-party constraints on party behavior. It does so by providing a clearly institutional theory of how these constraints evolve. As a result, measuring intra-party constraints becomes relatively easy because institutions are easier to observe (particularly in retrospection) than non-institutional concepts such as leadership accountability (Strøm and Müller 1999) or party organizational strength. These have mostly been measured using surveys (Schumacher et al. 2013; see also Meyer 2013 and Spies and Kaiser 2014 for alternatives) which limits their scope in time and space. This study points to an alternative operationalization that makes the test of many additional hypotheses feasible.

Third, an important contribution is the third paper's application and test of the theoretical framework at the government-level. Since this type of theory was, up until now, only tested using data on parties' policy positions, the supportive test should increase researchers' belief in the effect of intra-party democracy on party behavior in multiple arenas of party competition.

Fourth, this study also advances the scholarship on the niche party phenomenon. "Niche"-ness has been linked to non-standard behavior in party competition (Ezrow 2010; Ezrow et al. 2011; Jensen and Spoon 2010). In general, researchers define niche parties by reference to the policy issues they (dis-)emphasize (Adams et al. 2006; Meguid 2005; Wagner 2011; Meyer and Miller forthcoming). However, if party competition is strategic (Downs 1957) the choice of policy emphasis should be strategic too. This study points to the idea that it is intra-party democracy that drives parties to behave like niche parties when responding to changes in

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public opinion. Thus, it may be intra-party democracy too that makes parties emphasize "alternative" policy issues. Put differently, intra-party democracy may be the reason niche parties are niche parties. Even though future research will have to look into this more closely, this finding is a promising route to solving the niche party puzzle.

1.5 Implications for Political Representation

The result that internally democratic parties are constrained by intra-party democracy has important implications for political representation as well: It implies that intra-party democracy determines whom parties represent.

Scholars have emphasized different ways in which political representation works. The general electorate model equates political representation with representation of the political center (Erikson et al. 2002; Huber and Powell 1994; McDonald and Budge 2005; Powell 2000; Stimson et al. 1995, see also Golder and Stramski 2010). The partisan constituency model, by contrast, emphasizes representation of party supporters as the linkage between citizens' interests and party policy (Dalton 1985; Weissberg 1978; Wessels 1999).

The results of the study suggest that internally democratic parties represent their party supporters, whereas internally undemocratic parties represent the political center. Hence, intra-party democracy affects whether a party contributes to political representation via the partisan constituency channel or the general electorate channel.

This finding is particularly relevant because some countries (e.g., Germany) force their parties by law to use certain, internally democratic procedures. As a

result, these countries impose a framework that leads to the partisan constituency model of representation. In future work, scholars should look into whether a certain type of political representation or a mixture of both types enables democracies to perform better at making the economy work, satisfy citizens' needs or resolve conflict peacefully.

Further research that looks into the party-system consequences of intra-party democracy is especially interesting since there is a general trend among parties in democracies to become internally more democratic (Kenig 2008). Does this affect the way democracies work or do they produce different outputs as a result?

1.6 Plan of the Study

The study proceeds with three self-contained papers. Chapter 2 scrutinizes the effect of intra-party democracy on party responsiveness to the median voter and the median party member. Chapter 3 investigates how intra-party democracy is linked to party policy proximity to the median voter position and the median party member positions. Chapter 4 analyzes the link between intra-party democracy and coalition survival time. Chapter 5 summarizes the results and provides an overview of implications and further research questions that are raised by this study.

2 Intra-Party Democracy and Party Responsiveness

Abstract

This study examines whether parties respond to their supporters or to the median voter position. Party leaders require the support of the "selectorate", which is defined as the group that has influence in party leadership selection (Bueno de Mesqiuta et al. 2002, 2003). Internally democratic parties, which rely on rank-and-file membership to select their leadership, will respond to their members. Internally undemocratic parties, who rely on office-seeking members for leadership selection, will respond to the median voter position. Thus, intra-party institutions that (dis)enfranchise party members are crucial for understanding whether a party responds to their supporters (or to the median voter position). Using data from 1975-2003 for six West-European countries, I report findings that internally democratic parties respond to the mean party supporter position. While there is evidence that internally undemocratic parties respond to the median voter position in two-party systems, this finding does not extend to multiparty systems. This study has implications for our understanding of intra-party institutions and political representation.

Keywords: Intra-Party Democracy, Party Competition, Party Responsiveness, Political Representation

2.1 Introduction

It is one of modern democracies' principles that parties adapt their policy positions to public opinion and thus represent citizens' preferences. Also, parties represent their members whose policy ideals often times strongly diverge from public opinion. In this article, I develop and test the hypotheses that intra-party democracy determines whether parties are responsive to the general electorate or their party members.

In particular, I argue that party leaders adopt positions that are consistent with the preferences of their selectorate, or the "set of people who have an institutional say in choosing leaders" (Bueno de Mesquita et al. 2002, 560; see also Bueno de Mesquita et al. 2003, 41-43). Members of the selectorate value office and policy. However, office payoffs exceed policy payoffs.

Hence, candidates are motivated to respond to rank-and-file party members to the extent that these members have influence in selecting them. If office-motivated party members dominate the leadership selection, then parties will respond to the median voter. By contrast, if the policy-motivated rank-and-file members dominate the party leadership selection, then parties will respond to shifts in their core supporters. Thus, intra-party institutions are decisive with respect to which groups they enfranchise in the leadership selection.

These hypotheses are tested employing data from six European countries between 1975 and 2003. The analysis reveals that internally democratic parties—which rely on rank-and-file membership to select their leadership—are indeed different from internally undemocratic parties—that rely on office-seeking members for leadership selection—in terms of responsiveness to its mean supporter. In

addition, there is evidence that internally undemocratic parties respond to mean voter opinion shifts in two-party systems, however, this finding does not extend to multi-party systems.

This article contributes to the literature in four important ways: First, it extends the general scholarship on intra-party institutions by evaluating the effects of the intra-party franchise. During the last fifteen years, scholars have adopted an intra-party politics approach to address the question how parties adjust their positions (Strøm and Müller 1999; Schofield and Sened 2005; Budge et al. 2010; Meyer 2013). Strøm and Müller (1999, 18) introduce leadership accountability as a factor that may affect policy positions. Recently, Schumacher et al. (2013) take up the finding of Ezrow et al. (2011) that niche parties, i.e., parties from the Nationalist, Communist and Green party families, respond to the mean party supporter whereas mainstream parties respond to shifts in the mean voter. While Ezrow et al. (2011; see also Adams et al. 2006) propose that the crucial mainstream-niche distinction is based on attachments to ideology, Schumacher et al. (2013) argue that intra-party organizational strength matters, namely, that activist-dominated organizations induce responsiveness to the mean party supporter, and leadership-dominated parties are associated with responsiveness to the mean voter. To my knowledge, this paper provides the first analysis of how intra-party institutions (i.e., intra-party franchise) affect parties' policy positions.

Second, this article's findings have important implications for the study of political representation. In general theories of democracy, citizen preferences are linked to public policy via a "chain of responsiveness" (Powell 2004), although this "chain" may be altered or distorted by institutional characteristics (e.g., majority-manufacturing electoral systems). For aggregating citizen preferences, the chain

relies heavily on the delegation of interests within parties (Müller 2000). This article shows that whether parties represent their supporters depends on parties' internal institutions. Hence, we can add to the list of factors that attenuate the signal from citizens to representatives by pointing to the importance of institutions within parties.

Third, these findings have significant implications for coalition behavior. For instance, internally undemocratic parties should be more flexible to accept compromises and hence more likely to be members of a coalition government. Similarly, internally democratic parties should be less forbearing with its leaders if they implement unpopular policies from the party members' point of view, and less likely compromise their ideology to remain in a governing coalition. Hence, theories that combine intra-party politics and coalition politics (Giannetti and Benoit 2009) should analyze the effect of intra-party franchise too.

Fourth, this study extends previous work on niche and mainstream parties (Meguid 2005, 2008; Adams et al. 2006; Ezrow et al. 2011), and provides an additional step toward understanding the niche party phenomenon. What is it about niche parties that promotes responsiveness to their core supporters? The implication of this study is that it may be intra-party democracy rather than attachments to ideology that promotes niche responsiveness to their supporters.

2.2 Hypotheses

Below, it is argued first that party members have office- and policy-seeking motivations, and that office-seeking motivations outweigh policy-seeking motivations. However, office motivations are important if a party member runs for office only.

Whether a party-member is office- or policy-motivated is decisive for the policy position she prefers to be chosen by the party. Therefore, when deciding upon the party's policy, candidates for party leadership take into account to what extent the body that selects the party leader (i.e., the selectorate) is policy- or office-motivated. As shown below, the ratio of offices that a party leader commands to selectors proves to be crucial for the distribution of motives in the selectorate. Selectorates with many more selectors than offices are characterized by policy-motivated selectors that induce responsiveness to the median party member position. By contrast, selectorates with almost equally many selectors and offices incentivize responsiveness to the median voter position.

2.2.1 Individual Vote Choices: How Office Outweighs Policy

In the following, I assume that party members maximize utility by obtaining policy (Strøm and Müller 1999, 8; see also Wittman 1973, 1983) and office payoffs (Downs 1957, 30; see also Davis et al. 1970; Calvert 1985). On the one hand, each individual has a personal ideal position that she prefers to be implemented over all alternatives. Moreover, the further the implemented policy is away from her ideal position, the less utility she receives. On the other hand and by contrast with policy payoffs, office payoffs are gained if a party member runs for office only. In case a party member runs for office, she faces an election. If she loses the election, she receives payoffs for policy and running for office. Moreover, the payoffs for running for office exceed the maximal amount of policy payoffs (Luebbert 1986, 46). Alternatively, she wins the election, assumes office, and

obtains policy payoffs as well as office payoffs. Again, office is worthwhile enough to outnumber the maximal payoffs of policy and running for office together.

Provided there are two candidates for party leadership, three situations can evolve under these assumptions. First, if neither of the candidates for party leadership offers a party member to run for office, her vote decision is based on the candidates' policy offers. Thus, the party member is *policy-motivated*. Second, if the party member is offered to run for office by one candidate only, she will—even despite significant policy differences—vote for the candidate who offers her to run for office. The party member is then *office-motivated*. Third, if a party member is offered to run for office by both candidates for party leadership, she will prefer the candidate with the policy position that maximizes her chances of assuming office in the electoral competition for office. I label this policy position the *office-seeking position*. Now we turn to how this pattern affects parties' policy positions via leadership elections.

2.2.2 Vote-Choices and Intra-Party Franchise: Why Institutions Matter

For simplicity, I continue the example with two candidates for party leadership. Hence, a candidate is elected party leader if she is supported by a majority of the selectorate. Following Bueno de Mesquita et al.'s *Selectorate Theory* (2002, 2003), I define the selectorate as the subgroup of party members which takes part in the party leadership selection.

Since making party members office-motivated (i.e., offer them to run for office) is an effective means to secure selectors' support, candidates for party leadership

fully exploit this option. However, this strategy is constrained by the number of offices a candidate can distribute among selectors. Thus, the "offices-to-selectors" ratio within the party is important. As this ratio decreases, the fewer selectors can be "bribed" with office payoffs (i.e., they are office motivated) and, in turn, the more selectors rely on policy considerations when making their vote choice (i.e., they are policy-motivated). Hence, the smaller the offices-to-selectors ratio, the closer a leadership candidate's winning policy position has to be to the median selector's ideal position. This situation typically evolves in parties that allow their rank-and-file members to participate in leadership selections. I label these parties *internally democratic* and express the theoretical expectation about them in the Democratic Party Hypothesis:

> Hypothesis 1 (*Democratic Party Hypothesis*): Internally democratic parties that are characterized by a relatively low offices-to-selectors ratio respond to shifts in the position of the median party member.

By contrast, *internally undemocratic* parties' selectorates are primarily composed of office-holders (e.g., the parliamentary party). Due to mainly office-motivated selectors, these parties allow for more leeway from the median selector's ideal position. Since candidates for party leadership themselves are office motivated, i.e., they try to maximize votes in elections to form a government or participate in it (Luebbert 1986), they will use this leeway to move the party's policy position towards the office-seeking position.

The office-seeking position is somewhat complicated to derive. In a two-party framework, this position will be the position of the median voter (Downs 1957, 118). In a multi-party setting, scholars emphasize that parties have vote-seeking

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incentives to adopt distinctly non-centrist positions (i.e., they emphasize the role of centrifugal incentives) due to the existence of proportional electoral systems and more competitors (Cox 1990a, 1990b; Merrill and Adams 2002; Adams and Merrill 2006). On the other hand, the prospect of coalition formation exerts incentives for parties to adopt moderate or coalition-friendly policies (Schofield 1993) so that the median voter remains important in multi-party systems as well (Austen-Smith and Banks 1988; see also Ezrow 2008b). Thus, it is reasonable to expect that internally undemocratic parties orient towards the median voter in both types of systems. Hence,

> Hypothesis 2a (*Undemocratic Party Hypothesis*): Internally undemo-
> cratic parties that are characterized by a relatively high offices-to-
> selectors ratio respond to shifts in the position of the median voter.

Nevertheless, the incentives to respond to the median voter should be weaker in multi-party systems than in two-party systems because we expect that positioning effects of electoral rules and party system size slightly outweigh the incentives to present moderate policies to appeal to potential coalition partners. Thus,

> Hypothesis 2b (*Party System Hypothesis*): Internally undemocratic
> parties are more responsive to shifts in the position of the median
> voter in two-party systems than in multi-party systems.

2.3 Data and Measurement

Testing these hypotheses requires developing measures of: parties' policy positions, offices-to-selectors ratios, median party member positions, the median voter position and the type of party system in a country election year.

Parties' Policy Positions: The academic debate on whether party positions are best measured by different types of text analysis (Budge et al. 2001; Laver et al. 2003; Slapin and Proksch 2008), mass surveys (Thomassen 2005; Bäck 2008) roll call data analysis (Hix et al. 2006), or expert surveys (Huber and Inglehart 1995; Benoit and Laver 2006) is intense and ongoing (see also a special issue of *Electoral Studies* (Marks 2007) dedicated to this discussion). This paper relies on the data set on party positions provided by the Comparative Manifesto Project (CMP; Budge et al. 2001; Klingemann et al. 2006). It places parties' election manifestos from all over the world on a left-right scale ranging from -100 for extreme left parties to 100 for extreme right parties. In order to obtain this scale, coders read each party's election manifesto and portioned its content in 56 predefined quasi-sentence categories. Basing on the relative frequency of as "left" and "right" defined categories, each party manifesto's position on the left-right scale is computed. Consequently, the unit of observation is party election years.

Besides providing comparative results to other methods' estimates of party positions (Hearl 2001; McDonald and Mendes 2001; Laver et al. 2003), the CMP dataset also covers a large amount of countries, parties and elections which are needed to conduct the analysis.[1] Moreover, scholars argue (Inglehart 1990) and

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[1]For Italy data is available, yet, there is massive doubt about the validity of the CMP left-right scale (Pelizzo 2003). Thus, like Meyer (2013) and Schumacher et al. (2013) I exclude Italy from the analysis.

empirically show (Benoit and Laver 2006, 158) that the left-right dimension is dominant in West-European politics. Since the CMP left-right measures and its counterpart for public opinion (see below) are not equivalently scaled, I linearly rescale the CMP left-right scale to 1-10.[2]

Offices-to-selectors ratio: Since it is very difficult to obtain the exact number of selectors for parties, I use an ordinal rather than an absolute scale. In particular, I utilize a scale that—similar to the theoretical classification above (i.e., internally democratic and internally undemocratic)—distinguishes, based on their formal institutions in party leadership selections, between two types of selectorates.

Data on formal procedures how the party leader is elected can be found in Katz and Mair's (1992) *Data Handbook of Party Organizations* in which country experts compile institutional arrangements of various parties for the time period from 1960 until 1990. Since they only list and describe formal procedures, I apply a scheme developed by Kenig (2009) to classify parties according to their formal rules into internally democratic or internally undemocratic parties.

There are two scenarios that lead to a party being coded as internally democratic: On the one hand, if all party members can elect the party leader—either because all members are entitled to vote in the party conference selecting the party leader or because there are grass root elections ("Party Members" in Kenig's (2009) categorization)—I categorize a party as "internally democratic". On the other hand, parties that select their party leaders via delegates are considered "internally democratic" too if delegates to the party conference represent local party branches ("Selected Party Agency" according to Kenig). In either case, these parties are assigned the value 1 on the intra-party democracy scale. Due to the

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[2]To do so, I use the formula: $([CMP\ value] \times (9/200)) + 5.5$.

size of modern parties it is obviously the corresponding category to the "policy-motivated party" that is defined by its very small offices-to-selectors ratio. Thus, I expect the Democratic Party Hypothesis to hold true for this party.[3]

By contrast, if the selection process is dominated—*ex offico*—by the parliamentary party (or "Parliamentary Party Group" in Kenig's terms), I assign it the value 0 for the intra-party democracy dummy and label it "internally undemocratic". Considering that members of the parliamentary party hold an electoral office and that these groups are—compared to the overall party membership—relatively small, they fit well with the theoretical definition of the "office-motivated party" and its offices-to-selectors ratio greater than or equal to one half. Therefore, I expect the Undemocratic Party Hypothesis as well as the Party System Hypothesis to hold for this type of party.

For some cases there was either no indication of how the party leader is elected in the *Data Handbook* (e.g., Labour and Conservatives in the UK; Katz and Mair 1992) or elections took place after 1991. In this event and if available, I use Kenig's data to assign intra-party democracy scores.[4] This is a convenient strategy as the correlation between Kenig's and my coding is high (r = .71). Finally, 18 cases (8%) rely on intra-party democracy values adopted from Kenig (2009).

Median Voter Position: Following earlier research (Adams et al. 2004; Adams and Ezrow 2009; Ezrow et al. 2011; Schumacher et al. 2013), data on the elec-

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[3]Within the 194 cases of the internally democratic category, 187 cases (96%) originate from Kenig's category "Selected Party Agency".

[4]Kenig's (2009) data is collected in party leadership election years only. These do, however, not always coincide with the general election years that are the unit of analysis here. Therefore, I assign Kenig's intra-party democracy values not only in the year for which they were coded, yet, also in the following four years. If a party, for instance, had a leadership election coded in 2000 its intra-party democracy value from the year 2000 is used until 2004. Of course, if the party is coded again in 2002, this new value is used.

torate's position on the left-right scale is obtained from Eurobarometer surveys (Schmitt et al. 2008). From 1972 onwards, each year between 1000 and 7000 respondents in each member state of the European Union were asked for their self-placement on a 1-10 point left-right scale. Using this item, I compute for every country year the mean voter self-placement. In contrast to changes in the median voter self-placement, changes in the mean self-placement can be smaller than a unit change. This fact is especially important in this context since these statistics are computed from a large sample of respondents who place themselves on a 10-point scale. Moreover, the mean self-placement approximates the median self-placement as voters are on the whole normally distributed around one mode.

Median Party Member Position: Unfortunately respondents of the Eurobarometers have been asked if they were member of a political party in ten panels (1988-1991) only. Even though they were not asked what party they belonged to, they stated to which party they felt closest. Combining these pieces of information, I identify respondents who belong to a certain party and obtain—for the same reasons as above—their mean self-placement.

In order to use more than the 32 cases that party membership can be identified for, I have to rely on a proxy for party members' mean position. Indeed, the mean party supporter's self-placement, defined as the mean self-placement on the left-right scale of all respondents who state that they intended to vote for a certain party if next week was a general election, proves to be an excellent proxy for a party's mean member's self-placement. Their values are highly correlated (r = .94).

If values for the mean voter's or the mean supporter's position cannot be computed due to missing data, the preceding year's values are assigned. If this value is also not available, the following year's values are used.

Party System Type: All parties that compete in elections that lead to a party system whose effective number of parties in parliament is smaller or equal to 2.5 are classified as members of two-party systems. Data on effective party numbers in parliament are taken from Gallagher and Mitchell (2008).[5]

As a result, I obtain a data set including 33 panels of parties in six countries.[6] The time period covered is from 1975 through 2003. In total, there is a maximum of 228 cases of which 34 (15%) represent internally undemocratic parties. An exhaustive list of cases, election dates, categorizations of intra-party democracy as well as summary statistics can be found in Appendix A.

2.4 Model Specification and Estimation Techniques

Since it is reasonable to assume that parties respond consistently to any shift in public or their supporters' opinion, a linear model is the appropriate model to estimate. In order to evaluate the hypotheses, I specify a model of two interaction effects and their constitutive terms (Brambor et al. 2006). Therefore, the model reads:

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[5]In Germany, CDU and CSU are treated as one party since they always form a "Fraktion" together and do not run against each other in the electoral competition.

[6]These countries are: Denmark (1975-2001), Belgium (1977-2003), the Netherlands (1977-1998), Germany (1976-2002), the United Kingdom (1979-2001) and Ireland (1977-2002).

Change in party position (t-1 to t) =

β_0

$+ \beta_1[\textit{Intra-party democracy (t)}]$

$+ \beta_2[\textit{Mean supporter's shift (t-1 to t)}]$

$+ \beta_3[\textit{Intra-party democracy (t)} \times \textit{mean supporter's shift (t-1 to t)}]$

$+ \beta_4[\textit{Mean voter's shift (t-1 to t)}]$

$+ \beta_5[[\textit{Intra-party democracy (t)} \times \textit{mean voter's shift (t-1 to t)}]$

where

Change in party position (t-1 to t) = the change in a party's rescaled (10-point) CMP left-right score between elections at (t-1) and (t).

Intra-party democracy (t) = dummy equal unity if a party is internally democratic at (t) and zero otherwise.

Mean supporter's shift (t-1 to t) = the change in the mean self-placements between election years (t-1) and (t) of respondents who state that they intend to vote for this party.

Mean voter's shift (t-1 to t) = the change in the mean self-placement of all Eurobarometer respondents in this country between election years (t-1) and (t).

> For all variables expressing differences, positive values indicate policy shifts
> to the right and *vice versa.*

Due to the parties being observed at several consecutive elections, I treat the observation for parties as panels. Unfortunately, different estimation techniques for panel-data suffer from econometrics' chronic trade-off between efficiency and bias. In order to use the full capacity of advantages and control for disadvantages, I employ two different models: an ordinary Fixed Effects (FE) set-up as well as a Fixed Effects Generalized Least Squares (FEGLS) approach (Wooldridge 2010, 312-315). The FE technique is the gold-standard for applied panel-analysis. However, it has some disadvantages compared to the FEGLS method, which I describe below.

I address auto-correlation since tests indicate the presence of first order auto-correlation.[7] In the FE set-up, I include a lagged dependent variable (LDV) to eliminate the serial correlation.[8] Three problems arise by employing an LDV. First, if included in an FE model, a bias is induced (Nickell 1981; Judson and Owen 1999). Second, LDVs capture some of the theoretically motivated variables' effects in the estimation (Achen 2000; Plümper et al. 2005). Finally, since there is not always data on last election's policy shifts some observations are lost.[9] The main advantage of FEGLS over FE models is that it allows for a transformation of the variance-covariance matrix that corrects coefficients and standard errors for first-order auto-correlation. Thus, it does not suffer from any of the mentioned problems.

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[7]Regressing the residuals of the FE model on its prosecutors results in a negative and statically highly significant coefficient (β = -0.32, p = 0.000).

[8]Indeed, this eliminates auto-correlation. The corresponding coefficient (see last footnote) reduces to β = -0.01, p = 0.831).

[9]Here, seven observations are dropped.

An additional consideration is that a standard test detects heteroscedasticity in the error terms.[10] Again, the solutions by each estimation technique differ. For the FE set-up the well known panel corrected standard errors can be used (Beck and Katz 1995, 1996). The FEGLS model allows us to estimate heteroscedasticity, and weight coefficients and variance-covariance matrix by a corresponding factor to adjust for the disturbance. As a result, standard errors are often more accurate and smaller than their panel-specific counterparts.

Despite the striking advantages of FEGLS over FE, there is an important caveat. Its properties for a small to medium amount of panels (there are 33 in this analysis) may be poor (Wooldridge 2010, 298). Hence, I will present findings of the more conservative FE model as well as the more desirable FEGLS model.[11]

With respect to the hypotheses, the Democratic Party Hypothesis is supported to the extent that the joint coefficient on the [*Mean supporter's shift (t-1 to t)*] and the [*Intra-party democracy (t) × mean supporter's shift (t-1 to t)*] variables exceeds zero and is statistically significant. Similarly, if the coefficient on the [*Mean voter's shift (t-1 to t)*] variable is statistically significant and positive, the Undemocratic Party Hypothesis is corroborated. The Party System Hypothesis is supported if the coefficient on [*Mean voter's shift (t-1 to t)*] is significantly smaller in multi-party systems than in two-party systems.

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[10]A likelihood-ratio test of the given model specification estimated by generalized least squares for panel data with and without controlling for panel heteroscedasticity clearly indicates that panel specific heteroscedasticity exists ($p = 0.004$).

[11]Both estimation techniques may have problems if party supporter and public opinion shifts are highly correlated. However, the corresponding coefficient is found to be $r = .34$. Moreover, in 36% of all cases the opinions move even to opposite directions. Thus, the estimation techniques are appropriate.

2.5 Results

To ease substantive interpretation, note that except for [*Intra-party democracy (t)*] all independent variables are on the same scale as the dependent variable. Also, positive coefficients on the [*Mean supporter's shift (t-1 to t)*] and [*Mean voter's shift (t-1 to t)*] variables indicate responsiveness to the mean supporter and the mean voter positions. Second, these coefficients are interpreted in terms of percentages. For example, if the coefficient for [*Mean supporter's shift (t-1 to t)*] equals 0.7, the party will follow its mean supporter's movement by 70%. Note, again, that this is to ease interpretation of the coefficients, and that it assumes that the public opinion data and the rescaled CMP data are on substantively equivalent scales. In the following, I discuss the general patterns of intra-party democracy and party responsiveness before turning to their differences between party systems.

2.5.1 General Effects of Intra-Party Democracy on Party Responsiveness

Table 2.1 Column 1 contains the results of the baseline model described above, estimated with FEGLS.[12] Focusing on responsiveness to the mean party supporter first, the coefficient of -.55 on the [*Mean supporter's shift (t-1 to t)*] variable supports the finding that internally undemocratic parties move, on average, in the opposite direction of their supporters. In particular, the 95% confidence interval is between 22% and 86% of their mean supporter's movement in the opposite

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[12]Party-specific intercepts are not shown.

Table 2.1: Estimated Effects on Parties' Policy Shifts

	(1) Baseline Model FEGLS	(2) Baseline Model FE	(3) Two-Party Model FEGLS	(4) Two-Party Model FE	(5) Multi-Party Model FEGLS	(6) Multi-Party Model FE	(7) Niche Party Model FEGLS	(8) Niche Party Model RE
Intra-party democracy (t)	−0.05	−0.33	−0.55	−0.44	−0.00	0.28	−0.01	0.01
	(0.10)	(0.29)	(0.05)***	(0.16)**	(0.11)	(0.13)**	(0.06)	(0.18)
Mean supporter's shift (t-1 to t)	−0.55	−0.71	−0.74	−1.00	−0.55	−0.59	−0.39	−0.47
	(0.16)***	(0.34)**	(0.07)***	(0.35)**	(0.18)***	(0.38)	(0.22)*	(0.30)
Intra-party democracy (t) × Mean supporter's shift (t-1 to t)	0.90	0.93	2.13	2.43	0.89	0.81	0.63	0.66
	(0.19)***	(0.35)**	(0.34)***	(1.52)	(0.21)***	(0.38)**	(0.25)**	(0.30)**
Mean voter's shift (t-1 to t)	0.69	−0.36	1.10	0.80	−0.35	−1.63	0.44	−0.13
	(0.39)*	(0.77)	(0.06)***	(0.26)**	(0.37)	(0.83)*	(0.43)	(0.71)
Intra-party democracy (t) × Mean voter's shift (t-1 to t)	−0.87	0.52	−2.09	−1.83	0.45	1.97	−0.37	0.30
	(0.43)**	(0.82)	(0.25)***	(0.80)*	(0.43)	(0.86)**	(0.47)	(0.78)
Niche party							−0.094	−0.14
							(0.07)	(0.05)***
Niche party × Mean supporter's shift (t-1 to t)							0.70	0.69
							(0.23)***	(0.17)***
Niche party × Mean voter's shift (t-1 to t)							−0.79	−0.91
							(0.35)**	(0.32)***
Change party position (t-2 to t-1)		−0.39		−0.45		−0.33		−0.35
		(0.05)***		(0.18)**		(0.06)***		(0.06)***
Observations	228	221	21	24	204	197	228	221
Group	Party	Party	Party	Party	Party	Party	Country	Party
Group Dummies	Yes	No	Yes	No	Yes	No	Yes	No
Number of Parties	33	33	6	9	30	30	33	33

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Robust standard errors in parentheses. Party and country dummies are not shown. FEGLS = Fixed Effects General Least Squares, FE = Fixed Effects Least Squares, RE = Random Effects Least Squares.

direction. This quite striking finding is reinforced by the FE estimate in Model 2, though the standard errors are larger.

Figure 2.1 consists of two columns of graphs. On the left hand side, the effect of the mean supporter's shift is shown. On the right hand side, the same is depicted for the mean voter. Y-axes always show the marginal effect of the opinion changes, *ceteris paribus*, on a party's policy position. In all figures, positive values on the y-axis indicate responsiveness and its values can be interpreted as percentages of responsiveness if multiplied by 100. The x-axes show the different types of parties. Finally, black circles indicate the estimated marginal effect of the FEGLS models and white circles the corresponding estimates of the FE model. In both cases, bars give the corresponding 95% confidence intervals.

Turning now to internally democratic parties, a first glance at the [*Intra-party democracy (t) × mean supporter's shift (t-1 to t)*] estimates in Model 1 and 2 in Table 2.1 are positively signed, demonstrates that internally democratic parties are relatively more responsive to their supporters than internally undemocratic parties. As clearly shown by the right pair of bars in the left panel of Figure 1, both estimation techniques provide strong support that internally democratic parties are responsive to their mean supporter's opinion shifts. None of these intervals includes zero and hence they corroborate the Democratic Party Hypothesis. Indeed, the average internally democratic party is found to respond to 35% to the mean supporter's policy shifts, and this estimate is statistically significant ($\beta = .35$; p < .01). Model 2 predicts a smaller effect, though this effect is still consistent with the general findings.

With respect to mean voters' opinion shifts, there is some evidence that internally undemocratic parties are responsive to the mean voter position as shown

Figure 2.1: Marginal Effects of Opinion Changes on Changes in Parties' Policy Positions in the Baseline Model
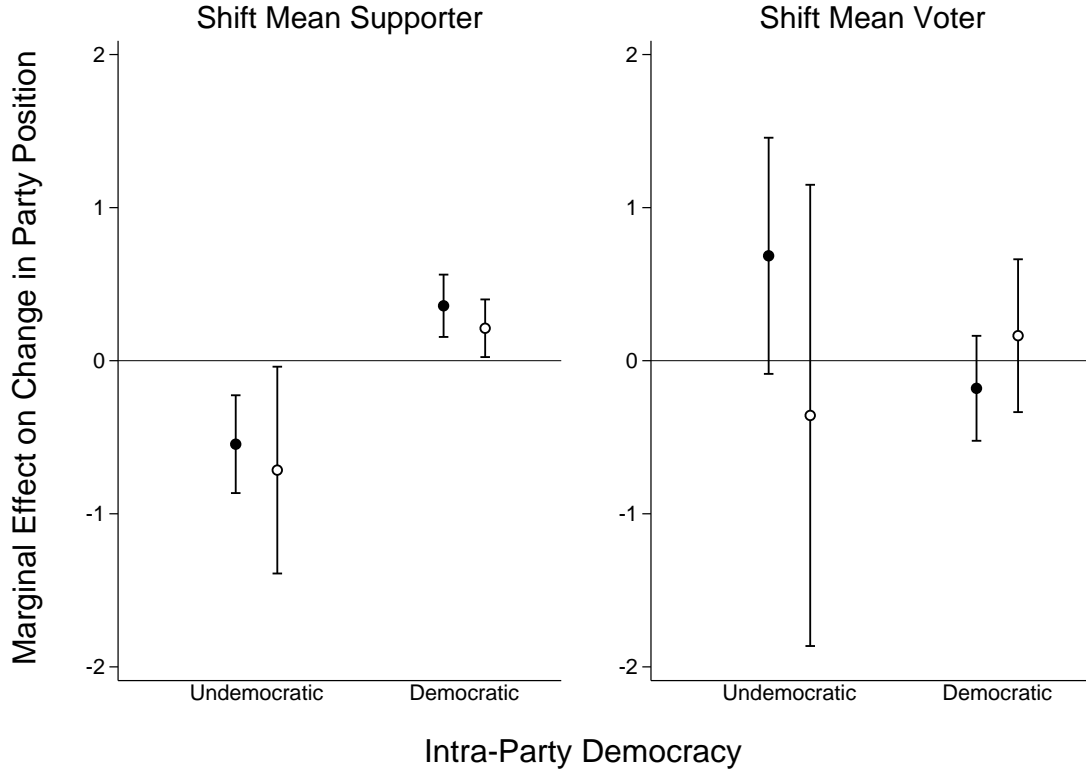
Notes: Black circles indicate FEGLS estimates (Model 1), white circles FE estimates (Model 2). Bars give robust 95% confidence intervals.

by the estimates on [*Mean voter's shift (t-1 to t)*] in Model 1, being positive and statistically significant (β= .69; p < .10). However, in Model 2 the corresponding coefficient is negative with a large standard error. These observations raise concern about evidence supporting the Democratic Party Hypothesis. The null hypothesis that internally undemocratic parties do not respond to the median voter cannot be rejected convincingly. Both of the left bars in the right panel in Figure 2.1 clarify this observation. The positive coefficient of the FEGLS model (not their standard errors) is consistent with the Undemocratic Party Hypothesis.

The FE results, on the other hand, indicate point estimates as well as standard errors that do not support the Undemocratic Party Hypothesis.

Concerning mean voter responsiveness for internally democratic parties, the estimation techniques return point estimates with different algebraic signs for [*Intra-party democracy (t) × mean voter's shift (t-1 to t)*] (β_{FEGLS} = .16; β_{FE} = -.18). And, in both cases, the confidence intervals clearly contain zero. Thus, one has to conclude that there is no clear pattern of responsiveness or anti-responsiveness for internally democratic parties to the mean voter.

To summarize, the analysis reveals that intra-party democracy does indeed influence how parties shift their positions. In line with the Democratic Party Hypotheses, I find that internally democratic parties respond to opinion shifts of their mean supporters while internally undemocratic parties do not show this pattern. Second, there is weak evidence that internally undemocratic parties respond to the mean voter, but this evidence is very sensitive to the model specification (FEGLS or FE). Finally, there is no evidence that internally democratic parties systematically respond to movements in the mean voter opinion. The next section evaluates whether these results hold in different party systems.

2.5.2 Party System Effects

The Party System Hypothesis states that internally undemocratic parties will be more responsive to changes in the public opinion in two-party systems than their counterparts in multi-party systems. In order to test whether this statement holds, I stratify the sample and re-estimate the parameter estimates of Models

1-2 in Table 2.1. Estimates and standard errors for two-party systems appear in Models 3-4 and for multi-party systems in Models 5-6 in Table 2.1, respectively.

With respect to responsiveness to the mean voter in two-party systems, internally undemocratic parties are—based on the coefficients on the [*Mean voter's shift (t-1 to t)*] variable in Models 3 and 4—responsive to shifts in the mean voter position which is consistent with the Undemocratic Party Hypothesis. The confidence intervals of both approaches include an estimated effect of 1 which suggests "one-to-one" responsiveness of the classical Downsian (1957) party in a two-party system.[13] Models 5-6 in Table 2.1 show the corresponding results for the multi-party case. In these party systems, it is striking that the FEGLS estimates are close to zero and that the standard errors are relatively large compared to the two-party set-up (Model 3) despite being based on significantly more observations.[14]

In order to evaluate the Party System Hypothesis, it is necessary to compare the estimates for two-party systems and multi-party systems. The hypothesis is supported if multi-party system estimates are significantly smaller than two-party system estimates. In the right column of Figure 2.2, this comparison is depicted by the left bars. Comparing FEGLS estimates (black) and FE estimates (white), respectively, it can be observed in Figure 2.2 that internally undemocratic parties in multi-party systems display less responsiveness to the mean voter position

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[13]Surprisingly, Model 3 as well as Model 4 report statistically significant and strong effects in the opposite direction for responsiveness to the mean supporter for internally undemocratic parties, as shown by the negative coefficient on the [*Mean supporter's shift (t-1 to t)*] variable. These observations of almost perfect responsiveness to the mean voter combined with almost perfect anti-responsiveness to the mean supporter may be interpreted as indication of a trade-off between these two types of responsiveness.

[14]Explaining whether the huge variation within multi-party systems expressed by the standard errors can be traced back to certain variables is beyond the scope of this study. A similar observation can be made for the FE estimates. Thus, neither model provides evidence to support the Undemocratic Party Hypothesis in multi-party systems.

Figure 2.2: Marginal Effects of Opinion Changes on Changes in Parties' Policy Positions in the Two-Party and Multi-Party Models
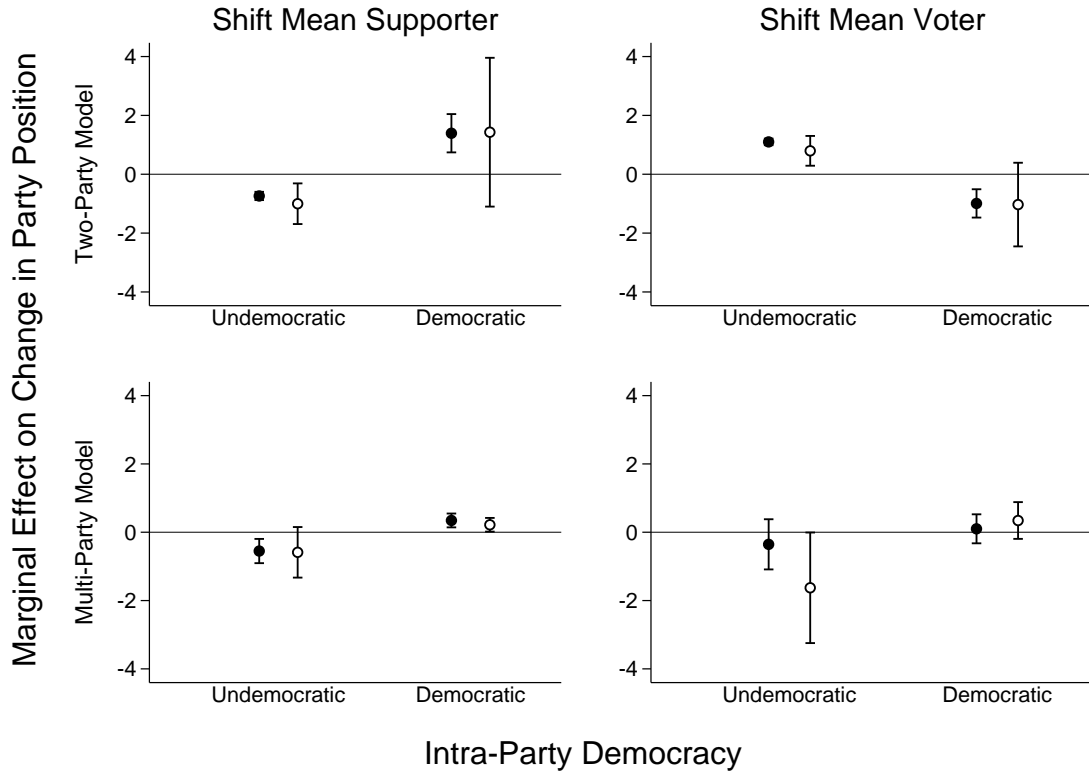
Notes: Black circles indicate FEGLS estimates (Model 3 and Model 5), white circles FE estimates (Model 4 and Model 6). Bars give robust 95% confidence intervals.

than internally undemocratic parties in two-party systems, and that this difference is statistically significant. This result is consistent with the Party System Hypothesis.

The results on party system size are also relevant for the Democratic Party Hypothesis, and whether it is supported across the two types of party systems. Results in Models 3 and 4 reveal that in two-party systems, evidence for the Democratic Party Hypothesis depends on the model specification: As shown by the right bars in the upper left panel of Figure 2.2, internally democratic parties

respond positively to their mean supporter's policy shifts according to the FEGLS estimates. The estimated marginal effects of the FE model are rather similar to the FEGLS estimates, however, the FE standard errors are significantly larger. Thus, the Democratic Party Hypothesis is not clearly corroborated by the FE model. Nevertheless, these results are suggestive. Given the few observations present in the sample in two-party systems (21 and 24 cases[15], respectively), it is not surprising that standard errors are slightly inflated.

The findings for responsiveness to the mean party supporter in multi-party systems are very similar to the baseline model which is not surprising as only roughly 10% of the baseline model's cases are excluded. The right pair of bars in the lower left panel in Figure 2.2 still support the Democratic Party Hypothesis.

In sum, the two-party cases support the Democratic Party Hypothesis and the Undemocratic Party Hypothesis (although these conclusions are based on a limited set of observations). While the evidence does not support the Undemocratic Party Hypothesis in multi-party settings—which, in turn, is in line with the Party System Hypothesis—, there is strong evidence for the Democratic Party Hypothesis in this context.

2.6 Robustness Tests

This section tests to what extent the results are robust to alternative model specifications and whether they are biased by other potential problems.

Niche Parties: Ezrow et al. (2011; see also Adams et al. 2006) have recently argued that niche parties, or parties that belong to the Communist, Nationalist

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[15]Even though 63% of the cases represent British parties there also German and Irish parties in this sample.

Table 2.2: Distribution of Intra-Party Democracy Levels and Party Types

| | Intra-Party Democracy Level | | | | | |
| | Internally Undemocratic | | Internally Democratic | | Total | |
Party Type	No.	Col. %	No.	Col. %	No.	Col. %
Mainstream	34	100.0	179	87.6	204	89.5
Niche	0	0.0	20	12.4	24	10.5
Total	34	100.0	194	100.0	228	100.00

Sources: Katz and Mair (1992) and Kenig (2009) for Intra-Party Democracy Level; Budge et al. (2001) and Klingemann et al. (2006) for Party Type.

or Green party families, are more responsive to their supporters than mainstream parties.[16] In order to test the results' robustness to this alternative explanation, I include a dummy variable which equals 1 if a party is among one of the mentioned groups in the CMP data set (Budge et al. 2001; Klingemann et al. 2006) and 0 otherwise. Moreover, I interact [*Niche party*] with each variable, [*Mean supporter's shift (t-1 to t)*] and [*Mean voter's shift (t-1 to t)*]. Table 2.2 shows the relation between "niche"-ness and intra-party democracy. It reveals that in fact all niche parties in the sample are internally democratic parties.

Before turning to the estimation results, there is one more problem to address that arises from this procedure. [*Niche party*] is constant over time and hence will necessarily be dropped if a fixed-effects model with party-specific effects is estimated. Ezrow et al. (2011) circumvent this fact by shifting to a higher level, namely countries instead of parties, as panels. I adopt their approach because it proves to eliminate most of the party-specific effects.[17]

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[16]For alternative approaches to niche parties see Meguid (2005, 2008) and Wagner (2011).

[17]To draw this conclusion, I estimate the baseline model with party fixed effects and compute the party-specific heterogeneity that the model isolates. Subsequently, I use the same model specification while grouping cases according to different criteria to obtain other types of heterogeneity. Looking for the best predictor of party specific heterogeneity, I model it using one of the

In order to show that the results are not driven by the fact that country-specific effects differ from party-specific effects, I estimate the model specification as FEGLS, FE and Random Effects (RE) model. The first two models eliminate country-specific heterogeneity, the latter estimates party-specific heterogeneity. Since FE and RE model return almost the same results that differ only in their standard errors, I report only the results of the RE model in Model 8 in Table 2.1 because its standard errors are larger in most cases and thus conclusions are more conservative.

If the pattern of responsiveness is driven by parties' (missing) "niche"-ness, the coefficient on [*Mean voter's shift (t-1 to t)*] should be significantly positive. Moreover, the joint effect of [*Mean supporter's shift (t-1 to t)*] and its interaction with [*Niche party*] should be positive and statistically significant. By contrast, if the conclusions drawn from the baseline models persist, the Democratic Party Hypothesis is corroborated whereas the Undemocratic Party Hypothesis is not.[18]

Regarding Models 7-8 in Table 2.1 and comparing them to Models 1-2 respectively, although the coefficients and significance levels change, the substantive conclusions concerning the hypotheses do not change when controlling for niche parties. In both model specifications, responsiveness to the mean supporter is strictly positive for internally democratic parties. This corroborates the Democratic Party Hypothesis. Again, neither model finds internally undemocratic parties to be responsive to the mean voter. Hence, the Undemocratic Party Hypothesis is not supported by the data.

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other types of heterogeneity in each estimation. Among decade-specific, party family-specific and country-specific heterogeneity, the latter proves to be the best predictor of party-specific heterogeneity.

[18]There are no niche parties in two-party systems in the sample, therefore, the Party System Hypothesis cannot be tested.

Figure 2.3: Marginal Effects of Opinion Changes on Changes in Parties' Policy Positions in the Niche Party Model
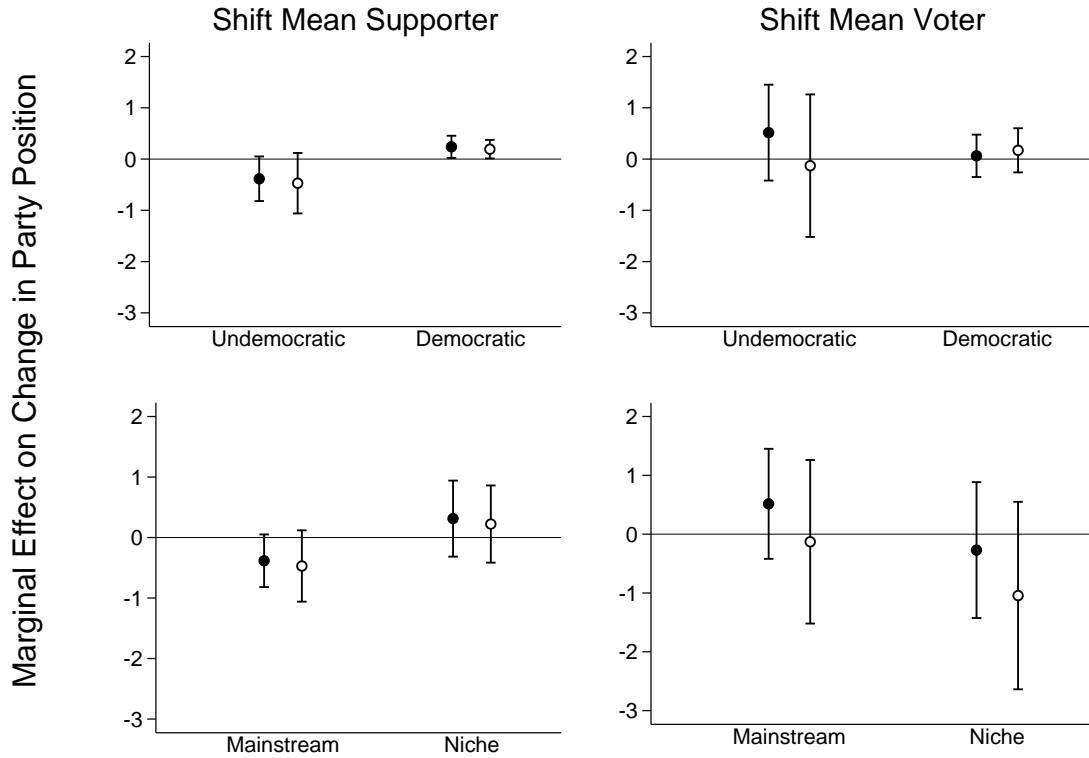
Notes: Black circles indicate FEGLS estimates (Model 7), white circles RE estimates (Model 8). Bars give robust 95% confidence intervals.

Furthermore, the second row in Figure 2.3 reveals that the observation Ezrow et al. (2011) made, namely that niche parties differ from mainstream parties in terms of responsiveness to the mean voter and the mean supporter, cannot be replicated by the RE or the FEGLS model while controlling for intra-party democracy. However, the FE model succeeds to perform this task.[19] Therefore, the conclusion for the hypotheses has to be that even if one controls for niche

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[19]The FE model finds the marginal effect of the mean supporter's policy shift on a party's policy movement to be positive. Moreover, this result is significant with 95% confidence intervals.

parties, intra-party democracy remains decisive in whether parties respond to their mean supporter. These findings support the Democratic Party Hypothesis. Recalling that all niche parties in the sample are internally democratic parties, the analysis provides indication that niche parties may be "fundamentally different from mainstream parties" (Adams et al. 2004) because they happen to be internally democratic.

Alternation: Another possibility is that parties naturally alternate their positions in between elections. As Budge (1994; see also Budge et al. 2010) argues, parties may shift their positions back and forth because of uncertainty. To address this possibility the lagged dependent variable was included in Models 2, 4, 6 and 8. If parties alternate, the coefficient on [*Change party position (t-2 to t-1)*] should be equal to -1. As Table 2.1 shows, in fact [*Change party position (t-2 to t-1)*] is statistically significant and negative whenever included in a model. However, its effect size is far from 1, which suggests that it is auto-correlation in the error terms that drives the result. More importantly, including the lagged dependent variable does not change the substantive results reported above.

Endogeneity: In order to rule out endogeneity (i.e., that party position shifts cause opinion shifts), I perform a Durbin-Wu-Hausman test (Ezrow et al. 2011, 287). I compute the residuals from regressing mean voter opinion shifts and mean party supporter opinion shifts on its lagged values, respectively. Both types of residuals are used to model parties' policy shifts. If opinions are exogenous with respect to party policy shifts, their coefficients are insignificant. Indeed, these results hold up clearly.[20]

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[20]The p-value for the coefficient on the residuals of mean party supporters' shifts is p = .404. The corresponding value for mean voter position shifts is p = .656.

Outliers: With regard to whether outliers drive the results reported above, I re-estimate the baseline models (i.e., Model 1 and Model 2, respectively) without those cases whose residuals are more than two standard deviation from the mean residual away. However, results do not substantially change any of the conclusions drawn.[21]

2.7 Conclusion

This paper derives a model of intra-party competition for party leadership. Since candidates need the support of the selectorate, which is defined as the group of all party members who are entitled to vote in the party leadership selection (Bueno de Mesquita et al. 2002, 2003), they are generally responsive to the median selector's ideal policy position. However, if selectors are offered office benefits, they compromise their policy ideals for office. Thus the share of office candidates in the selectorate determines how close the party's position has to be to the median selector's position. Since institutions are crucial for enfranchising party members and thereby determine the denominator of the offices-to-selectors ratio by setting the selectorate's size, they are decisive for parties' policy positions.

The empirical analysis evaluates these expectations against 228 cases from six countries from 1975-2003. Internally democratic parties that choose their leader based on widespread membership (e.g. grass root dominated party conferences or grass root elections) respond to shifts in the mean party supporter position. This finding holds across two-party and multi-party systems. Moreover, this result

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[21]The only observable difference is that the marginal effect for internally undemocratic parties and their response to party supporter opinion shifts in the FE model is no longer statistically significant with 95% confidence intervals, yet, with 90% confidence intervals. These results are shown in Table A1 in Appendix A.

holds controlling for niche parties and policy alternation. In contrast, internally undemocratic parties whose leadership selection is based on a few members are not responsive to their supporters. Finally, the evidence reported indicates that internally undemocratic parties do not respond to shifts in the mean voter position in multi-party systems. However, in two-party systems they do.

Besides providing the first analysis of the effect of intra-party institutions (i.e., intra-party franchise in leadership selections) on party positions and party responsiveness, this paper has three important implications for future research. First and with respect to coalition behavior (Giannetti and Benoit 2009), internally undemocratic parties should be more flexible to accept compromises and hence more likely to be members of a coalition government. Similarly, internally democratic parties should be less forbearing with its leaders if they implement unpopular policies from the party members' point of view, and less likely compromise their ideology to remain in a governing coalition. Hence, theories that combine intra-party politics and coalition politics should analyze the effect of intra-party democracy on parties' willingness to join coalitions as well as their inclination to terminate them (see Chapter 4.1).

Second, an obvious implication of this study is that countries that produce legislation that affects intra-party institutions will affect patterns of party responsiveness. Powell (2004) highlights the delegation of interests in democracies via a "chain of responsiveness". Müller (2000) points to the crucial role of parties in these delegation processes. This paper adds to this knowledge the insight that intra-party institutions affect whose preferences dominate a party's policy. Hence, political systems that impose internally democratic party structure on parties by

law (e.g., Germany) should have different patterns of responsiveness to the mean voter than political systems without these restrictions.

Third, Schumacher et al. (2013) raise doubt about the explanation that niche parties, i.e., parties from Communist, Nationalist or Ecologist party families, respond to their mean supporters rather than the mean voter because of "ideological" aspects (Adams et al. 2006; Ezrow et al. 2011). In this paper, I not only make their argument more specific by pointing out the importance of intra-party democracy, yet, I also control for the alternative niche party approach. As a result, I find strong indication that niche parties are responsive to their mean supporters because they are internally democratic parties. Nevertheless, this does not prove that the ideological explanation is false. It rather raises the question whether certain party ideologies lead to specific internal institutions which, in turn, lead to responsiveness to the mean voter or the mean supporter.

3 Intra-Party Democracy and Policy Proximity

Abstract

Who selects the party leader influences party policy positions. Intra-party "selectors" who receive office benefits favor office-seeking policy positions (i.e., they are office-motivated), whereas rank-and-file members prefer policy-seeking policy positions (i.e., they are policy-motivated). The mixture of office-motivated and policy-motivated selectors affects where the party positions: Under democratic intra-party institutions, policy-seeking selectors dominate, leading parties to pursue policy goals over office payoffs. Under undemocratic intra-party rules, office-seeking selectors demand centrist policy positions which allow the party to be vote-seeking. In mixed selectorates, the dispersion in selector preferences determines to what extent intra-party constraints bind. I provide empirical evidence that intra-party democracy is linked to policy proximity to the median voter position and the median party member position as theorized. These finding have important implications for political representation and our general understanding of party politics.

Keywords: Intra-Party Politics, Spatial Modeling, Party Competition, Political Representation; Party Policy Proximity

3.1 Introduction

When do political parties appeal to party members instead of to the median voter? In two-party systems, the Downsian model predicts that parties respond to public opinion because they have vote-seeking incentives to position themselves at the median voter position (Downs 1957). With respect to multi-party systems, scholars have put forth theoretical arguments that parties diverge from the median voter (Palfrey 1984; Cox 1990a, 1990b; Adams et al. 2005; Miller and Schofield 2003; Cho 2014). While these studies focus on system-level factors—such as electoral rules (Cox 1990a), the number of parties in the party system (Adams and Merrill 2006; Plümper and Martin 2008; Cox 1990b), the type of voting (Lin et al. 1999; Adams 1999; Patty 2005), and valence (Stokes 1963; Adams et al. 2005; Schofield 2003)—these formal models of party competition have done so at the cost of overlooking the effects of intra-party democracy.

I argue that internally democratic party organizations, where members hold leaders accountable, pressure leaders to adopt non-centrist positions. Conversely, internally less democratic parties, where leaders are not constrained by members, adopt centrist positions.

Although the party competition literature has largely overlooked the effects of intra-party democracy, there are conspicuous instances of its effects. Before the 1979 and the 2001 British general elections, the Conservative party could have adopted centrist policies or policies that aligned with its party members' ideals. In 1979, only members of parliament (MPs) were allowed to select the party leader (Quinn 2012, 100), and the Conservatives adopted a centrist position (Blake 1997, 334). In 2001, on the other hand, when they changed their internal

leadership selection rules and allowed rank-and-file party members to participate (Quinn 2012, 100), this internal party rule change resulted in the party adopting a more rightward ideological position (Bale 2010, 127). The Conservatives won the 1979 election and lost in 2001. In 2001, intra-party politics induced the party leadership to appease rank-and-file members by adopting policies consistent with them, while MPs requested electorally beneficial policies in 1979 (Schumacher et al. 2013; Ezrow et al. 2011; Strom and Müller 1999).

The example above provides the intuition for the model I develop of intra-party politics. The model predicts that internally democratic parties allow for less policy leeway for the party leadership to adopt vote-maximizing centrist positions. Simply, party leaders have to cater to rank-and-file party members. Following this logic, the model develops three expectations: First, internally democratic parties position close to the median party member position (Democratic Party Hypothesis). Second, internally undemocratic parties take positions close to the median voter position (Undemocratic Party Hypothesis). Third, for parties in the middle—parties that are internally not completely democratic nor completely undemocratic—party positioning depends on the heterogeneity in party members' policy preferences with the more heterogeneous parties allowing for policy support at more centrist positions. This is because in these parties, office-seeking party members are influential when choosing the party leader, yet, not pivotal on their own. Hence, they ally with those policy-seeking party members that are close to the political center. The more heterogeneous preferences are within the party, the more centrist the most moderate party members, the more these parties behave like internally undemocratic rather than internally democratic parties (Hybrid Party Hypothesis). Using data from ten democratic countries between 1964-2010,

I find that intra-party democracy affects "real world" party competition in line with these expectation.

Even though predictions about the effects of intra-party competition on inter-party competition can partially be derived analytically, linking it to competition for votes among parties makes the model analytically intractable (Roemer 2001, 103-116). Accordingly, I employ simulation strategies to obtain predictions (Kollman et al. 1992; Adams 2001; Adams et al. 2005; Laver 2005; Bendor et al. 2011; Laver and Sergenti 2012; Golder et al. 2012).

This study makes a number of important contributions. First, it is the first formal model of intra-party politics and party behavior that allows for precise predictions of party positions. Previous studies discuss intra-party politics and party platform choice and due to the complexities of deriving specific predictions analytically, they do not model competition between parties directly (see Caillaud and Tirole 1999, 2002; Crutzen at al. 2009; Dewan and Squintani 2014). Hence, no clear predictions about parties' policy positions (relative to the median voter) can be derived. This paper makes specific predictions (and presents empirical support for them).

Second, the paper shows that preference heterogeneity within parties matters for intra-party constraints. Up until now, scholars explained the strength of intra-party constraints with reference to leadership accountability and rank-and-file policy influence (Strom and Müller 1999, 17-18); self-selection of policy-seeking members into internally democratic parties (Panebianco 1988); and party organizational strength (Schumacher et al. 2013). While it is natural to concentrate on the party's ideological center (i.e., the median party member position), this study

emphasizes that it is also the dispersion of party members around the center that matters (if parties are internally neither democratic nor undemocratic).

Third, I add to the empirical literature on intra-party constraints on party behavior. In particular, the findings support the claim that higher levels of intra-party democracy are correlated with policy-seeking, and conversely that internally undemocratic parties' behavior is consistent with office-seeking behavior (Schumacher et al. 2013; Meyer 2013; Bäck 2008; Pedersen 2010; Ceron 2012).

Fourth, this study has implications for our understanding of political representation. While the literature on party strategies emphasizes party-system-level variables (Blais and Bodet 2006; Ezrow 2008b, 2011; Dow 2011), this study suggests that scholars should lower the level of analysis and explicitly consider intra-party institutions, and how these are decisive for how citizen preferences are represented (Müller 2000; Powell 2004).

3.2 A Model of Party Competition

The proposed model operates at two levels: At the national level, parties compete against one another for votes by choosing policy positions. In light of this, a party's policy position is determined at the intra-party-level. The core assumptions of the model relate to trade-offs office-seeking party leaders face when making policy decisions. On the one hand, leaders appeal to the general electorate (i.e., the median voter position at the national level) in order to maximize votes and their chances of forming the government (Roemer 2001, Chapter 1; Schofield 1993; Austen-Smith and Banks 1988; see also Ezrow 2008b). On the other hand, leaders must first be selected by their parties and thus have incentives to cater to party

members (i.e., the median party member position at the intra-party-level). The model suggests that the extent to which rank-and-file members are enfranchised to select the party leader matters for how close parties position to the median voter position.[1]

3.2.1 Model Set-Up

In the game, there are three types of players: First, at the intra-party-level an incumbent party leader (I) and a challenger (C) compete for party leadership. They campaign for intra-party support by announcing a policy position and promising office to certain party members. Second, intra-party selectors choose the next party leader. They evaluate the candidates' offers when making their vote choices. The winning candidate's policy position becomes the party's policy position. Third, voters at the national level observe party positions and vote for the party closest to their ideal position.

Incumbents have a decisive disadvantage compared to challengers in intra-party competition: They have to give speeches in public and have to staff crucial positions. This commits them to a policy position as well as to staff. Since challengers do not have this public exposure, they can credibly commit to any policy position as well as to any personnel. The sequence of moves is hence as follows (see Figure 3.1).

Each round of the model begins with an incumbent party leader whose policy and office nominations are known. Moreover, voters' policy preferences are well documented by public opinion polls. The first move is made by the chal-

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[1]The model resembles Bueno de Mesquita et al.'s (2002, 2003) *Selectorate Theory* if one thinks about a parties' policy positions as public goods and office nominations as private goods.

Figure 3.1: Sequence of Moves in the Intra-Party Game
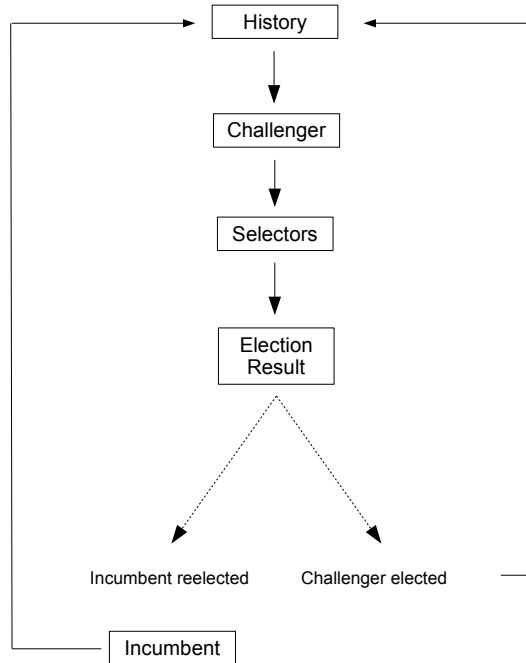
lenger who observes voter positions and both the incumbent's position and her nominations ("History"). Using this information, the challenger chooses his policy position and nominations strategically. Next, intra-party selectors choose the new party leader by comparing the incumbent's and the challenger's policy positions and nominations. If the challenger is elected party leader, the challenger's policy position becomes the party's policy position, the challenger's nominations are implemented, payoffs are realized, and the round ends. If the incumbent is reelected, he rules for another round. I assume that a rounds endures long enough to allow the incumbent to alter the party's policy position and change nominations without losing credibility. Once this happened, payoffs are realized, and the round ends.

Since the model becomes intractable rather quickly when multiple parties are analyzed, simulation strategies are used to derive hypotheses (see below). To facilitate this, the game is played in turns: one party selects a party leader, thereby selecting a policy position, while other parties' actions are held fixed. The sequence of parties is randomly chosen from all parties that have not moved. When all parties have moved once, the round ends and a new round begins.

In the following, I describe the players' utility functions and their utility maximizing strategies keeping all other players' actions fixed. Note that these are not best responses that can be used to find (subgame perfect) equilibria because strategies ignore the fact that other parties will move before payoffs are realized. Anticipating that simulations will be used to derive predictions from the model, I express these strategies as decision rules. These are equivalent to formal expressions and can be directly translated into computer code for simulations. Formal expressions and the proof that the decision rules (weakly) dominate any other rule can be found in Appendix B.1.

3.2.2 Voters at the National Level

Assume a single policy dimension in the interval $[0, 10]$. Let E an uneven number of voters. The set of their ideal positions, E_{ideal}, contains the ideal points that are Normally distributed around position 5 with standard deviation E_{sd}. Voters observe the K ($K \geq 2$) parties' policy positions.

Note that voters' decisions are needed only to determine how many votes a party expects to receive when taking a particular policy position (see below).[2] Since this quantity is public knowledge, parties are perfectly informed even if

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[2]Therefore, voters do never actually vote in the model (see Figure 3.1).

voters use complex decision rules (e.g., strategic voting). Since the purpose of the model is to highlight the effects of intra-party politics and not the effects of a certain voting model, voters' decision rule is kept as simple as possible: Voters vote sincerely for the party closest to their ideal position. They break ties randomly.[3]

3.2.3 Selectors

There is an uneven number, S, of selectors within party k who choose the next party leader (i.e., incumbent or challenger). Similar to voters, selectors have ideal policy positions on the interval $[0, 10]$ that are Normally distributed around some mean selector position S^k_{mean} with standard deviation S^k_{sd}. Note that these parameters are party-specific.

While voters think only about policy proximity when making their decisions, selectors consider office payoffs as well. One popular view about the proportions of office and policy payoffs, dating back to Downs (1957, 28), is that politicians use policy as means to gain office without any loss of utility by doing so, whereas voters maximize policy payoffs only. This implies either that politicians and voters have completely different utility functions or the office and policy terms in these utility functions, respectively, are (relatively) too small to be relevant. One way to express this latter idea is the following utility function for selectors in party k:

$$
U_s = \begin{cases} -\,|i_s - p_Z| & \text{if not nominated for office by } Z, \\ -\,|i_s - p_Z| + O(p_Z; E_{ideal}, p_{-k}) & \text{if nominated for office by } Z \end{cases}
$$

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[3]Of course, other decision rules can easily be used.

where i_s denotes selector s's ideal policy positions; p_Z is candidate Z's, $Z \in \{I, C\}$, policy position; $O(\cdot)$ indicates office payoffs which are a function of the number of votes the party gets at policy position p_Z, which in turn depends on voters' ideal positions, E_{ideal}, and other parties' policy positions, p_{-k}. Moreover, office payoffs always exceed maximal policy payoffs, formally $O(\cdot) \gg D$. As a result, a selector's expected utility of voting for candidate Z increases in policy proximity to candidate Z, and conditional on the selector assuming office, her utility increases also in party k's national vote share at position p_Z.

Why do office payoffs, $O(\cdot)$, strictly increase as the share of votes a party expects to gain increases? The rationale is that the utility generated by holding office is dependent of a party's electoral performance. For instance, all offices that a party may lose in elections (i.e., governmental positions, seats in parliament, and so forth) are subject to election outcomes. Moreover, even offices that the party commands with weak electoral performance (e.g., leader of the parliamentary party, or party secretary) are by far more influential, interesting, and thus utility generating if a party performs well in elections. Put differently: Selectors can be thought to (quasi-)change their ideal policy position to the vote maximizing policy position once they are nominated for office (i.e., they become office-motivated with regard to their favored policy position).

Knowing whether selectors are office motivated is also important to derive their utility-maximizing action. Of course, selectors vote for the candidate with the greater expected utility. Using the model's assumptions, however, this decision can be simplified: Since candidates make offers before selectors make their decisions, selectors know whether they assume office if a certain candidate wins. This implies that when facing a choice between two offers, one with and one without office

payoffs, a selector will always opt for the offer with office payoffs, irrespective of the policy positions contained in the offers (i.e., the selector becomes office-motivated also with regard to her vote choice). For instance, when Edward Heath announced that he would stand for Conservative party leadership again, most shadow-ministers articulated their support immediately even though there was a general feeling among MPs that change was needed (Ramsden 1998, 420-421). In the absence of office offers, just like ordinary voters, selectors make vote decisions based on policy proximity to their own ideal policy position (i.e., they are policy-motivated).

If a selector is nominated by both candidates, determining her vote choice is rather complicated (i.e., comparison of candidate vote shares at different positions). A shortcut exists that does not effect the model predictions (see Lemma 1 in Appendix B.1): Simply assume that all selectors who are nominated by both candidates vote for the same candidate (the "advantaged" candidate). Before turning to an example to clarify selector behavior, assume that candidate A is favored in the way just mentioned. Then, selectors' decision rule is Decision Rule 3.1.

To clarify this decision rule, consider Figure 3.2. It shows eleven selectors (labeled 1, 2 ..., 11) and their ideal positions on a single policy dimension. The incumbent party leader, I, set her policy position at 3's ideal position, whereas the challenger, C, chose 6's ideal position. Downward pointing arrows indicate incumbent nominations and upward pointing arrows challenger nominations. Moreover, all selectors prefer to be nominated by the incumbent. How do selectors vote? Consider selector 4 first. She is not nominated by either candidate and thus chooses according to policy proximity. Since I's policy position is closer to

Decision Rule 3.1: Selectors' Weakly Dominant Decision Rule

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if nominated by Candidate A **then**

       vote for Candidate A

else

       if nominated by Candidate B **then**

              vote for Candidate B

       else

              if candidates propose identical policy positions **then**

                     vote randomly

              else

                     vote for the candidate whose policy proposal is closer to own ideal position

              end if

       end if

end if

Notes: For proof of weak dominance see Proposition 1 in Appendix B.1.

her than C's policy offer, she votes for I. Next, consider selector 1. Though I's policy position is closer to her ideal position, she votes for C due to the office nomination. Finally, consider selector 7. She is nominated by both candidates but prefers the incumbent and votes thus for I even though C's policy position is closer to her ideal position. Continuing in this fashion, I wins six votes (those of selectors 2, 3, 4, 7, 8, and 9) and therefore remains party leader even though C's position is closer to the median selector position. It turns out that the share of selectors candidates can nominate for office is crucial to understand policy outcomes (see below).

3.2.4 Candidates for Party Leadership

Candidates for party leadership are the central players of the game. Similar to selectors, they are motivated by office and policy. Again, office clearly outweighs

Figure 3.2: Selectorate Vote Choices
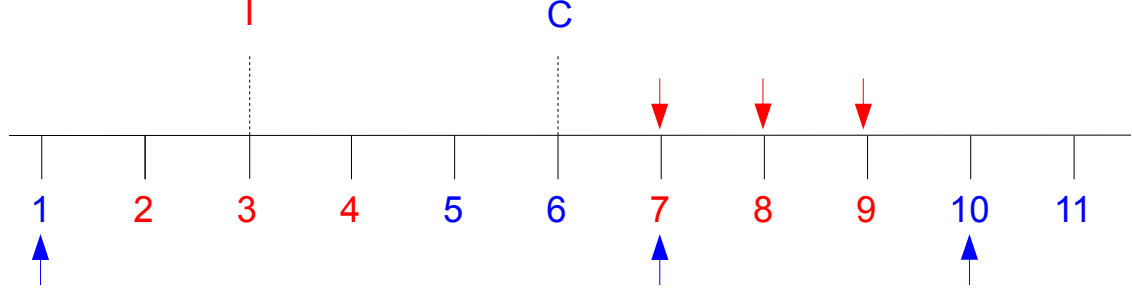
Notes: Numbers represent selectors and their ideal policy positions. They either vote for the incumbent or the challenger to be next party leader. Downward pointing arrows indicate incumbent nominations, whereas upward pointing arrows indicate challenger nominations. All selectors favor nominations by the incumbent over nomination by the challenger. Both candidates can nominate three out of eleven selectors. As a result, the incumbent wins with support of selectors 2, 3, 4, 7, 8, and 9.

policy: Since being party leader is a political office in its own right and the prerequisite to obtain government offices, party leaders compete for party leadership in the first place. Only to the extent that they can be sure to be elected party leader, they compete for votes at the national level since this maximizes their odds of becoming a cabinet member, implement policy, and so forth.[4] Formally, the corresponding utility function reads:

$$
U_Z = \begin{cases} O(p_k; E_{ideal}, p_{-k}) & \text{if elected party leader,} \\ 0 & \text{otherwise} \end{cases}
$$

where $O(\cdot) > 0$.

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[4]Essentially, this is a Downsian assumption (Downs 1957, 28) because party leaders care about policy only in the second place. For an alternative perspective see Wittman (1983).

Decision Rule 3.2: Challenger's Weakly Dominant Decision Rule

if more than one offer maximizes the probability of becoming party leader
then
> find among these offers the ones that maximize the expected election vote share and choose among them randomly

else
> choose the single offer that maximizes the probability of becoming party leader

end if

Notes: For proof of weak dominance see Proposition 2 in Appendix B.1.

Unlike other players that cast a single vote per round, candidates for party leadership take two actions: they choose a policy position and nominate selectors for office. To simplify the following explanations, label a combination of office nominations and a policy position a "candidate offer". Since the challenger knows how selectors respond to her offers, she can compute the probability that she is elected party leader for each offer.[5] Knowing this, we can turn to the challenger's utility maximizing strategy as expressed in Decision Rule 3.2. This rule simply states that the challenger maximizes the probability of winning in the first place and expected vote share in the second place.

Turning now to the incumbent, recall that the incumbent moves only if re-elected. Her utility maximizing response to the challenger offer and the voter distribution, provided she can move (i.e., she is re-elected), is expressed in Decision Rule 3.3.

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[5]For most offers, this probability will either equal 1 or 0, however, whenever selectors who vote randomly are pivotal, this probability lies strictly between 0 and 1.

Decision Rule 3.3: Incumbent's Weakly Dominant Decision Rule

remain nominations unchanged and move to vote-maximizing party position

Notes: For proof of weak dominance see Proposition 2 in Appendix B.1.

The next step in the analysis is to use these utility maximizing strategies to predict party behavior which can be used to derive hypotheses about party policy proximity.

3.3 Deriving Predictions from the Model of Party Competition

3.3.1 Quantity of Interest: Average Relative Party Proximity

Even though the model can be used to obtain various predictions (e.g., frequency of party leadership change, policy positions of office holders, and many more), the application here focuses on parties' policy positions when competing for votes. In particular, policy proximity to the median voter position and the median selector position is considered. To express this in a single number, I compute the very straightforward Average Relative Party Proximity Index (ARPP) for each party, k:

$$ARPP^k = \frac{1}{n} \sum_{i=1}^{i=n} \left(\left| x_i^k - s^k \right| - \left| x_i^k - V \right| \right)$$

where x_i^k is party k's policy position after its move in round i, for $i \in \{1, 2, \ldots, n\}$, s^k is the party's median selector position, and V is the median voter position. Assuming a single round (i.e., $n = 1$), if a party locates right in the middle between the median selector position and the median voter position (or these

positions coincide), the ARPP equals zero. An ARPP of 1.2 indicates that the party locates 1.2 policy units closer to the median voter than to the median selector. Negative numbers denote relative proximity to the median selector. Now assume multiple rounds ($n > 1$). If the party's policy position, x_i^k, is not in equilibrium (i.e., the party moves in the policy space), then the ARPP is the average of the round-specific proximities and provides useful information about the expected party position across rounds (Golder et al. 2014).

In the following, I discuss how the ARPP for different parties can be extracted from the model using analytical methods and simulation modeling.

3.3.2 Strategies for Obtaining Predictions

The most straightforward method to derive ARPPs from the model is to analytically demonstrate where parties position. However, the analysis of party competition in the Downsian tradition with multiple parties, on which the suggested model is based, suffers from the problem that equilibria do not exist (Roemer 2001, 103-116). Hence, analytical methods often fail to provide this information.

As an alternative, researchers turn to simulation modeling (Kollman et al. 1992; Adams 2001; Adams et al. 2005; Laver 2005; Fowler and Laver 2008; Laver and Sergenti 2012; Golder et al. 2012). The basic idea is to substitute analytic proofs by "playing the game" for many times with different input parameters while keeping track of players' actions, and analyzing the model output. In particular, if the model's outcomes are generated with random numbers as input, well-known regression techniques can be used to reveal the data generating process—that is

the way the model translates parameter input into model outcomes (Plümper and Martin 2008, 431-433).[6]

If equilibria exists and given utility maximizing strategies, players will eventually play Nash-equilibrium strategies only, which is reflected in the data the researcher extracts from her simulations, and enables her to detect the equilibrium. Moreover, if no equilibrium exists, simulations will still show what non-equilibrium outcomes evolve.

Nevertheless, abandoning analytical proofs comes at a cost. For instance, analytical solutions are more general since they are not constrained by being derived from observations limited to a certain parameter space. Moreover, simulations can never proof the existence of equilibria. Also, the decision when to stop collecting data from simulations is somewhat arbitrary (Sergenti 2012). Similarly, output data analysis is not always straightforward and hence conclusions drawn from simulations tend to be more mistrusted than analytical statements (Law 2007, Chapter 9).

Due to the many caveats brought forward against simulations, researchers prefer solving games analytically—if possible. If analytical solutions, however, are either intractable, generally infeasible, or end at stating that no clear prediction can be made, simulations clearly outperforms its counterpart. Therefore, I use analytical methods whenever possible and proceed with simulations only when necessary.

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[6]For alternative approaches for deriving hypotheses from simulation models of party competition see Laver and Sergenti (2012, 56-82) and Fowler and Smirnof (2007, 24-25), see also Golder et al. (2014).

3.3.3 Analytical Insights

The model's major determinant of party proximity is the share of selectors that expect office payoffs. To see this, consider the offices-to-selectors ratio within the party, $\frac{N}{S}$, where N is the number of offices a party leader commands and S is selectorate size. In particular, three cases arise.[7]

First, if the share of selectors motivated by office payoffs is zero, $\frac{N}{S} = 0$, the well known Downsian model with two office-seeking candidates and proximity vote choices applies. Thus, both candidates, and therefore the party, will position at the median selector position. Letting the distance between the median voter position and the median selector position be d, this implies $ARPP_{democratic} = -d$.

In real world applications, making office nominations completely irrelevant in intra-party elections requires the size of the selectorate to be large (e.g., all party members form the selectorate). Therefore, I label this type of party "democratic" because it must have democratic intra-party institutions with regards to party leadership selection.

Second, if more than half of the selectors make their vote choice based on office considerations, $\frac{N}{S} > \frac{1}{2}$, the advantaged candidate can dictate the party's policy position because all selectors nominated by her vote for her irrespective of the other candidate's offer. Being vote-seeking herself, the party position will always be the vote-maximizing policy position.[8] Since national voters make their choices based on relative party proximity, the vote-maximizing position may change if

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[7]Proposition 3 in Appendix B.1 expresses the following statements formally for those cases for which analytical solution are available.

[8]Recall that according to Lemma 1 in Appendix B.1 an advantaged candidates who maximizes the chance of becoming party leader and votes returns the same policy position as two equal, vote-seeking candidates.

some other party changes its position. Except for very few cases, these vote-maximizing movements are thus intractable and are further investigated using simulations (i.e., analytically $ARPP_{undemocratic} =?$).

In order to allow for a rather small number of offices that parties typically command to be enough to be distributed to a majority of selectors, this type of party must have undemocratic leadership selection institutions (e.g., institutions that enfranchise only party elites and/or MPs). Therefore, I refer to it as an "undemocratic" party.

Third, if some but less than a majority of selectors are motivated by office payoffs, i.e., $0 < \frac{N}{S} \leq \frac{1}{2}$, winning coalitions contain both policy-motivated and office-motivated selectors. One the one hand, this implies that party policy is constrained by intra-party politics because policy-motivated selectors provide incentives not to deviate from their positions too much. On the other hand, candidates do not necessarily target the same selectors when formulating their policy position. This happens in particular when the challenger strategically nominates policy-motivated selectors that the incumbent relies on (to which the incumbent cannot respond). This can make the incumbent be far away from policy-motivated selectors which, in turn, allows the challenger to deviate almost as far. As a result, parties' policy positions are not clearly specifiable analytically (i.e., $ARPP_{hybrid} =?$). Simulations will be used below, to obtain more precise predictions.

Since this type of party selectorate is a mix between both of the above types, I label it "hybrid". Empirically, these are parties that choose their party leader by delegates that vote at party conferences. Since many MPs will either be among the delegates or are entitled to vote by party constitution, this type of party is distinct from the democratic type. However, as the selection process is not dominated by

Table 3.1: Analytical Predictions of the Intra-Party Game

Party Type	Size of $\frac{N}{S}$	Policy Position	ARPP
Democratic	$\frac{N}{S} = 0$	Median Selector Position	$-d$
Hybrid	$0 > \frac{N}{S} \geq \frac{1}{2}$	Close to Median Selector Position	?
Undemocratic	$\frac{N}{S} > \frac{1}{2}$	Vote-Maximizing Position	?

Notes: Proposition 3 in Appendix B.1 expresses and proves these statements formally. ARPP is Average Relative Party Proximity, N denotes the number of offices candidates for party leadership can allocate, S denotes the number of intra-party selectors, and d indicates the distance between median voter position and median selector position. Missing ARPPs are obtained using simulation modeling below.

office-holders, this kind of party does not correspond to the (fully) undemocratic party either.

Table 3.1 summarizes these analytical intra-party results. The next subsection discusses how these can be used to obtain predictions for party proximity evolving from competition between parties.

3.3.4 Numerical Insights

Model Set-Up

As specified by the game, the simulations take place in a one-dimensional policy environment,[9] with 101 distinct policy positions between 0 and 10. Also, 101 voters are Normally distributed around this policy dimension's center. In total, 10,000 of these voter distributions are created, each time randomly drawing voters' standard deviation about the center, E_{sd}, and the number of parties competing for votes, K. Below, I refer to these as model runs.

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[9]Details of simulation set-up and summary statistics of model input are provided in Appendix B.2.

Similarly, model parameters are randomly and independently chosen within each party. In particular, the eleven Normally distributed selectors' median position, S_{mean}^k, their standard deviation, S_{sd}^k, as well as the number of offices the party commands, N^k, are drawn.

For the first round of the game, one of the candidates is chosen as an incumbent. Parties are located at their corresponding median selector positions and some randomly chosen selectors are holding office. Also, one candidate is selected to be preferred by all selectors who are nominated by both candidates.

Each round of the game starts with one party being randomly chosen to make the first move. Subsequent moves are randomly chosen among the parties that have not moved. When all parties have moved once, the round ends and the next round starts with any party as potential first mover. Within each party, players move according to their decision rules.[10] Before turning to the analysis of the model output, I discuss next how I verify that the obtained data is a valid and unbiased representation of the model.

Obtaining Unbiased Simulation Data

The suggested simulations can be understood as a Markov chain with ARPPs as state variable.[11] In particular, the model is a discrete-time Markov chain that is defined by having a finite state space (due to the 101 policy positions the parties can take) and a discrete time framework (i.e., rounds can be counted). Moreover, the Markov chain is stochastic because the order in which parties move is random.

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[10]If a party's policy position can be derived analytically (i.e., for democratic and undemocratic parties), intra-party politics is not simulated. See Appendix B.2.

[11]For an introduction to Markov chain representations of simulation models of party competition see chapter 4 in Laver and Sergenti (2012).

As a result, the Markov chain is ergodic which implies that for each combination of input parameters the chain converges to a single steady state distribution of ARPPs (Laver and Sergenti 2012, 64). In practice, this means that if we can verify that the single steady state is reached (which I do shortly), neither a discussion of parties' starting positions nor of iterating model runs with different random number generators is needed.

Obtaining simulation data from Markov chains that allow for correct conclusions requires two aspects: First, the data should not be "contaminated" by transient state data. I find that a burn-in period of 303 rounds (i.e., 303 movements per party) is sufficient to meet that condition. Second, the steady state should be mapped-out in the data. This happens after 3000 rounds. To verify these numbers, I simulated 100 model runs with 6010 rounds and computed their ARPPs twice: The first time using only 303 burn-in rounds and 3000 rounds to compute ARPPs. The second time I repeated the exercise, expanding the burn-in period to 1001 rounds and using 5000 rounds for ARPP computation. Both versions yield ARPPs substantially indistinguishable from one another. Also, their correlation is almost perfect ($r = 0.9999$). These findings strongly suggest that the steady state is correctly mapped-out after 3101 rounds of which 101 are burn-in rounds. Thus, I use this procedure to compute ARPPs and to derive hypotheses from them.

In total, I simulate 10,000 model runs letting the dispersion of voters at the national level, E_{sd}, the number of parties, K, the position of each party's median selector position, i_s^k, as well as each party's selector dispersion, i_{sd}^k, and the number of offices in each party, N^k, vary. Table B4 in Appendix B.2 gives an overview of model parameters.

Deriving Hypotheses from Simulation Data

As mentioned before, regression techniques can help to derive hypotheses about
how certain model parameters are linked to certain ARPPs. Since ARPPs can be
virtually any number between -10 and 10 an OLS regression is the appropriate
statistical tool. However, the correct model specification remains unclear.

In order to benchmark different model specifications, I tested them in predicting
3903 out-of-sample ARPPs generated in an additional 1000 model runs.[12] The
model specification that performs best at predicting out-of-sample observations is
obtained as follows: First, the sample is split between hybrid and undemocratic
parties (democratic parties are not analyzed using simulations). This is justified
by the analytically derived expectation that these parties take different policy
positions which are also dependent on different determinants (see Table 3.1). For-
mally speaking, their data generating process is expected to be fundamentally
different. Second, all model parameters are interacted with each other and them-
selves such that there are at most three-way-interactions.[13] Third, for both the
hybrid and the undemocratic subsample, these parameters and their interactions
are used as independent variables in an OLS regression. Fourth, from these regres-
sions, the statistically insignificant ($p > .05$) independent variables are dropped.
Given the large number of observations (N_{hybrid}=18,257 and $N_{undemocratic}$=20,379
respectively), this is an appropriate strategy to distinguish between important

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[12]Those cases whose ARPPs could be analytically derived were excluded from both the
regression as well as the prediction exercise.

[13]For instance, let a, b, and c be three model parameters. Then the regressions will include
$a, a^2, a^3, (a \times b), (a^2 \times b), (a \times b \times c)$, and so forth but not $(a^2 \times b^2)$ because this would interact
four variables ($a \times a \times b \times b$).

and unimportant effects. Fifth, a new OLS regression is estimated using only the remaining variables.

To ease comparison with the empirical application (see below), I do not present these two regressions' results individually. Instead, I pool the data for undemocratic and hybrid parties, interact all variables with corresponding party type dummies, and present results of this regression in Table 3.2. Mathematically, this is identical to computing both regressions individually and hence both coefficients and standard errors are identical to the party-type-specific results. Only the number of cases (N_{hybrid}=18,257 and $N_{undemocratic}$=20,379 respectively) and the goodness-of-fit measures (R^2_{hybrid}=.98 and $R^2_{undemocratic}$=.92) differ as they now report overall results instead of party-type-specific results.

Three checks highlight that these results are in fact capable of describing the data generating process well: First, the high adjusted R^2 values ($R^2_{hybrid} = .98$, $R^2_{undemocratic} = .92$, $R^2_{pooled} = .95$) indicate that the regressions indeed capture almost all of the variation in the data. Second, it makes sense that the adjusted R^2 value for hybrid parties is greater than the one for undemocratic parties. Recall that undemocratic parties can move freely in the policy space, whereas, hybrid parties are constrained by intra-party politics. Therefore, undemocratic parties' behavior should, on average, be harder to predict. This is expressed in the lower adjusted R^2 value for hybrid parties. Third, while R^2 measures the regression's power in within-sample predictions, I also conducted out-of-sample predictions. Across undemocratic and hybrid parties, 95% of out-of-sample predictions deviate less than .68 policy units from their actual ARPPs. (The ratio of absolute bias to the true value for 95% of predictions is less than .02%). In 90% of cases, predictions are less than .53 units (.007%) away, and 50% of predictions are closer

Table 3.2: OLS Estimates of Parameter Impact on Average Relative Party Proximity in Simulated Data

	OLS Estimates (Standard Errors)	
Hybrid Parties		
Distance Medians	-0.89	(0.02)
Distance Medians^2	-0.07	(0.01)
Distance Medians^3	0.01	(0.00)
Selectorate Dispersion	0.15	(0.03)
Selectorate Dispersion^2	-0.06	(0.02)
Selectorate Dispersion^3	0.01	(0.01)
Distance Medians×Selectorate Dispersion	0.12	(0.01)
Distance Medians×Selectorate Dispersion^2	0.02	(0.00)
Distance Medians^2×Selectorate Dispersion	-0.02	(0.00)
Undemocratic Parties		
Distance Medians	0.89	(0.02)
Distance Medians^2	0.04	(0.01)
Distance Medians^3	-0.02	(0.00)
Voter Dispersion^2	0.13	(0.03)
Voter Dispersion^3	-0.03	(0.01)
Two-Party System	0.15	(0.05)
Distance Medians×Voter Dispersion×Number of Parties	-0.04	(0.00)
Distance Medians×Voter Dispersion×Two-Party System	-0.19	(0.03)
Distance Medians×Two-Party System	-0.44	(0.05)
Distance Medians×Number of Parties^2	0.00	(0.00)
Distance Medians^2×Voter Dispersion	0.03	(0.00)
Distance Medians^2×Two-Party System	0.08	(0.01)
Distance Medians^2×Number of Parties	0.02	(0.00)
Voter Dispersion×Two-Party System	-0.29	(0.09)
Voter Dispersion×Number of Parties	-0.09	(0.01)
Voter Dispersion×Number of Parties^2	0.01	(0.00)
Voter Dispersion^2×Two-Party System	0.13	(0.04)
Number of Observations	38636	
Number of Observations (Hybird Parties)	18257	
Number of Observations (Undemocratic Parties)	20379	
Adjusted R^2	0.95	
Adjusted R^2 (Hybird Parties)	0.98	
Adjusted R^2 (Undemocratic Parties)	0.92	

Notes: The dependent variable is Average Relative Party Proximity (ARPP). Data is generated by 1000 rounds of 9374 ABM model runs of party competition with intra-party competition. See text for procedure to find presented model specification. All variables within categories "Hybrid Parties" or "Undemocratic Parties" are multiplied by a corresponding party type dummy variable which, for ease of presentation, is left implicit.

than .12 units (.00005%) to the true value. Overall, these results indicate that the regression captures the data generating process that is implied by the suggested model very well. Hence, we can use it to make theoretically derived, counterfactual predictions about ARPPs.

Focusing on the independent variables in Table 3.2, note that for hybrid parties ARPPs depend only on two variables: the distance between the median party selector position and the median voter position, and the dispersion of the party selectorate. Even though the distance between medians matters for undemocratic parties as well, the intra-party selector dispersion does not matter at all. Instead, more "classical" variables of party competition such as the number of parties in the party system and the dispersion of voters around the median voter are relevant.

Despite the limited number of relevant variables, their functional form is rather complex. Therefore, Figure 3.3 depicts expectations for different scenarios. In each of the panels, solid lines indicate expected ARPPs and dashed lines show the corresponding 95% confidence intervals (y-axis). Distance between median voter position and median selector position is shown on the x-axis.[14] For democratic parties analytical predictions are available and they are hence plotted without confidence intervals. Across the figure's columns, the type of party (i.e., their intra-party democracy level) varies, and across rows Selector Dispersion varies. Recall, that positive values of ARPPs indicate that a party is closer to the median voter position than to the median selector position while negative values show relative median selector proximity.

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[14]All other values are held constant: Voter Dispersion = 2.5 and Number of Parties = 4. These values are close to the means of the empirical data used below.

Figure 3.3: Expected Average Relative Party Proximity to Median Voter and Median Party Selector by Party Type and Selectorate Dispersion
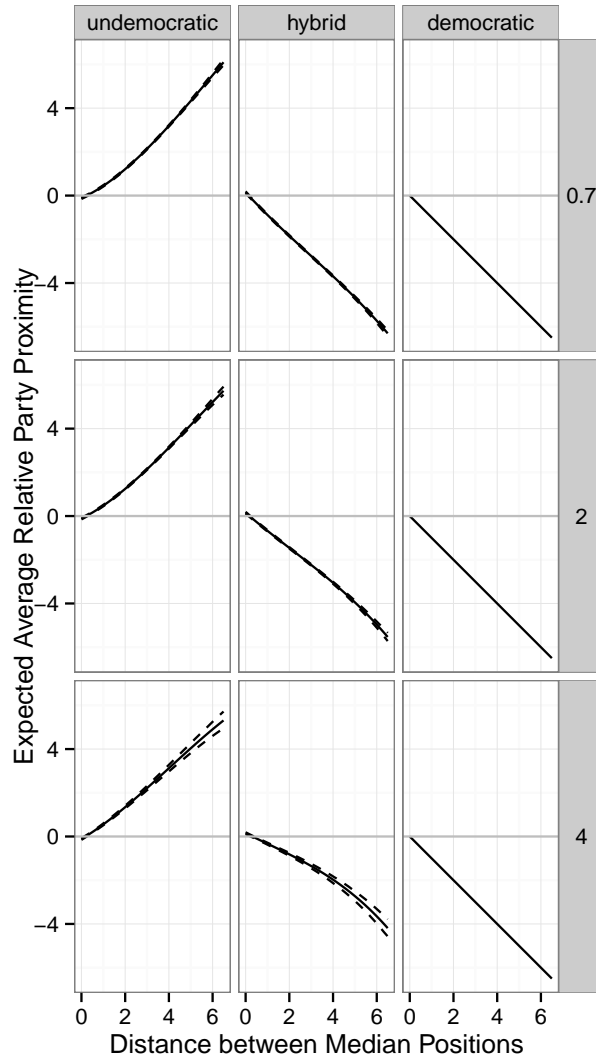
Notes: Rows show results for different values of Selectorate Dispersion. Columns depict results for different types of parties. The share of office-motivated selectors in undemocratic parties (left column) is greater than 50%, in hybrid parties (center column) it is betwenn 1% and 49%, and in democratic parties (right column) it equals 0%.

Expectations are based on Table 3.2. All variables are at their means (see Table B4 in Appendix B.2). In all panels, the y-axis shows the expectation of how much closer a party positions to the median voter position than to the median selector position. Positive values indicate that the party positions closer to the median voter position than to the median party selector position and *vice versa.* The x-axis indicates the distance between the median voter position and median party selector position. All positions and distances are measured on an eleven-point scale between 0 and 10.

As can be seen in Figure 3.3, a party's response to a large difference between its median selector position and the median voter position clearly depends on the party's type (i.e, the columns in Figure 3.3). Simply by applying the Median Voter Theorem to intra-party competition, we find that democratic parties (right column) locate exactly at the median selector position. For undemocratic parties (left column), by contrast, the larger the distance between median voter position and median selector position, the more selectorate representation is neglected. Put differently: Even though party leaders in both types of parties would like to position close to the median voter position, those in democratic parties are chained to the median selector position and therefore cannot position close to the median voter. Expressed as hypotheses this reads:

> *Democratic Party Hypothesis:* Democratic parties position closer to the median selector position than to the median voter position, *ceteris paribus.*

> *Undemocratic Party Hypothesis:* Undemocratic parties position closer to the median voter position than to the median selector position, *ceteris paribus.*

As can be seen in the center column of Figure 3.3, party leaders in hybrid parties are also chained to the median selector position. However, their chains allow for some leeway to move the party toward the median voter position. To illustrate this, consider the two bottom panels of the center column in Figure 3.3. We see that in the bottom panel the line's slope is less steep. Put differently, greater selector dispersion helps the party leadership to resist the median selector position's gravity.

In fact, the amount of leeway that hybrid party leaders have to deviate from the median selector position increases with the dispersion of selectors around the median selector position (see rows in Figure 3.3). It is easy to understand why selector dispersion in hybrid parties directly translates into policy leeway: Recall that unlike in undemocratic or democratic parties, winning coalitions in hybrid parties are formed of both policy-motivated and office-motivated selectors. Hence similar to democratic parties, policy competition between candidates takes place. However, it is not determined to be at the median selector position. Instead, parties compete at the median position of those selectors that are both pivotal and policy-motivated. For example, let those selectors that position between the median voter position and the median selector be pivotal. Unless there are more selectors at the median selector position than offices that candidates can allocate, candidates will "buy-off" the median selector with office pay-offs. Then, the median voter is no longer policy-motivated and the party positions at least a little closer to the median voter position. This logic leads to the following hypothesis:

> *Hybrid Party Hypothesis:* The more dispersed a hybrid party's selectors, the closer the party positions to the median voter position relative to the median selector position *ceteris paribus.*

I test these hypotheses in the following empirically.

Table 3.3: OLS Estimates of Impacts on Relative Party Proximity in Democracies 1964-2010

	OLS Estimates Panel Corrected SEs
Democratic Parties	
Distance Medians	-0.20 (0.18)
Hybrid Parties	
Distance Medians	-5.07 (1.53)***
Distance Medians^2	0.13 (0.75)
Distance Medians^3	-0.08 (0.17)
Selector Dispersion	-0.10 (0.74)
Selector Dispersion^2	0.03 (0.74)
Selector Dispersion^3	0.02 (0.17)
Distance Medians×Selector Dispersion	5.20 (1.36)***
Distance Medians×Selector Dispersion^2	-1.39 (0.34)***
Distance Medians^2×Selector Dispersion	0.18 (0.29)
Undemocratic Parties	
Distance Medians	2.43 (4.52)
Distance Medians^2	-3.37 (4.33)
Distance Medians^3	0.58 (0.43)
Voter Dispersion^2	-1.01 (1.21)
Voter Dispersion^3	0.35 (0.35)
Two-Party System	-6.43 (8.18)
Distance Medians×Voter Dispersion×ENPP	0.14 (0.63)
Distance Medians×Voter Dispersion×Two-Party System	-1.15 (1.21)
Distance Medians×Two-Party System	1.44 (2.99)
Distance Medians×ENPP^2	-0.13 (0.14)
Distance Medians^2×Voter Dispersion	0.13 (0.90)
Distance Medians^2×Two-Party System	0.11 (1.04)
Distance Medians^2×ENPP	0.36 (0.52)
Voter Dispersion×Two-Party System	7.05 (7.87)
Voter Dispersion×ENPP	0.07 (0.47)
Voter Dispersion×ENPP^2	0.01 (0.06)
Voter Dispersion^2×Two-Party System	-1.73 (1.78)
Number of Observations	265
Adjusted R^2	0.30

Notes: ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. The dependent variable is Relative Party Proximity. Model specification is taken from Table 3.2 and inclusive intra-party competition is added as reference category with its single explanatory variable. All variables within categories "Hybrid Parties" and "Undemocratic Parties" are multiplied by a party type dummy variable which, for ease of presentation, is left implicit. ENPP is the Effective Number of Parliamentary Parties.

3.4 Empirical Test

I summarize the most important results of an empirical assessment of the hypotheses. Even though I briefly describe here what data is used and how the presented model is developed, more details can be found in Appendix B.3. Overall, the results are in line with the theoretical expectations.

In the following, I describe how I translate the theoretical model into an empirical model. In particular, estimator choice, model specification, and measurement matter.

The empirical model as well as the model specification can be derived directly from the theoretical model. Since there is no reason why empirical data should not follow the same data generating process, I adopt the same regression equation (i.e., OLS with the model specification given in Table 3.2) in the empirical application. The only change is that I add [*Distance Medians*] as a single explanatory variable for democratic parties. This follows directly from the theoretical argument that they always position at the median selector position.

With regard to measurement, the theoretical variables are not always easy to observe empirically. Here, I abbreviate the description of operationalizations. An exhaustive discussion of measurements can be found in Appendix B.3.

The central predictor of relative party proximity is *party type.* Following the discussion about party types above, I consider parties that let MPs or party elites only vote on the party leader as undemocratic parties. Democratic parties are categorized by one-member-one-vote leadership elections. Finally, hybrid parties choose their leaders in party conferences in which delegates from local party branches vote on the party leadership. Since MPs are among the most prominent

party activists in their local branch, they are delegated to party conferences rather frequently. However, rank-and-file members are delegated to party conferences as well. This data is provided by Kenig (2009), Katz and Mair (1992), and Cross and Blais (2012).

Information on the other variables is taken from various sources. *Party Policy Positions* are retrieved from the "rile"-index of the Comparative Manifesto Project (CMP) dataset (Budge et al. 2001; Klingemann et al. 2006; Volkens et al. 2012). *Median Voter Position* and *Voter Dispersion* are obtained from respondents' self-placements in Eurobarometer surveys (Schmitt et al. 2008) or national election studies. *Median Selector Position* and *Selector Dispersion* use the same sources but limit the sample to those respondents that state a vote intention for a certain party. Finally, the *Number of Parties* is measured using the Effective Number of Parliamentary Parties (ENPP, Gallagher 2013).

As a result, I obtain 282 cases of 58 party panels from 10 democratic countries between 1964 and 2010. After testing for outliers,[15] panel-specific heteroscedasticity, and autocorrelation, I decide to use an OLS model with Panel Corrected Standard Errors (PCSE) to test the hypotheses. The corresponding results can be found in Table 3.3.

To ease interpretation, consider Figure 3.4. Again, columns show results for different types of parties, whereas columns indicate different levels of selector dispersion.[16] The gray areas in the plots are the theoretical predictions as in Figure 3.3. Black lines show empirical expected values and the corresponding 90%

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[15]Eventually, 17 cases are excluded because they are outliers.

[16]In particular, these are the mean level of Selectorate Dispersion in the empirical data (1.87 policy units), more or less one standard deviation (0.46 policy units).

Figure 3.4: Comparison of Theoretical and Empirical Expected (Average) Relative Party Proximity by Party Type and Selectorate Dispersion
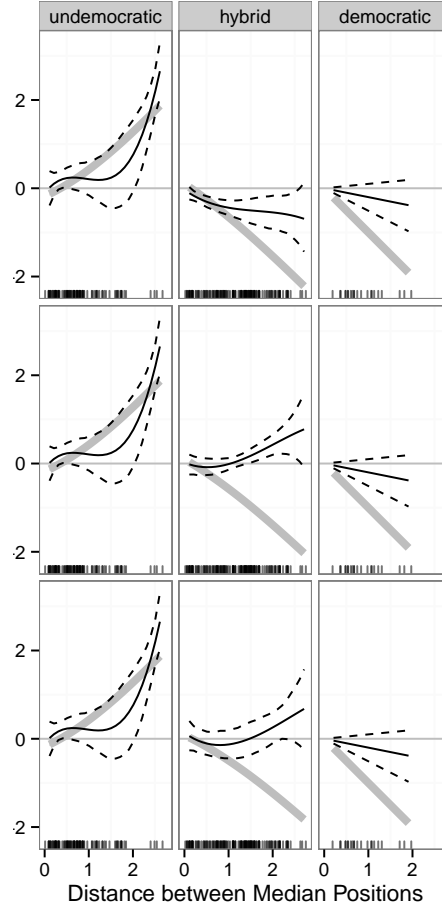
Notes: This figure combines theoretical and empirical expectations. Theoretical expectations are shown by gray lines similar to Figure 3.3. Black lines show empirical predictions based on Table 3.3. Solid black lines indicate empirical expectations of relative party proximity. Dashed lines are the corresponding 90% confidence intervals. The small lines at the bottom of each panel indicate the empirical distribution of cases. Rows indicate different levels of Selectorate Dispersion. Columns depict results for different types of parties.

confidence intervals. The small black lines at the bottom of the panels express the distribution of cases. Darker colors indicate a higher density of cases.

A first glance at Figure 3.4 shows that empirical expectations approximate the strict theoretical predictions. This means that intra-party democracy does indeed

affect policy proximity to the median voter position and the median selector position. As it is unlikely that the data follow exactly the theoretical data generating process, I also test the hypotheses stated above. They predict that the black lines should be positive for undemocratic parties (Undemocratic Party Hypothesis) and negative for democratic parties (Democratic Party Hypothesis). For hybrid parties, the black lines' slope should increase with Selector Dispersion (Hybrid Party Hypothesis).

With regard to the Undemocratic Party Hypothesis, the expected values of the empirical model predict undemocratic parties to consistently position closer to the median voter position than to the median selector position. For those regions of the parameter space with relatively few observations, however, this effect is not always statistically significant. Nevertheless, the results (weakly) support the Undemocratic Party Hypothesis.

Democratic parties are always expected to position closer to the median supporter position than to the median voter position. This effect is not statistically significant which, yet, is not surprising given the small number of cases in this category ($N_{hybrid} = 22$). These results, in turn, weakly support the Democratic Party Hypothesis.

Finally, the center column of Figure 3.4 shows that as Selector Dispersion increases (going from the top row to the bottom row), parties position relatively closer to the median voter position than to the median selector position. This effect is statistically significant. This finding corroborates the claim that intra-party constraints on party leaders in parties which enfranchise both rank-and-file members and party elites depend on the party's ideological cohesion (Hybrid Party Hypothesis).

Since all three hypotheses find at least weak empirical support in the data, we can be confident that the model captures a significant share of real world processes.

3.5 Conclusion and Extensions

This study finds that intra-party democracy matters for explaining and predicting party policy positions. The composition of intra-party selectorates (i.e., the level of intra-party democracy) affects party proximity to both the median voter position and the median party member position. This supports the predictions made by a combined model of intra-party politics and party competition.

In particular, the Democratic Party Hypothesis states that internally democratic parties position closer to their median party member position than to the median voter position. The opposite holds true for internally undemocratic parties (Undemocratic Party Hypothesis). Finally, for parties that are neither fully internally democratic nor internally entirely undemocratic, it depends on the dispersion of party members' ideals where the party positions (Hybrid Party Hypothesis). Data from 10 democracies in the period 1964-2010 support these hypotheses.

These findings trigger several interesting future research questions: In particular, does the suggested model of intra-party politics also apply to other aspects of party behavior? For example, do internally democratic parties act differently when forming, negotiating, or maintaining a coalition government (Giannetti and Benoit 2009; Bäck 2008; Maor 1995; Pedersen 2010)? Or more general: To what extent does intra-party democracy affect whether parties seek policy, office, or votes (Strøm and Müller 1999; Strøm 1990; Pedersen 2012)?

This study also raises questions with regard to political representation. Since 1945 there is a general trend that parties become more internally democratic (Kenig 2008). Given that these parties position closer to their party members, how does this affect the patterns of political representation in democracies (Müller 2000; Powell 2004; Miller and Stokes 1963)? Moreover, since internally democratic parties are restricted in their policy range, do parties become less competitive when turning internally democratic (Ezrow 2008a; Adam and Somer-Topcu 2009)?

These and many other questions are raised by the findings of this study, namely that the level of intra-party democracy as well as the dispersion of intra-party preferences matter for party behavior.

4 Intra-Party Democracy and Coalition Survival

Abstract

Intra-party democracy affects coalition government stability. Coalition parties face policy shocks while governing which require them to re-negotiate their common policy goals. Moreover, internally democratic parties are less willing to compromise on their core policy ideals because party leaders are constrained by their members in terms of how far they can depart from these ideals. As a result, coalition governments are less stable if they include internally democratic parties. I report support for this hypothesis using data from 13 countries in the period 1946-2002. This result has important implications for coalition politics, political representation, and the study of intra-party politics.

Keywords: Intra-Party Politics, Government Survival, Policy Horizons

4.1 Introduction

Qualitative discussions of coalition politics—both in academic journals as well as in daily newspapers—pay a lot of attention to intra-party politics. Party elites' dependency on other party members (e.g., MPs, party factions or grass-root party members) is a matter of course for government survival.

By contrast, intra-party politics is hardly discussed in the empirical political science literature on government survival.[1] And even if intra-party politics is considered, most treatments focus on the effect of party factions. This is in stark contrast to recent developments in the intra-party politics literature that emphasizes the effect of intra-party democracy rather than party factions (Schumacher et al. 2013; Lehrer 2012; Strøm and Müller 1999, 18; Meyer 2013; Bäck 2008).

This paper addresses this gap. I argue that intra-party democracy diminishes a party's "policy horizon" (Warwick 2006, 24). In a spatial model of politics, policy horizons indicate the area of policies that a party is willing to accept when member of a coalition government. The larger this area, the more willing the party is to compromise on policy.

Intra-party democracy reduces the leeway party leaders have when making decisions on behalf of the party (see Chapter 3; Schumacher et al. 2013). In the realm of coalition politics, this translates into internally more democratic parties having smaller policy horizons. As a result, coalitions including internally democratic parties have weakly smaller intersections of policy horizons. Hence, their range of maneuver to maintain the coalition in case of policy shocks is limited. They are, thus, less stable than coalitions without internally democratic parties.

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[1]See Laver (2003) for an overview of most broadly discussed topics.

I test this claim using data from 13 democracies in the period 1946-2002. The result supports the hypothesis. Moreover, it is robust to different model specifications.

This chapter makes several contributions. It is the first cross-country study of the effect of intra-party democracy on coalitions, which has multiple implications. First, for the literature on links between intra-party politics and coalitions, it adds to a series of empirical studies the idea that besides party factions intra-party democracy matters as well (Druckman 1996; Saalfeld 2009; Chambers 2008).

Second, it provides indication that empirical results from country-specific studies of the link between intra-party democracy and coalitions hold across a much larger list of countries as well (Bäck 2008; Pedersen 2010).

Third, the comparative literature on the effects of intra-party democracy focused up until now on explaining parties' policy positions or policy shifts (Schumacher et al. 2013; Lehrer 2012; Meyer 2013). This paper extends the empirical support for these theories by showing that their predictions are of importance for coalition politics as well (Strøm and Müller 1999, 18; Panebianco 1988). This increases our belief in these theories substantially.

4.2 Theory

Government members are dually influenced by the responsibilities of governing (i.e., managing portfolios) and by their political parties (Müller 2000). As government activity is constantly monitored by both the media as well as the party, cabinet members cannot pursue their private desires only, yet, also have to ensure that government policy is in line with those party members that can oust them. I

argue that in internally democratic parties, cabinet members will be held account-able with respect to policy in the first place, whereas in internally undemocratic parties maintaining the coalition takes priority.

When parties nominate their cabinet members, they consider all but party elites only. However, once cabinet members have assumed office, parties hold very little direct means to threaten a cabinet member's political survival because cabinet members are formally accountable to the Prime Minister (PM) or the parliament only (Bergman et al. 2003, 186-187). Nevertheless, parties punish their agents indirectly using internal party elections, and party leadership elections in particular. It is an unwritten rule that politicians who lose intra-party support resign from government office. The retirements of Slovenian PM Bratusek and Australian PM Gillard following defeats in intra-party leadership elections are examples for this (Reuters 2014; ABC News 2013).

Knowing that they need intra-party support to be in government, cabinet mem-bers are keen to deliver spoils to the intra-party selectorate, i.e., those party mem-bers that can hold the party leadership accountable, force them to resign from government and potentially from politics altogether (Bueno de Mesquita et al. 2000, 2003).

4.2.1 Intra-Party Democracy and Policy Horizons

As a minimal requirement, government policy must not run against party ideology. Warwick (2006) argues that parties have "policy horizons" which mark the border between policies that are acceptable compromises the party would support when member of a coalition government on the one hand, and those policies that the

party would never implement on the other hand. For example, many European Green parties would rather accept unfavorable governments to be formed than participate in governments that foster the use of nuclear energy. Policy in favor of nuclear energy is, thus, clearly outside of these parties' policy horizons.

The greater a party's policy horizon, the more compromises it is willing to accept. I argue that the size of policy horizons is determined by who the intra-party selectors are (see Chapter 3; Warwick 2006, 24): Rank-and-file party membership dominated selectorates (e.g., party conferences, one-member-one-vote selectorates) foster government policy that is rather closely in line with the party's ideology. From an ordinary party member's point of view, the only reason why her party should compromise on policy when entering a coalition government is that this enables the party to pull government policy closer to the party's ideal position than an alternative government would. If, however, the coalition's policy is not within a party member's policy horizon, this party member has no reason to support the coalition.

Selectorates that are mainly composed of office-holders who receive non-policy benefits from government participation (e.g., members of parliament or party elites), by contrast, are willing to trade policy purity for government continuation. Even though this does not imply that they do not have policy horizons at all, their policy horizons are at least not smaller (and probably greater) than those of policy-seeking party members. Hence, the level of intra-party democracy affects a party's policy horizon size.

4.2.2 Policy Horizons and Coalition Government Survival

How are policy horizons related to coalition duration? The policy horizon argument (Warwick 2006) states that a government is formed, or for our purpose retained, only if its policy position is within all participating parties' policy horizons. Henceforth, I refer to the area that is covered by all coalition parties' policy horizons as the "agreement area". By definition, government policy is within the agreement area as long as a government survives which includes the time of coalition formation.

However, government policy may change in the course of a coalition due to policy shocks (Browne et al. 1984, 1986, see also Laver and Shepsle 1998). These shocks are unexpected and politicized. Unexpected in the sense that parties did not consider them when forming the government and negotiating the coalition agreement. And politicized because government (non-)actions are closely monitored and affect future vote choices.

As a consequence, policy shocks shift government policy which then may or may not be in the agreement area.[2] If it is, the government survives the policy shock, otherwise the government breaks because at least one party leaves it.[3] This may be because party officials break the coalition out of anticipatory obedience to avoid intra-party punishment. Alternatively, intra-party rivals can challenge the current party leadership based on the coalition's policy position. As challengers will win the intra-party elections, the old party leaders will resign from government, and

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[2]Actually, policy shocks are more likely to shift the government's perceived policy position. To keep the argument simple, I ignore this complication.

[3]This is not necessarily the party that dislikes the coalition policy. This party could also shift the government's policy position unilaterally, thereby breaking the rules of coalition governments, which in turn induces some other party to leave the government. Either way, the government terminates.

the new leadership will leave the government or trigger its failure by demanding policy change.

Since policy shocks are random (Browne et al. 1984, 1986), they apply to all kinds of governments alike. Hence, the probability that a government survives the policy shock increases with the size of the agreement area (Warwick 2006, 144-147).

The exact size of the agreement area depends on the number and the policy positions of coalition parties, whether the coalition parties hold a majority in parliament, as well as on the sizes of their policy horizons. Since the predictions for changes in most of these variables are straightforward and unsurprising (i.e., more parties, greater ideological divisions, and a lack of a parliamentary majority can each decrease agreement area size *ceteris paribus*), I move the derivation of these predictions to Appendix C.1. In the following, I focus on the effect of intra-party democracy.

4.2.3 Intra-Party Democracy, Agreement Area Size and Government Survival

To understand the link between intra-party democracy and agreement area size, consider the center panel in Figure 4.1. It shows a coalition of two parties, A and B. Their ideal policy positions are indicated by filled circles and their policy horizons by large circles. The gray area shows the agreement area (i.e., the intersection of their policy horizons) which happens to be the area of B's entire policy horizon.

Figure 4.1: Changes in Agreement Area Size as Policy Horizon Size Changes
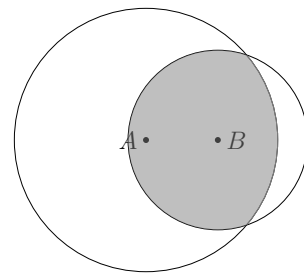
B's policy horizon increases
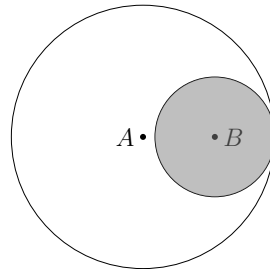
Baseline Case
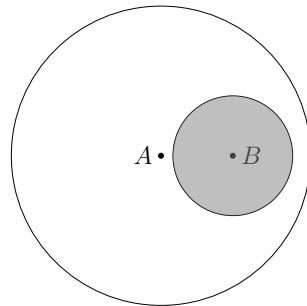
A's policy horizon increases

Notes: Filled circles indicate parties' ideal points, large circles their policy horizons, and shaded areas are the intersections of all policy horizons (i.e., the "agreement area").

The other panels in Figure 4.1 depict the same scenario as the center panel, however, in each one party's policy horizon is increased and the resulting agreement area is shown. As visualized by the top panel, all else equal, an increase in B's policy horizon size leads to a greater agreement area. However, the bot-

tom panel shows that if party *A* increases its policy horizon, the agreement area size remains unchanged. This example points to the fact that increases in policy horizon size within a coalition are not strictly related to agreement area size: The agreement area may increase as policy horizon size increases but may also remain constant.[4]

As mentioned before, intra-party democracy is linked to smaller policy horizons for an individual party. Aggregating this effect to the coalition-level gives rise to the Internally Democratic Coalition Members Hypothesis:

> *Internally Democratic Coalition Members Hypothesis*: As the number of internally democratic coalition government members increases *ceteris paribus*, the government's duration decreases or remains the same.[5]

In the following, I test this hypothesis empirically.

4.3 Estimation Technique, Data and Model Specification

The idea that a government is constantly subject to the risk of breaking down is econometrically best captured by event history techniques (King et al. 1990). The dependent variable in the corresponding analyses is the share of days a coalition

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[4]It is easily seen, however, that agreement area size cannot decrease in policy horizon size *ceteris paribus.*

[5]As a consequence of Chapter 3, one could argue that intra-party preferences and their dispersion matter for the size of agreement areas as well. To keep the argument simple, I abstract from this.

government spent in office out of the days it could have ruled. This operational-ization controls for the fact that governments' maximal term time differs across countries and may even vary within countries if a government does not form right after an election.[6]

For the following analyses, I primarily rely on Cox's semi-parametric propor-tional hazards model (Cox 1972, 1975) because it does not require the researcher to specify a baseline hazard *a-priori*. This advantage, however, comes at the cost of additional assumptions. To verify that results are not driven by these assumptions, I use parametric models as well.[7]

A government is considered terminated if either parliamentary elections are held, the composition of government parties changes, or the head of government is replaced.[8] Governments that voluntarily call elections or who face elections for constitutional reasons, whose head of government resigns for non-political reasons (e.g., death), or who dissolve parliament because of policy conflict with the second parliamentary chamber are expected to fall due to a different causal mechanism and are thus treated as censored (Diermeier and Stevenson 1999). This means that

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[6]In the section on sensitivity analyses, I also use the count of days in office to measure government survival. Results are substantively identical.

[7]Chiba et al. (forthcoming) suggest an econometric model that allows to correct for selection bias in government survival models which arises if the government formation stage is ignored. It essentially captures the government formation stage directly using a multinomial logit model. This model requires information on every single proto-coalition that may form. Since data on intra-party politics is very rare and often not coded for small parties, this requirement reduces the size of my dataset to a handful of observations from countries with very limited variance in intra-party politics. As an alternative, I could model the selection stage using those variables that are widely available and ignore intra-party politics. However, the estimator's behavior in the presence of a misspecified selection stage is unknown. I thus leave the inclusion of the selection stage to future research. This also allows the results to be compared to previous research and avoids a "botched repair" that leads to entirely unknown estimator behavior.

[8]Caretaker governments are excluded from the analyses.

they are expected to have lasted longer if the censoring event had not happened. All other government breakdowns are treated as events.

The data needed for the dependent variable are taken from Chiba et al. (forthcoming) for European countries. Data for non-European countries are retrieved from Döring and Manow (2012), the ECPR Political Yearbooks, and Keesing's World Archive. Since the Internally Democratic Coalition Members Hypothesis makes "*ceteris paribus* predictions", I control for other factors that determine agreement area size and in turn coalition survival time. These are Ideological Divisions, Number of Cabinet Parties, and Majority Government (see Appendix C.1). Operationalizations for these variables as well as for Intra-Party Democracy are as follows.

Intra-Party Democracy: Following the theoretical argument, I distinguish between internally democratic and internally undemocratic parties. Internally democratic parties let their rank-and-file members participate in party leadership elections (e.g., in one-member-one-vote elections or party conferences with delegates from local party branches), whereas internally undemocratic parties let party elites only (e.g., MPs) choose the party leader.[9] Data is taken from Katz and Mair (1992) as well as from Cross and Blais (2012).

To aggregate the party-level variable Intra-Party Democracy to the coalition-level, I use the maximum value of Intra-Party Democracy within a coalition. This means that if at least one coalition party is internally democratic, the coalition is

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[9]For simplicity, hybrid parties are ignored. Note, however, that all hybrid parties are considered to behave like internally democratic parties even though, as Chapter 3 shows, not all hybrid parties are constrained by intra-party democracy. (Instead the effect is dependent on intra-party preference heterogeneity.) By treating hybrid parties as internally democratic parties, I partially stack the deck against finding evidence for intra-party constraints because those hybrid parties that are not internally constrained extenuate the effect.

coded as democratic (1) and undemocratic otherwise (0).[10] Results from alternative aggregation rules are discussed in the section on sensitivity analyses below. They are substantially very similar to the original results.

Ideological Divisions: Data on parties' ideal policy positions are taken from the Comparative Manifesto Project database (Budge et al. 2001, Klingemann et al. 2006; Volkens et al. 2012). These data measure parties' policy positions by experts coding statements in party platforms as "left" or "right". Loosely speaking, the more a party mentions left statements, the more leftist it is scaled. A coalition's ideological division is simply the distance between the leftmost and the rightmost coalition party within a government. I recode this variable so that it ranges from 0 (perfect ideological cohesiveness) to 10 (maximal ideological divisions).

Number of Cabinet Parties: This information follows immediately from knowing the government composition (see above). Because it is unlikely that the marginal effect of another cabinet party is constant as the number of cabinet parties increases, I transform this variable and use two-party coalitions as reference category. In particular, I subtract 1 from the count of cabinet parties and then take the logarithm of this quantity. As a result, the variable expresses the logarithm of the number of parties that exceed the two-party coalition case.

Majority Government: Chiba et al. (forthcoming) and Döring and Manow (2012) contain information on whether a government controls a majority in the lower chamber of parliament while in office.

In total, I obtain a dataset of 106 government terminations from 13 democracies since 1945. An exact list of all cases used and variables' descriptive statistics can be found in Appendix B.3.

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[10]Roughly 25% of coalitions are internally undemocratic using this operationalization.

Table 4.1: Cox Proportional Hazard Analyses of Government Duration

	(1) Baseline Model	(2) Intra-Party Democracy: Square Root Model	(3) Intra-Party Democracy: Logarithmic Model	(4) Country-Specific Heterogeneity
Intra-Party Democracy Dummy Variable	1.039 (0.401)			1.684 (0.534)
# Internally Democratic Parties (square root)		0.404 (0.228)		
# Internally Democratic Parties (+1, then logged)			0.444 (0.283)	
Ideological Divisions	0.374 (0.277)	0.326 (0.270)	0.314 (0.269)	0.253 (0.219)
×log(Time)	0.552 (0.281)	0.536 (0.277)	0.534 (0.276)	
log(# Cabinet Parties -1)	0.520 (0.285)	0.393 (0.323)	0.412 (0.329)	0.309 (0.393)
×log(Time)				
Majority Government	−0.449 (0.362)	−0.444 (0.364)	−0.442 (0.365)	−0.970 (0.508)
log(Maximal Duration in Days)				
Constant				
Observations	106	106	106	106
Log Likelihood	−199.063	−201.418	−201.805	−195.967
Country-Level Variance				0.575
$log(\sigma)$				
κ				

Notes: Regression coefficients from Cox proportional hazard models. Standard errors in parentheses.

Table 4.2: Cox Proportional Hazard Analyses and Generalized Gamma Regression Analysis of Government Duration

	(5) Government Duration in Days	(6) Imputation: All Missings Democratic	(7) Imputation: All Missings Undemocratic	(8) Generalized Gamma Regression
Intra-Party Democracy Dummy Variable	1.066 (0.425)	0.970 (0.261)	0.947 (0.352)	−0.771 (0.261)
# Internally Democratic Parties (square root)				
# Internally Democratic Parties (+1, then logged)				
Ideological Divisions	−0.027 (0.191)	0.001 (0.122)	−0.040 (0.130)	0.047 (0.128)
×log(Time)		−0.519 (0.190)	−0.498 (0.199)	
log(# Cabinet Parties -1)	5.901 (2.574)	−0.370 (0.292)	−0.489 (0.307)	−0.617 (0.248)
×log(Time)	−0.882 (0.411)			
Majority Government	−0.466 (0.370)	−0.833 (0.337)	−0.801 (0.319)	0.600 (0.283)
log(Maximal Duration in Days)	−0.689 (0.471)			
Constant				−0.112 (0.420)
Observations	106	200	199	106
Log Likelihood	−185.318	−412.633	−417.218	−98.059
Country-Level Variance				
$log(\sigma)$				0.003 (0.110)
κ				−0.693 (0.667)

Notes: Regression coefficients from Cox proportional hazard models (and a Generalized Gamma regression for Model 8). Standard errors in parentheses (government clustered standard errors in Models 6 and 7).

I use the variables linearly to predict government duration. A Grambsch and Therneau (1994) test of proportional hazards indicates that the variable Ideological Divisions may violate the proportional hazard assumption (i.e., its effect may change over time).[11] To capture this potential effect, I interact the variable Ideological Divisions with the natural logarithm of relative survival time, and add this variable to the regression (Box-Steffensmeier and Jones 2004, 136).[12]

4.4 Results

Model 1 in Table 4.1 shows coefficients from a Cox proportional hazards model which parameterizes the hazard that an event occurs (i.e., the probability that a coalition breaks in a certain time interval provided it survived until this point in time). As such, these coefficients are substantively not easily interpretable and, therefore, Figure 4.2 is intended to ease interpretation.[13]

Figure 4.2 plots the multiplicative effect of a unit increase in intra-party democracy on a coalition's breakdown hazard.[14] Filled circles indicate point predictions

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[11]The corresponding p-value is p=.049, which indicates statistical significance.

[12]As Golder (nd, 14) notes, it remains unclear (and untestable) whether such an interaction solves the non-proportionality issue. To assure that conclusions drawn are robust to the proportional hazards assumption, I also estimate a parametric survival model that allows for flexible baseline hazards and does not rely on the proportional hazards assumption (see section on sensitivity analyses). The substantive conclusions are virtually identical, which suggests that after adding the interaction effect, the proportional hazard assumption is not violated in a way that affects the substantial results presented.

[13]Coefficients in Tables 4.1 and 4.2 are interpreted in the following way: Positive coefficients indicate that a government is expected to break earlier as the corresponding covariate increases. Negative coefficients denote increasing government stability in the corresponding independent variable. Standard errors are in parentheses. To evaluate effect sizes, coefficients can be exponentiated. Then, they capture the factor the by which the baseline hazard rate is multiplied as a covariate increases by a unit. However, due to interactions, marginal effects (and their standard errors) cannot readily be read off the table.

[14]Of course, if intra-party democracy is coded as a dummy variable (e.g., in the baseline model), then Figure 4.2 shows the expected multiplicative effect of a single coalition party turning internally democratic while all other coalition parties remain internally undemocratic.

Figure 4.2: Marginal Changes in Expected Hazards and Expected Accelerated Failures Times for Different Coalition Government Survival Models
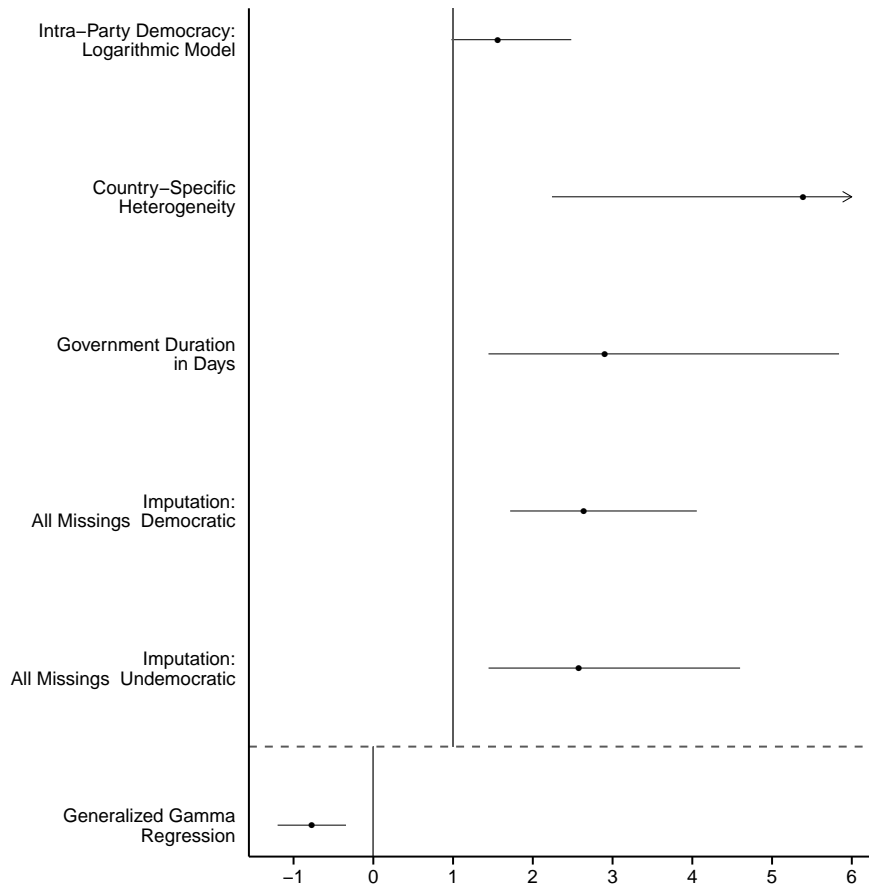
Notes: Above the dashed line, full circles indicate hazard rate factors (exponentiated Cox proportional hazard coefficients) as covariates increase by one unit in different model specifications (rows). Below the dashed line, the full circle shows the marginal effect on accelerated failure time. In all cases, bars give 90% confidence intervals.

and horizontal bars give 90% confidence intervals. The figure's rows 2-6 refer to alternative model specifications which are discussed in the section on sensitivity analyses.

To make meaningful predictions, Figure 4.2 is based on exponentiated coefficients. Hence one should keep several things in mind when interpreting it. First, the effects are multiplicative, which implies that the hazard is multiplied by the

predicted effect if a covariate is increased by one unit *ceteris paribus.* Therefore, the "no-effect hypothesis" predicts coefficients of size 1. Coalitions are expected to fall earlier compared to the baseline coalition if the predicted effect is greater than 1 and coalitions should last longer if the effect is in the interval (0,1). Second, since exponentiating "inflates" large number more than small numbers, confidence intervals are not symmetric around the corresponding point estimates.

We can now turn to the substantive evaluation of the hypothesis. The Internally Democratic Coalition Members Hypothesis predicts that coalitions with internally democratic parties do not last as long as coalitions without internally democratic parties. This is equivalent to a hazard factor equal to or greater 1 on the Intra-Party Democracy variable. As the top row of Figure 4.2 shows, the predicted effect is indeed greater than 1 and statistically significant. More precisely, the risk of early termination for coalitions with at least one internally democratic party is on average about 183% greater (95% confidence interval: [29%, 520%]) than for coalitions without internally democratic parties.

The long run effect is shown in Figure 4.3. It shows the expected share of surviving coalition governments with and without internally democratic parties at different points in the government's term (survival curves). It is easily seen that fewer governments with internally democratic parties manage to serve until the end of their term (31% vs. 66%). This result points to a meaningful effect size and corroborates the Internally Democratic Coalition Members Hypothesis.

In the following, I test the robustness of the result to other model specifications, other estimators, and different ways to aggregate intra-party democracy in individual parties to the coalition-level.

Figure 4.3: Expected Survival Rates of Coalitions With and Without Internally Democratic Parties
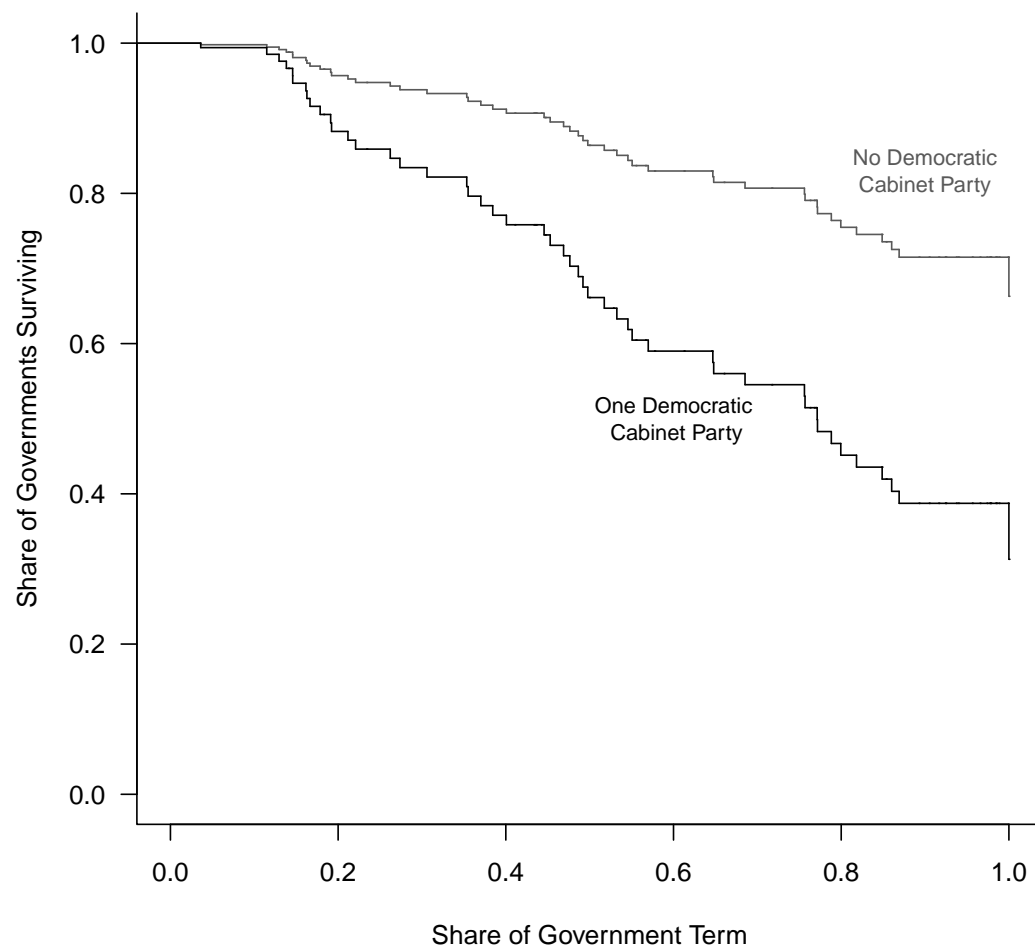
Notes: Predictions are based on Model 1 in Table 4.1 assuming three-party majority coalitions scoring 1.43 points in Ideological Divisions (sample means and medians of variables, respectively).

4.5 Sensitivity Analyses

4.5.1 Alternative Aggregation of Intra-Party Democracy

It is not entirely clear how a coalition's agreement area size changes as one government party "switches" to being internally democratic. Does a single internally democratic party have a different effect than four internally democratic parties? The operationalization used above assumes that there is no difference between a coalition with one internally democratic party and a coalition composed of internally democratic parties only. For coalitions with few cabinet parties and high ideological divisions this seems plausible. For broad and ideologically rather coherent coalitions, however, this assumption is questionable.

I test two more aggregation rules. First, I use the square root of the count of internally democratic cabinet parties. Second, I take the natural logarithm of this count variable (adding 1 to it to avoid taking the logarithm of 0). Both specifications assume a distinct, decreasing marginal influence of another internally democratic party on the coalition's agreement area size. In both alternative model specifications, results are remarkably similar to the baseline model. In particular, the substantive interpretation does not change.

Of course, the effect of the internal democracy variables varies over model specifications: In the square root specification (second row in Figure 4.2; Model 2 in Table 4.1), the effect size of internal democracy is smaller than in the baseline model. Also, the coefficient is statistically significant only at the 90%-level (p=.077), which given the small number of observations (N=106) is still a reliable result. As the square root of the count of internal democratic cabinet parties

increases by 1 (e.g., from none to one internally democratic party *ceteris paribus*), the hazard that a government breaks early increases by 50% on average.

In the logarithmic specification (third row in Figure 4.2; Model 3 in Table 4.1), the effect size is very similar. As the logarithm of the number of internally democratic parties increases by 1 (e.g., from no internally democratic parties to two internally democratic parties *ceteris paribus*) the probability that the government falls early goes up by 56% on average. The effect is only marginally statistically significant (p=.116). Again, in the context of the rather few cases this is still a meaningful finding.

To ease comparison of effect sizes, Figure 4.4 plots the differences in expected coalition survival for coalitions with and without an internally democratic party. In particular, it indicates what share of coalitions we expect to have survived up until a certain point in time had they not included an internally democratic party, *ceteris paribus*.[15]

Since both alternative aggregation rules yield very similar survival curves, the square root model is depicted in Figure 4.4 only. It is obvious that the effect size is substantially weaker in the square root model than in the baseline model: While roughly an additional 35% of governments are expected to break early in the baseline model, only an additional 13% are predicted to do so in the square root model.

In total, the expected effect size of internal party democracy on the probability of early government breakdown hinges to a certain extent on the way it is aggregated to the coalition-level. Moreover, our uncertainty about the effect of

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[15]To not clutter up this figure too much, I do not plot confidence intervals. As Figure 4.2 indicates, differences between models are not statistically significant at the 90%-level.

Figure 4.4: Differences in Expected Survival Curves Between Coalitions With and Without an Internally Democratic Party
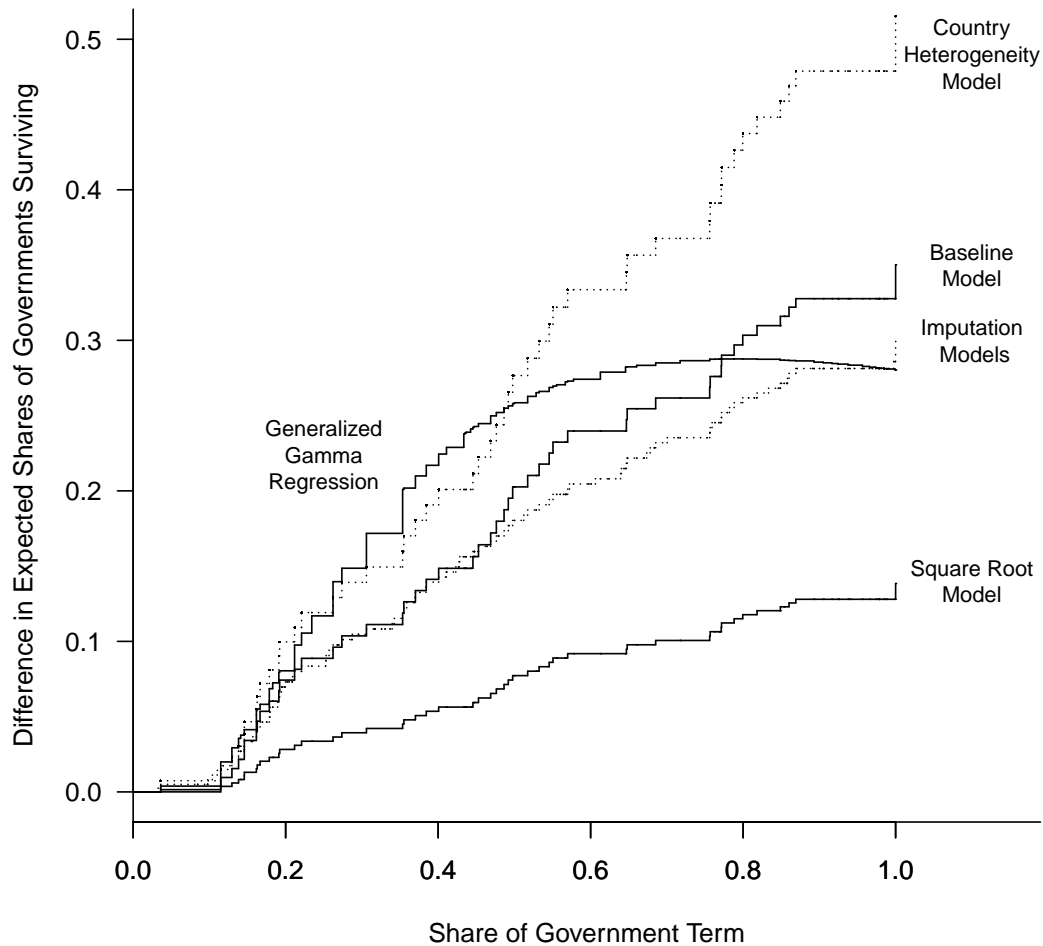
Notes: Predictions are based on Tables 4.1 and 4.2 assuming three-party majority coalitions scoring 1.43 points in Ideological Divisions (sample means and medians of variables, respectively). Frailty equals 1 for the Country Heterogeneity Model.

intra-party democracy decreases when using the alternative specifications. This is due to the higher variability in the variables resulting from the alternative aggregation rules. Nevertheless, all models support the claim that intra-party democracy within coalition parties increases coalition governments' risk to break down early.

4.5.2 Country-Specific Heterogeneity

Government stability may be a function of country-specific norms and processes rather than of a systematic process which is linked to the agreement area size as argued here. To capture country-specific heterogeneity in the data, I re-estimate the baseline model with country-specific (shared) Gamma frailty (Box-Steffensmeier and Jones 2004, 141-147). Results are shown in the fourth row of Figure 4.2 and in Model 4 of Table 4.1.

The effect of intra-party democracy (measured as a dummy variable) increases relative to the baseline specification. At the same time, the precision of the estimate declines. The result is, nevertheless, still statistically and substantially significant and positive.[16]

The top dotted line in Figure 4.4 shows the long-run effect according to the model controlling for country-specific heterogeneity.[17] It predicts that in course of their term, about 50% of governments with internally democratic break early due to intra-party democracy. This finding provides further support for the Internally Democratic Coalition Members Hypothesis.

4.5.3 Alternative for Controlling for Maximal Government Duration

In a cross-country set-up with governments being formed in the middle of a parliamentary term, it is necessary to control for the maximal duration a government

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[16]Please note that Figure 4.2 does not show the entire confidence interval for the effect of Intra-Party Democracy. This is because it covers the interval [1.89, 15.34] and requires different scales than the other effects to be plotted entirely.

[17]The frailty value is kept at 1 for these predictions.

can last. Otherwise, two governments that governed the same number of days but terminated at completely different times during their parliaments' term were treated equally.

However, there are at least two strategies how to achieve this. The first option, on which the baseline model is based, is to use the share of the maximal term served as the dependent variable. The alternative is to use maximal term time as an independent variable in a regression on government survival time. Here, the dependent variable is government duration in days and the covariate is days remaining in the inter-election period (logged). I present the result of applying this approach in the fifth row of Figure 4.2 and in Model 5 of Table 4.2.

When comparing the result to the first row in Figure 4.2 (Baseline Model), it is striking that the substantial interpretation of the prediction does not change much. Since this analysis uses a different dependent variable than the other models, comparing coefficients or survival curves is not meaningful. Even though we cannot directly derive conclusions about effect sizes, the direction of the effect of intra-party democracy on coalition government survival proves robust to using the alternative way to control for maximal government duration.

4.5.4 Dealing with Missing Data

Since the intra-party democracy variable is an aggregation of party-specific information, it is missing whenever one of the pieces of information for one cabinet party is missing. Unfortunately, this happens rather frequently.[18]

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[18]About 40% of government party years of governments for which some intra-party information is available suffer from missing information.

Scholars have suggested to mitigate the problem of missing data by statistical imputation (Rubin 2004; King et al. 2001; Honacker and King 2010; Cranmer and Gill 2013). This type of literature focuses on single missing data points, here, however, entire time-series of individual parties are missing. Since imputation is extremely noisy in these circumstances, and virtually a series of random coin flips (because intra-party democracy is a dummy variable), I use a more naïve imputation strategy:

I re-estimate the model twice, once guessing that all parties for which data are missing are internally democratic, and once guessing that all of them are internally undemocratic. If these models—using (intentionally) biased data while avoiding listwise deletion—can still retrieve effects similar to the baseline model, we can be confident that the bias introduced by listwise deletion does not affect our substantial inferences.[19]

Row 6 in Figure 4.2 (Model 6 in Table 4.2) shows the result for assuming that all parties with missing intra-party information are internally democratic. Row 7 (Model 7) does so for guessing that these parties are internally undemocratic. Surprisingly, the type of imputation has no effect on the estimated effect size of intra-party democracy on coalition survival. In both imputation models, the effect is similar to the baseline model (i.e., internal democracy increases the hazard of early coalition breakdown substantially). Please note, however, that standard errors are too narrow in this imputed set-up because models treat the "guessed" data as certain. Hence, their standard errors and confidence intervals should be interpreted with caution.

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[19]A list of cases used after imputation as well the relevant descriptive statistics can be found in Tables C10 and C11 in Appendix B.3.

The models using the imputed data and the baseline model make very similar predictions. The effect sizes of the imputation models are shown by the dashed line in Figure 4.4.[20] They differ from the baseline model only after roughly 50% of a government's term. And even then, the difference in effect sizes is fairly weak.

In conclusion, the imputation models provide evidence that the insights gained from the baseline model are not too much affected by listwise deletion of certain cases.

4.5.5 Relaxing the Proportional Hazards Assumption

As mentioned before, the semi-parametric event history method used in the baseline model specification relies on the proportional hazards assumption. Statistical tests indicate that this assumption may be violated by the Ideological Divisions variable in the baseline model. Since it remains unclear whether this violation can be avoided by interacting the variable with the logarithm of time (Golder nd, 14), I also estimate a Generalized Gamma regression model.

The downside of this approach is that it requires me to assume that the baseline hazard can be described by a Generalized Gamma distribution (vs. not assuming any distribution in the Cox model). The advantage is that this model does not assume that hazards are proportional (i.e., time-independent). Moreover, the caveat is mitigated by the fact that the Generalized Gamma model is known to be rather flexible in capturing different types of baseline hazards (Box-Steffensmeier and Jones, 41).

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[20]These predictions are based on Model 7 in Table 4.2. In fact, Model 8's predictions are virtually identical and would be plotted by the exact same line.

Please note that the Generalized Gamma model is parameterized in terms of accelerated failure time, whereas the Cox model is parameterized in terms of hazards. By construction, identical effects yield positive (negative) coefficients in the bottom row of Figure 4.2 compared to all the other rows. The same holds true for Model 8 in Table 4.2. Moreover, the "no-effect hypothesis" is supported by effect size 0.

Due to the different modeling techniques, a comparison of estimated coefficients in Figure 4.2 provides only limited insights (i.e., that the sign of the effect has the correct sign and is statistically highly significant.) Figure 4.4, however, allows for a direct comparison of effect sizes. It reveals that, in general, effect sizes are similar, even though the Generalized Gamma model expects a wider gap in the survival curves of coalitions with and without internally democratic parties up until 80% of a government's term than the baseline model does. Afterward, the relation flips.

Even though these differences in predictions exist, the substantial conclusion about the Internally Democratic Coalition Members Hypothesis remains unchanged. It is also corroborated when relaxing the proportional hazards assumption.

4.6 Conclusion

Intra-party democracy matters for explaining and predicting coalition duration. The results support the idea that parties' policy horizons decrease with intra-party democracy (Warwick 2006). As larger policy horizons allow for more leeway when negotiating policy with other coalition members, the interaction of smaller policy horizons is linked to a smaller set of potential policy compromises among coalition

parties which makes coalition governments more vulnerable to inevitable policy shocks. Hence, coalition governments including internally democratic parties are less stable than coalition governments without these parties. The empirical results support this claim.

Even though intra-party effects on coalitions are known for specific countries (Pedersen 2010; Bäck 2008), there is no systematic cross-country evidence that intra-party democracy matters in general. This paper provides such evidence and hence adds intra-party politics to the list of empirically relevant variables for government survival (Laver 2003).

Moreover, these results support recent theories about the effects of intra-party democracy on party politics in general. In fact, this is the first empirical test of their hypotheses relating to non-policy-related party behavior (Strøm and Müller 1999, 18; Lehrer 2012; Meyer 2013; Schumacher et al. 2013).

The study raises several interesting questions for future research. First, these findings imply that besides coalition-level variables, party-level variables affect coalition behavior (Laver and Shepsle 1990; Strøm 2001; Groenings 1968; Maor 1995). Similar effects should hold for coalition formation as well. Researchers should thus consider including intra-party variables, and intra-party democracy in particular, into their models. Moreover, future research will have to investigate how different party-level variables are aggregated across coalition parties to affect coalition behavior.

Second, the results indicate that intra-party democracy does not only affect parties' policy decisions as known so far but also government behavior. Future research should further scrutinize how intra-party democracy shapes party behavior with regard to other subfields of party politics. For instance, scholars could

investigate how staffing decision for higher party and government positions are affected by internal democracy.

Third, the implications of these findings for political representation should be analyzed: If internally democratic parties have smaller policy horizons, then they should, on average, compromise in coalition bargaining rather on office than on policy. As a result, they may perform better at implementing the policy they advocated in election campaigns. Internally undemocratic parties, on the other hand, should be overrepresented in terms of portfolios (Gamson 1961; Carroll and Cox 2007; Laver et al. 2011).

5 Conclusion

The central conclusion of this study is that intra-party politics matters for how political representation occurs. In this final chapter, I summarize each chapter's contribution and then I comment on the general contributions and implications of the study.

The second chapter argues that internally democratic parties respond to shifts in their members' policy position and that in two-party systems internally undemocratic parties respond to shifts in the general electorate's policy position. This chapter was the first to link, empirically, parties' institutional characteristics with how parties behave across countries in the manner that Strøm and Müller (1999) called for well over a decade ago. In addition, the second chapter forcefully argues that the niche party phenomenon, which has received considerable attention recently (Ezrow 2010; Ezrow et al. 2011; Jensen and Spoon 2010), is rooted in intra-party democracy as opposed to ideology (Adams et al. 2006; Meguid 2005; Wagner 2011; Meyer and Miller forthcoming).

The third chapter formalizes the theory developed in the second chapter. It is the first time that multi-party competition and intra-party competition have been modeled simultaneously. Whereas predictions of the second chapter were aimed at "responsiveness" (i.e., which parties would respond to which sub-constituencies),

the third chapter reports similar conclusions with respect to congruence or prox-imity that internally democratic parties position closer to the median voter and internally undemocratic parties position closer to the median party member. Moreover, I show that the *intra-party dispersion of members' political preferences* matters: for example, hybrid (i.e., internally partially democratic) parties with dispersed membership are more likely to adopt policies at the median voter posi-tion than the same parties with compact membership preferences. Some scholars look at system-level characteristics—like power-sharing arrangements or electoral systems—to make predictions about where parties will locate (Blais and Bodet 2006; Ezrow 2008b, 2011; Dow 2011). However, the findings from the third chap-ter imply that scholars of party policy positioning should also consider party-level variables such as intra-party democracy and the dispersion of party membership preferences.

Finally, the fourth chapter theorizes that coalitions with at least one internally democratic party are less stable than coalitions without such parties. This chap-ter is the first to propose intra-party democracy as an explanation for coalition termination. Also, it is the first cross-country study of the effects of intra-party democracy that does not focus on parties' policy positions. The results support the expectation that coalitions comprised of internally democratic parties will terminate faster than those comprised of internally undemocratic parties.

5.1 Implications for Party Politics Research

This study has established a framework for analyzing important and general ques-tions about politics. The makeup of governments and specifically whether they

are composed of internally democratic or undemocratic parties could matter for areas like tax policy. For instance, suppose that a single-party leftist government is cross-pressured between increasing taxes as party members demand, or decreasing them which would be preferred by most citizens (Ward et al. 2011). This study suggests that an internally democratic government party would increase taxes (and prioritize a sub-constituency over the general electorate) whereas an internally undemocratic party would cut taxes (and choose to respond to the average citizen over its core supporters).

And a very direct implication of the conclusions of chapter 3, that internally democratic parties are more likely to adopt distinctly non-centrist positions, is that policy-making in party systems composed of internally democratic parties should also be more polarized than policy-making in party systems with undemocratic parties.

A third research question that follows from the study deals with the interaction of intra-party democracy and party members' preferences heterogeneity. When parties become more democratic over time, do party leaders become more constrained by their membership? On the one hand, the fourth chapter's results suggest that this should hold true since it shows that even parties with limited internal democracy (i.e., hybrid parties) are different from internally undemocratic parties. On the other hand, more intra-party democracy might attract new members to join the party, and thus expand the dispersion of the preferences within the membership (Panebianco 1988). This increased heterogeneity of party members' preference grants party leaders more leeway in choosing positions, and could counterbalance or offset the constraining effects of becoming more internally democratic. This is a particularly interesting puzzle because parties are indeed

becoming more democratic over time (Kenig 2008), and given the competing considerations raised above, it is not entirely clear what the effect will be.

These research questions suggest that there are additional puzzles to address within the intra-party framework emphasized here.[1]

5.2 Implications for Political Representation

This study has important implications for political representation. It finds that whether parties represent the general electorate or party supporters (or even only party members) depends on intra-party democracy (Erikson et al. 2002; Huber and Powell 1994; McDonald and Budge 2005; Powell 2000; Stimson et al. 1995; Dalton 1985; Weissberg 1978; Wessels 1999). As legislation on party organizations proliferates, making parties more internally democratic, the debates should consider the implications of making parties more internally responsive at the cost of responsiveness to the median voter position which has held a privileged position for some theorists of democracy (McDonald and Budge 2005; Powell 2000; Ware 1987; Schumpeter 1943; Sartori 1987; Riker 1982).

Overall, this study makes important steps to advance our understanding of the interactions between intra-party democracy and inter-party competition. It estab-

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[1]More puzzles to address include whether intra-party democracy causes parties to target office or policy in coalition negotiations (Strøm and Müller 1999; Gamson 1961; Carroll and Cox 2007; Laver et al. 2011), and whether party leaders of internally democratic parties stay in leadership roles longer than leaders of internally undemocratic parties because they are only held accountable with respect to ideological purity—which they can directly control – rather than election outcomes (Bueno de Mesquita and Siverson 1995; Ennser-Jedenastik and Müller 2013). On the other hand, there may be fewer means for removing party leaders in internally undemocratic parties.

lishes important effects of intra-party democracy: Internally democratic parties represent citizens differently and they behave differently in government. Moreover, this effect is conditioned by intra-party preference heterogeneity. Although the study stops short of evaluating how intra-party democracy affects specific policy outcomes—like social security systems, environmental policies, or foreign affairs—it provides a strong theoretical framework for doing so.

6 Appendix

A Intra-Party Democracy and Party Responsiveness

Table A1: Estimated Effects on Parties' Policy Shifts: No Outlier Models

| | No Outlier Models | |
	FEGLS (9)	FE (10)
Intra-party democracy (t)	−0.07 (0.10)	−0.29 (0.32)
Mean supporter's shift (t-1 to t)	−0.57 (0.16)***	−0.55 (0.29)*
Intra-party democracy (t) × Mean supporter's shift (t-1 to t)	1.05 (0.18)***	0.86 (0.30)***
Mean voter's shift (t-1 to t)	0.57 (0.30)*	0.28 (0.51)
Intra-party democracy (t) × Mean voter's shift (t-1 to t)	−0.57 (0.35)	−0.10 (0.57)
Change party position (t-2 to t-1)		−0.30 (0.05)***
Observations	214	210
Group	Party	Party
Group Dummies	Yes	No
Number of Parties	33	33

Notes: ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. Robust standard errors in parentheses. Party dummies are not shown. FEGLS = Fixed Effects General Least Squares, FE = Fixed Effects Least Squares.

Table A2: Summary Statistics of Data Used for Analysis

	Observations	Mean	Std. Dev.	Min	Max
Change party position (t-1 to t)	228	0.01	0.67	-2.76	1.98
Intra-party democracy (t)	228	0.85	0.36	0.00	1.00
Mean supporter's shift (t-1 to t)	228	-0.04	0.37	-1.22	1.08
Intra-party democracy (t) × Mean supporter's shift (t-1 to t)	228	-0.04	0.34	-1.22	1.08
Mean voter's shift (t-1 to t)	228	-0.05	0.20	-0.43	0.46
Intra-party democracy (t) × Mean voter's shift (t-1 to t)	228	-0.03	0.18	-0.43	0.46
Niche party	228	0.11	0.31	0.00	1.00
Niche party × Mean supporter's shift (t-1 to t)	228	-0.00	0.09	-0.54	0.50
Niche party × Mean voter's shift (t-1 to t)	228	-0.00	0.06	-0.43	0.35
Change party position (t-2 to t-1)	221	0.04	0.72	-2.76	2.05
Two-party system (t)	228	0.89	0.31	0.00	1.00

Table A3: List of Parties' Intra-Party Democracy Level in Election Years

Country	Party Name	Election Year										
		1975	1977	1979	1981	1985	1987	1988	1990	1994	1998	2001
Denmark	SF Socialist People's Party	D	D	D	D	D	D	D	D	D	D	D
	SD Social Democratic Party	D	D	D	D	D	D	D	D	D	D	D
	CD Centre Democrats	–	D	D	D	D	D	D	D	D	D	–
	RV Radical Party	D	D	D	D	D	D	D	D	D	D	D
	V Liberals	D	D	D	D	D	D	D	D	D	D	D
	KrF Christian People's Party	–	D	D	D	D	D	D	D	D	D	D
	KF Conservative People's Party	D	D	D	D	D	D	D	D	D	D	D
	FP Progress Party	U	D	D	D	D	D	D	D	D	D	–
		1977	1978	1981	1985	1987	1991	1995	1999	2003		
Belgium	ECOLO Francophone Ecologists	–	–	U	D	D	D	D	D	D		
	SP Flemish Socialist Party	–	–	U	U	U	U	U	U	–		
	PS Francophone Socialist Party	–	U	D	D	D	D	D	D	D		
	PVV Party of Liberty and Progress	–	D	D	D	D	D	–	–	–		
	PRL Francophone Liberals	–	D	D	D	D	D	–	–	–		

Table A3: List of Parties' Intra-Party Democracy Level in Election Years *(continued)*

Country	Party Name	Election Year							
	CVP Christian People's Party	–	D	D	D	D	D	D	
	PSC Christian Social Party	D	D	D	D	D	D	D	
	Flemish Christian People's Union	D	D	D	D	–	–	–	
	VU People's Union	–	–	–	D	D	–	–	
Netherlands		1977	1981	1982	1986	1989	1994	1998	
	PPR Radical Political Party	–	D	D	D	–	–	–	
	PvdA Labour Party	D	D	D	D	D	D		
	D'66 Democrats 66	D	D	D	D	D	–	–	
	VVD People's Party for Freedom and Democracy	D	D	D	D	–	–	–	
	CDA Christian Democratic Appeal	–	D	D	D	D	–	–	
Germany		1976	1980	1983	1987	1990	1994	1998	2002
	90 and Greens Alliance '90 and Greens	–	–	–	D	D	D	D	D
	SPD Social Democratic Party	D	D	D	D	D	D	D	D
	FDP Free Democratic Party	D	D	D	D	D	D	D	D

Table A3: List of Parties' Intra-Party Democracy Level in Election Years *(continued)*

Country	Party Name			Election Year					
	CDU and CSU Christian Democratic Union and Social Union	D	D	D	D	D	D		
United Kingdom		1979	1983	1987	1992	1997	2001		
	Labour Party	U	D	D	D	D	D		
	Liberal Party	D	D	D	D	–	–		
	Conservative Party	U	U	U	U	U	D		
Ireland		1977	1981	1982	1987	1989	1992	1997	2002
	WP Workers' Party	–	–	–	D	D	–	–	–
	LP Labour Party	U	U	U	U	D	D	U	–
	PD Progressive Democrats	–	–	–	–	U	U	–	–
	Fine Gael	U	U	U	U	U	U	–	U
	Fianna Fail	U	U	U	U	U	U	–	–

Notes: U = Internally Undemocratic Party; D= Internally Democratic Party; – = not in sample.

Sources: Katz and Mair (1992) and Kenig (2009).

B Intra-Party Democracy and Policy Proximity

B.1 Omitted Proofs

Optimality of Selectors' Choices

Proposition 1. *Let σ_s be the vote choice of selector s and let $v_A > v_B$ be the proportion of candidates' valence values respectively. Since each selector can choose between two candidates only, it is convenient to express her utility maximizing action, θ_s, in terms of the probability that she votes for A, $Pr(\sigma_s = A | p_A, p_B, \mathbb{1}_A, \mathbb{1}_B)$, where p_A and p_B are candidate A and B's policy positions respectively, and $\mathbb{1}_A$ and $\mathbb{1}_B$ the indicator functions equal to unity if s is nominated by the corresponding candidate and equal to zero otherwise. Then,*

$$\theta_s(p_A, p_B, \mathbb{1}_A, \mathbb{1}_B) = Pr(\sigma_s = A | p_A, p_B, \mathbb{1}_A, \mathbb{1}_B) =$$

$$\begin{cases} 1 & \textit{if } \mathbb{1}_A = 1, \\[2mm] 0 & \textit{if } \mathbb{1}_A = 0 \textit{ and } \mathbb{1}_B = 1, \\[2mm] 1 & \textit{if } \mathbb{1}_A = \mathbb{1}_B = 0 \textit{ and } |x_s - p_A| < |x_s - p_B|, \\[2mm] 0 & \textit{if } \mathbb{1}_A = \mathbb{1}_B = 0 \textit{ and } |x_s - p_A| > |x_s - p_B|, \\[2mm] \frac{1}{2} & \textit{if } \mathbb{1}_A = \mathbb{1}_B = 0 \textit{ and } |x_s - p_A| = |x_s - p_B| \end{cases}$$

weakly dominates any other strategy.

Proof. If s's vote is not pivotal in the leadership election, then s's vote choice does not matter for her final payoff and hence any strategy is utility maximizing. Recall that D is the maximal cost generated by policy distance and that their

proportion to office benefits, O, is $O > D$. The following shows that Proposition 1 expresses the utility maximizing strategy if s's vote is pivotal as well.

- *Case 1:* $\mathbb{1}_A = 1$

  Since $O > D$, $\mathbb{1}_A = 1$, and $v_A > v_B$, B can never compete with A because even if $\mathbb{1}_B = 1$, $v_A > v_B$ and thus $Pr(\sigma_s = A|p_A, p_B, \mathbb{1}_A, \mathbb{1}_B) = 1$.

- *Case 2:* $\mathbb{1}_A = 0$ *and* $\mathbb{1}_B = 1$

  Since $O > D$ and $\mathbb{1}_A = 0$ but $\mathbb{1}_B = 1$, O is realized if candidate B wins only, thus, $Pr(\sigma_s = A|p_A, p_B, \mathbb{1}_A, \mathbb{1}_B) = 0$.

- *Case 3:* $\mathbb{1}_A = \mathbb{1}_B = 0$ *and* $|x_s - p_A| < |x_s - p_B|$

  Since the selector cannot expect to receive any office payoffs, she opts for the candidate that yields the higher policy utility. Hence, $Pr(\sigma_s = A|p_A, p_B, \mathbb{1}_A, \mathbb{1}_B) = 1$.

- *Case 4:* $\mathbb{1}_A = \mathbb{1}_B = 0$ *and* $|x_s - p_A| > |x_s - p_B|$

  Since the selector cannot expect to receive any office payoffs, she opts for the candidate that yields the higher policy utility. Hence, $Pr(\sigma_s = A|p_A, p_B, \mathbb{1}_A, \mathbb{1}_B) = 0$.

- *Case 5:* $\mathbb{1}_A = \mathbb{1}_B = 0$ *and* $|x_s - p_A| = |x_s - p_B|$

  Since the candidates' offers are equal, the selector is indifferent between the candidates and votes with probability $Pr(\sigma_s = A|p_A, p_B, \mathbb{1}_A, \mathbb{1}_B) = \frac{1}{2}$. $\qquad\square$

Optimality of Candidates' Choices

Proposition 2. *Let ω_Z for $Z \in \{I, C\}$ be a candidate's offer (i.e., a combination of nominations and policy position), Ω_Z a set of candidate offers, ω_{-Z} the other candidate's offer, E_{ideal} the distribution of voter ideal positions, $\pi(\omega_Z; \omega_{-Z}, E_{ideal})$ the probability that candidate Z becomes party leader, and let $V_Z(\omega_Z; \omega_{-Z}, E_{ideal})$ be the expected number of votes at the national level with offer ω_Z. Then, any mix of*

$$\sigma_Z = \{\Omega_Z^* : \pi(\omega_Z) = max(\pi(\Omega_Z)) \ \cap \ V_Z(\omega_Z^*) = max(V(\Omega_Z))\}$$

weakly dominates any other strategy.

Proof. Note that $O \gg D$ and deviating to a strategy with lower $\pi(\cdot)$ is harmful even for small changes in $\pi(\cdot)$. Moreover, among offers with equal $\pi(\cdot)$, not maximizing $V_Z(\cdot)$ is harmful since utility is strictly increasing in $V_Z(\cdot)$ as $\pi(\cdot)$ is constant. This proof holds for both incumbent and candidate choices.

$\square$

Selectors' Tie-Breaking Assumptions

Lemma 1. *Let R_{votes} be the decision rule that selectors who are nominated by both candidates vote for the candidate with the higher expected vote share. Let $R_{valence}$ be the decision rule that these selectors vote for the same, "advantaged" candidate.*

The policy position that a party chooses is the same under R_{votes} as under $R_{valence}$ if the size of the selectorate, S, is uneven.

Proof. Let N be the number of office candidates for party leadership can allocate. There are three cases:

6 Appendix

- *Case 1: N = 0*

  No selector considers office payoffs and therefore the tie breaking rule cannot matter.

- *Case 2: $0 < N \leq \frac{S}{2}$*

  Showing that the decision rules lead to the same party policy position implies that under both rules the challenger's policy position and the challenger's likelihood to replace the incumbent must be equal.

  To see that the tie breaking rule does not affect the challenger's policy choice, note that a potential winning coalition can contain maximally N nominated selectors and if S is uneven, it must at least contain $\frac{S+1}{2} - N$ non-nominated selectors. Moreover, let there exists a specific policy position, p, that allows for this minimal number of $\frac{S+1}{2} - N$ policy-motivated selectors' support given the incumbent's policy position as well as her nominations. Since these selectors are nominated by neither candidate, they only consider policy positions when making vote choices and hence their vote choices are not affected by the tie breaking rule. Therefore, it cannot affect the challenger's choice of policy positions.

  To see that the tie breaking rule does not affect the challenger's probability to become incumbent, suppose the challenger nominates N of the selectors that have not been nominated by the incumbent. Then, there are $S - 2N$ unnominated selectors left. Since $S - 2N \geq \frac{S+1}{2} - N$ if S is an uneven integer, the challenger can form a winning coalition at policy position p without nominating any of the selectors that the incumbent nominated.

Hence, her likelihood to form a winning coalition is not affect by the tie breaking rule either.

- *Case 3: $N > \frac{S}{2}$*

  If selectors use $R_{valence}$, this candidate wins due to her nominations and thus positions at her most preferred position, the vote-maximizing position. If use R_{votes}, both candidates maximize the probability of winning a majority of selectors by locating at the vote-maximizing position. Thus, the policy position does not depend on the tie breaking rule.

  $\square$

Winning Candidate's Policy Positions

Proposition 3. *Let N be the number of offices candidates can allocate and let S be the number of selectors. Then,*

1. *Parties with $\frac{N}{S} = 0$ position at their median party selector position,*

2. *Parties with $0 < \frac{N}{S} \leq \frac{1}{2}$ have no clear policy position that can be derived from intra-party politics,*

3. *Parties with $\frac{N}{S} > \frac{1}{2}$ position at the vote-maximizing policy position.*

Proof. There are three cases:

- *Case 1: $\frac{N}{S} = 0$*

  In this case, no candidate can make any selector office-motivated and hence competition is about policy only. This is classical Downsian (1957) party

competition in a single policy dimension. Hence, candidates position at the median selector position.

- *Case 2:* $0 < \frac{N}{S} \leq \frac{1}{2}$

  Note that the challenger always has at least a positive probability to replace the incumbent (see Lemma 2). There are two sub-cases to proof:

  Sub-case 1: The challenger can replace the incumbent with certainty. This implies that the challenger takes a different policy position than the incumbent and hence the party policy position is not stable and cannot be clearly predicted.

  Sub-case 2: The challenger can replace the challenger only with some positive probability. Then, the party positions either at the vote-maximizing position (i.e., if the incumbent wins) or at its current position (i.e., if the challenger wins). This implies that the position cannot be clearly predicted.

- *Case 3:* $\frac{N}{S} > \frac{1}{2}$

  In this situation, a majority of selectors is office-motivated and thus vote for the advantaged candidate irrespective of her policy position. Hence, she can position at her favored policy position (i.e., the vote-maximizing policy position).

  $\square$

Probability Challenger Becomes Incumbent

Lemma 2. *In hybrid parties, the challenger has always a positive probability to become party leader if S is uneven.*

Proof. Note that in hybrid parties, $0 < N \leq \frac{S}{2} - \frac{1}{2}$ for uneven S. Suppose N of S selectors are nominated by the incumbent. Then, the challenger can nominate N of the $S - N$ selectors that have not been nominated yet. He needs another $\frac{S+1}{2} - N$ selectors to be supported by a majority. There are always $\frac{S+1}{2} - N$ policy-motivated selectors left since $S \geq S - 2N + (\frac{S+1}{2} - N)$ for uneven S and $N \leq \frac{S}{2} - \frac{1}{2}$. Thus, the challenger can position at the same position as the incumbent, thereby making all policy-motivated selectors vote randomly which in turn implies a positive probability of becoming party leader. $\square$

B.2 Simulation Experiment Set-Up

Choose Number of Cases

1. Choose the number of model runs to run, e,

2. Choose the number of burn-in rounds, b,

3. Choose the number of rounds within each simulation experiment to run, r,

Generate Experiment Parameters

4. Take 101 draws from a Normal Distribution with mean 5 and standard deviation E_{sd}, where E_{sd} is drawn from the set $\{.1, .2, \ldots, 3\}$. Round the values to one decimal place, rescale them linearly to lie between 0 and 10 if necessary, and call the resulting set E_{ideal}, the voters' ideal positions,

5. Set the value of office payoffs O to 10.000,

6. Draw the number of parties in the party-system, K, from the set $\{2, 3, 4, 5\}$,

7. Let an elevated k denote an individual party ID. Draw S_{mean}^k uniformly from the range of voters' ideal positions,

8. Draw S_{sd}^k from the set $\{.1, .2, \ldots, 3\}$,

9. Take eleven draws from a Truncated Normal Distribution $\mathcal{TN}(S_{mean}^k, S_{sd}^k)$ bounded between 0 and 10. Round the values to one decimal place and call the set of resulting numbers, S_{ideal}^k, the selector's ideal positions,

10. Draw the number of offices, N^k, from the the set $\{0, 1, \ldots, 11\}$,

11. Randomly nominate N^k of the selectors and position the party at its median selector position,

12. Set one candidate's valence value, v_Z with $Z \in \{A, B\}$, greater than the valence value of her opponent,

13. Repeat step 7-12 another $(K - 1)$ times for the remaining parties in the party system,

Run the Experiment

14. Among those parties that have not moved this round yet, choose one randomly and call it k,

15. If party k is democratic, move it to its median selector position. If party k is undemocratic, choose randomly among the vote maximizing positions. If party k is a hybrid party, obtain its nominations and policy position from the Intra-Party Game (see below),

16. Repeat steps 14-15 K times,

17. Repeat steps 14-16 b times and another r times, saving the input parameters and the quantities of interest,

18. Repeat steps 4-17 e times.

Intra-Party Game

1. Within party k, the challenger finds all combinations of nominations and policy positions that make him incumbent with some positive probability. Among the combinations with the highest probability, he chooses the one that maximizes votes in inter-party competition. If

no such combination exists, he randomly chooses nominees and policy position,

2. Selectors vote for the single candidate who nominated them. If both nominated them, they vote for the candidate with greater V_Z. If neither candidate nominated them, they vote for the candidate that positions closer to their ideal position. If neither candidate nominated them and candidate policy positions are equal, they vote randomly,

3. If the challenger is elected, his policy and nomination choices are returned to the major game, the challenger becomes next round's incumbent and the Intra-Party Game ends. Otherwise, the incumbent chooses the vote maximizing position in inter-party competition, leaves nominations unchanged and the Intra-Party Game ends.

Table B4: Summary Statistics of Input Parameters for Simulation Models

Parameter	Min	Mean	Median	Max
Voter Dispersion	0.1	1.4	1.5	2.7
Number of Parties	2.0	4.5	5.0	6.0
Median Selector Position	0.1	5.0	5.0	10.0
Selector Dispersion	0.1	1.3	1.3	3.8
Number of Offices	1.0	6.0	6.0	11.0

B.3 Empirics

Data, Measurement and Estimation Technique

Testing the hypotheses requires data on party policy positions, selector policy positions, voter policy positions, the party type for each party, as well as the number of parties competing in the party system. I discuss their measurements in turns.

Party Positions: Scholars have suggested many different ways to measure parties' policy positions (Budge et al. 2001; Laver et al. 2003; Slapin and Proksch 2008; Huber and Inglehart 1995; Benoit and Laver 2006; Hix et al. 2006). The data used here is taken from the Comparative Manifesto Project (CMP, Budge et al. 2001; Klingemann et al. 2006; Volkens et al. 2012). Data is collected by specially trained coders who read party manifestos and divide their content into predefined categories. In order to extract a single left-right index, the relative frequency of left and right statements is compared. Equal shares are understood as very centrist positions whereas higher frequencies for one side indicate left or right positions respectively.

The CMP datas' major advantaged over alternative measurements is its broad coverage of elections around the world. Moreover, different studies have shown that this method performs well compared to other methods (Hearl 2001; McDonald and Mendes 2001; Laver et al. 2003; see also: Marks 2007).

Median Voter Position and Voter Dispersion: Voter positions are extracted from two sources: Eurobarometer surveys (Schmitt et al. 2008) in election years and, if not available in the Eurobarometer, from national election studies. In either case, respondents answer a question about their self-placement on a left-

right scale.[1] Since these scales vary across surveys, I rescale all of them to an eleven-point scale between 0 (left) and 11 (right). Voter Dispersion is simply this variable's standard deviation in an election year.

As the median voter in these surveys is almost always located at 5, I approximate her position using the mean voter position. This allows for more variation in the variable and is justified by the fact that voters are approximately Normally distributed (Budge et al. 2012, 35-36) and thus median voter and mean voter coincide.

Party Type: Empirically, party leaders are selected by one of six types of selectorates (Kenig 2009) of which four are relevant here. Parties that either have a single person selecting the party leader or let MPs only choose the party leader, are labeled "undemocratic" because all selectors are office holders. This matches the theoretical definition of an "undemocratic" party perfectly.

Parties that let all members select the party leader are the empirical equivalent of the theoretical "democratic" parties because it is very unlikely that a party controls enough offices (or is small enough) to see a significant share of selectors running for meaningful offices. Thus, these parties are called "democratic" parties.

Finally, similar to the theoretical concept, there also exists a real world "hybrid" party. These are parties that choose their party leader by delegates that vote in party conferences. Since many MPs will either be among the delegates or are entitled to vote by party constitution, this type of party is distinct from the democratic type. However, as the selection process is not dominated by office-holders, this kind of party does not correspond to the undemocratic party either.

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[1]For example, in Eurobarometer surveys this question is posed as: "In political matters people talk of 'the left' and 'the right'. How would you place your views on this scale?"

It is thus labeled "hybrid" party. Data on intra-party democracy levels is based on Kenig (2009), Katz and Mair (1992), and Cross and Blais (2012).

Median Selector Position and Selector Dispersion: Ideally, data on selector positions would consider that the selectorate can be composed of party members, the party elite, or a mixture of two. Unfortunately, neither group has been surveyed comparatively. As a proxy for members' positions, I rely on party supporters' left-right self-placements. Respondents are considered party supporters if they intend to vote for the focal party in the next general election.[2] This measure is highly correlated with party members' left-right self-placements.[3] Moreover, it is reasonable to assume that MPs and party elites are located relatively close to their mean party member position.[4]

Number of Parties: The number of parties competing in the party system is measured by the Effective Number of Parliamentary Parties (ENPP, Gallagher 2013). I opt for the ENPP for two reasons: First, simple counts of parties running for parliament, for instance, disregard the fact that almost every party system contains very small but electorally irrelevant parties who are not considered as viable vote choices for many voters. Second, the Effective Number of *Electoral* Parties disregards the effects of majority manufacturing electoral institutions which are certainly considered by parties.

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[2]In Eurobarometer surveys, respondents are considered supporters of the party they mention as the answer to the question: "Which party would you be included to vote for?"

[3]Relying on 190 mean party supporter and mean party member self-placements in Eurobarometer surveys between 1988 and 1991, I find a correlation of .85 between the two estimates.

[4]The hypothesis claiming that party elites have other policy preferences than rank-and-file members, May's Special Law of Curvilinear Disparity (1973; see also Kitschelt 1989), is empirically not well supported (Norris 1995; Narud and Skare 1999; Kennedy et al. 2006; Scarow and Gezgor 2010).

Table B5: Summary Statistics of Empirical Variables

	Observations	Mean	Std. Dev.	Min	Max
Relative Party Proximity	282	-0.11	0.97	-2.55	2.67
Distance Medians	282	1.13	0.80	0.01	5.08
Voter Dispersion	282	2.32	0.30	1.96	3.78
Selector Dispersion	282	1.87	0.46	0.70	3.95
Two-Party System	282	0.35	0.48	0.00	1.00
Internally Undemocratic Party	282	0.35	0.48	0.00	1.00
Hybrid Party	282	0.57	0.50	0.00	1.00
Internally Democratic Party	282	0.08	0.27	0.00	1.00
Eff. No. Parl. Parties	282	3.82	1.49	1.69	7.62

In total, I obtain 282 cases of 58 party panels from 10 democratic countries[5] between 1964 and 2010 whose summary statistics are shown in Table B5. More details can be found in Table B7. Since the data generating process is "given" by the regression depicted in Table 3.2, estimator choice and model specification are very straightforward: they are simply the same as in Table 3.2 (i.e., OLS with the given model specification). Moreover, basic tests do not indicate any autocorrelation within panels.[6] Table B6 shows in its first column the result of an accordingly specified OLS regression.

Analyzing its residuals, I find that there are 14 cases whose absolute residuals are more than two standard deviations greater than the mean absolute residual. Table B6, Model 2 shows a model excluding these cases. Some coefficients change considerably which indicates that the excluded cases are in fact outliers that bias the estimation results. Thus, I continue to exclude these cases.

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[5]These are Australia, Belgium, Canada, Denmark, Germany, Ireland, Italy, New Zealand, The Netherlands, and the United Kingdom.

[6]Trying to predict an observation's residual with its previous election's residual using an OLS regression does not return a significant relationship (p-value = 0.762).

Even after excluding these outliers, there are two more cases that distort the results. These are two cases for the Italian *Movimento Sociale Italiano* (MSI) in 1976 and 1979 respectively. In these elections, Italy had the most leftist mean voter position of all elections in the sample whereas MSI's mean supporter position was the most rightist of all parties in the sample. Even though MSI's extremism is not surprising, its relative extremism compared to other right-wing, populist parties is: While all other parties have a maximal Median Distance of 3 units, it is 5 for the MSI cases. Given that [*Distance Medians³*] is included in the regression equation which is, therefore, especially vulnerable to outliers, I re-estimated the model excluding these two cases. Results are shown in Model 3 of Table B6.

Besides autocorrelation, panel data oftentimes suffer from panel-specific heteroscedasticity. In order to adjust for this potential problem, the fourth model in Table B6 uses Panel-Corrected Standard Errors (PCSE, Beck and Katz 1995, 1996). These differ slightly from their ordinary counterparts and change statistical significance conclusions for some estimates. Since using PCSEs makes inferences marginally more robust, I continue to use the fourth model which excludes outliers and uses PCSEs to draw conclusions about the accuracy of the hypotheses. It is the model presented in the chapter in Table 3.3 and on which the chapter's Figure 3.4 is based.

Table B6: OLS estimates of Impacts on Relative Party Proximity in Democracies 1964-2010

	(1) Full Sample (Standard Errors)	(2) Outliers Excluded (Standard Errors)	(3) Outliers and MSI Excluded (Standard Errors)	(4) Outliers and MSI Excluded (PCSEs)
Internally Democratic Parties				
Distance Medians	−0.03 (0.18)	−0.20 (0.16)	−0.20 (0.16)	−0.20 (0.18)
Hybrid Parties				
Distance Medians	−2.63 (1.93)	−5.15 (1.78)***	−5.07 (1.79)***	−5.07 (1.53)***
Distance Medians^2	0.75 (0.55)	−0.20 (0.73)	0.13 (0.95)	0.13 (0.75)
Distance Medians^3	−0.03 (0.05)	0.05 (0.05)	−0.08 (0.21)	−0.08 (0.17)
Selector Dispersion	−0.53 (1.23)	−0.08 (1.10)	−0.10 (1.10)	−0.10 (0.74)
Selector Dispersion^2	0.55 (1.16)	−0.04 (1.01)	0.03 (1.02)	0.03 (0.74)
Selector Dispersion^3	−0.14 (0.27)	0.03 (0.23)	0.02 (0.23)	0.02 (0.17)
Distance Medians×Selector Dispersion	1.87 (1.57)	5.62 (1.42)***	5.20 (1.59)***	5.20 (1.36)***
Distance Medians×Selector Dispersion^2	−0.31 (0.36)	−1.46 (0.38)***	−1.39 (0.41)***	−1.39 (0.34)***
Distance Medians^2×Selector Dispersion	−0.31 (0.18)*	0.10 (0.31)	0.18 (0.32)	0.18 (0.29)
Internally Undemocratic Parties				
Distance Medians	5.05 (6.35)	2.43 (5.29)	2.43 (5.30)	2.43 (4.52)
Distance Medians^2	−7.82 (5.36)	−3.37 (4.62)	−3.37 (4.63)	−3.37 (4.33)
Distance Medians^3	0.80 (0.48)*	0.58 (0.41)	0.58 (0.41)	0.58 (0.43)
Voter Dispersion^2	−1.16 (2.00)	−1.01 (1.65)	−1.01 (1.66)	−1.01 (1.21)
Voter Dispersion^3	0.42 (0.59)	0.35 (0.48)	0.35 (0.48)	0.35 (0.35)
Two-Party System	−9.31 (13.79)	−6.43 (11.39)	−6.43 (11.42)	−6.43 (8.18)
Distance Medians×Voter Dispersion×ENPP	0.06 (0.94)	0.14 (0.78)	0.14 (0.78)	0.14 (0.63)
Distance Medians×Voter Dispersion×Two-Party System	−2.33 (1.84)	−1.15 (1.56)	−1.15 (1.57)	−1.15 (1.21)
Distance Medians×Two-Party System	2.96 (4.95)	1.44 (4.10)	1.44 (4.11)	1.44 (2.99)
Distance Medians×ENPP^2	−0.23 (0.21)	−0.13 (0.18)	−0.13 (0.18)	−0.13 (0.14)
Distance Medians^2×Voter Dispersion	0.83 (1.40)	0.13 (1.17)	0.13 (1.17)	0.13 (0.90)
Distance Medians^2×Two-Party System	1.08 (1.27)	0.11 (1.10)	0.11 (1.11)	0.11 (1.04)
Distance Medians^2×ENPP	0.87 (0.75)	0.36 (0.64)	0.36 (0.64)	0.36 (0.52)
Voter Dispersion×Two-Party System	9.62 (13.16)	7.05 (10.86)	7.05 (10.89)	7.05 (7.87)
Voter Dispersion×ENPP	−0.13 (0.74)	0.07 (0.62)	0.07 (0.62)	0.07 (0.47)
Voter Dispersion×ENPP^2	0.06 (0.10)	0.01 (0.08)	0.01 (0.08)	0.01 (0.06)
Voter Dispersion^2×Two-Party System	−2.27 (3.01)	−1.73 (2.48)	−1.73 (2.49)	−1.73 (1.78)
Number of Observations	282	267	265	265
Number of Internally Democratic Parties	23	22	22	22
Number of Hybird Parties	161	149	147	147
Number of Internally Undemocratic Parties	98	96	96	96
Adjusted R^2	0.13	0.29	0.26	0.30

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors in parentheses (Panel Corrected Standard Errors for Model 4). The dependent variable is Relative Party Proximity. See section "Data, Measurement and Estimation Technique" for operationalizations. Model specification is taken from Table 3.2 and internally democratic parties is added as reference category with its single explanatory variable. All variables within categories "Hybrid Parties" and "Internally Undemocratic Parties" are multiplied by a party type dummy variable which, for ease of presentation, is left implicit. ENPP is the Effective Number of Parliamentary Parties.

Table B7: List of Parties' Intra-Party Democracy Levels in Election Years

Country	Party Name				Election Year			
Australia		1984	1987	1990	1993	1996	1998	2001
	ALP Labor Party	U	U	U	U	U	U	U
	LPA Liberal Party	U	U	U	U	U	U	U
	NPA National Party	U	U	U	U	U	U	U
Belgium		1977	1978	1981	1985	1987		
	ECOLO Francophone Ecologists	–	–	–	H	H		
	SP Flemish Socialist Party	–	–	–	U	U		
	PS Francophone Socialist Party	–	–	U	H	H		
	PVV Party of Liberty and Progress	–	H	H	H	H		
	PRL Francophone Liberals	–	H	H	H	H		
	CVP Christian People's Party	–	H	H	H	H		
	PSC Christian Social Party	H	H	H	H	H		
	Flemish Christian People's Union	H	H	H	H	H		
	PRLW Francophone Liberals	–	H	H	H	H		
Canada		1965	1979	1984	1988	2000		
	NDP New Democratic Party	H	H	H	H	H		
	LP Liberal Party	H	H	H	H	H		

Table B7: List of Parties' Intra-Party Democracy Levels in Election Years (continued)

Country	Party Name				Election Year			
		1977	1979	1981	1984	1987	1988	1990
	PCP Progressive Conservative Party	–	H	–	–	D		
	CA Reform Conservative Alliance			–	–	D		
	BQ Bloc Quebecois			–	–	D		
Denmark	SF Socialist People's Party	H	H	H	H	H	H	H
	SD Social Democratic Party	H	H	H	H	H	H	H
	CD Centre Democrats	H	H	H	H	H	H	H
	RV Radical Party	H	H	H	H	H	H	H
	V Liberals	H	H	H	H	H	H	H
	KrF Christian People's Party	H	H	H	H	H	H	H
	KF Conservative People's Party	H	H	H	H	H	H	H
	FP Progress Party	H	H	H	H	H	H	H
		1976	1980	1983	1987	1990	1994	2002
Germany	SPD Social Democratic Party	H	H	H	H	H	D	H
	FDP Free Democratic Party	H	H	H	H	H	–	–
	CDU/CSU Christian Democratic Union/Social Union	H	H	H	H	H	–	H

Table B7: List of Parties' Intra-Party Democracy Levels in Election Years (*continued*)

Country	Party Name	1976	1979	1983	1987						
Italy	DP Proletarian Democracy	–	–	–	H						
	PCI Communist Party	U	U	U	U						
	PR Radical Party	–	–	D	D						
	PSI Socialist Party	U	U	U	H						
	PSDI Democratic Socialist Party	U	U	H	H						
	PRI Republican Party	H	H	H	H						
	PLI Liberal Party	H	H	H	H						
	DC Christian Democrats	H	H	H	H						
	MSI–DN Social Movement–Right National	H	H	H	H						

Country	Party Name	1973	1977	1981	1982	1987	1989	1992	1997	2002	2007
Ireland	Greens Ecology Party/Green Party	–	–	–	–	–	–	–	–	D	D
	WP Workers' Party	–	–	–	–	H	H	–	–	–	
	LP Labour Party	U	U	U	U	U	D	D	D	D	D
	PD Progressive Democrats	–	–	–	–	U	U	U	U	D	D
	Fine Gael	U	U	U	U	U	U	U	U	U	H
	Fianna Fail	U	U	U	U	U	U	U	U	U	U

Country	Party Name	1977	1981	1982	1986	1989
Netherlands	PPR Radical Political Party	–	H	H	H	H
	PvdA Labour Party	H	H	H	H	D

Table B7: List of Parties' Intra-Party Democracy Levels in Election Years *(continued)*

		Election Year				
Country	Party Name	1990	1993	1996	1999	2002
	D'66 Democrats 66	D	D	D	D	H
	VVD People's Party for Freedom and Democracy	H	H	H	H	H
	CDA Christian Democratic Appeal	–	H	H	H	
New Zealand	Green Party of Aortearoa	–	–	–	H	–
	LP Labour Party	U	U	U	U	U
	ACT	–	–	U	U	U
	United Future	–	–	–	–	U
	NP National Party	U	U	U	U	U
	NZFP New Zealand First Party	–	–	U	U	U

		Election Year									
Country	Party Name	1964	1966	1979	1983	1987	1992	1997	2001	2005	2010
UK	Labour Party	U	U	U	H	H	H	H	H	H	H
	SDP Social Democratic Party	–	–	–	D	D	–	–	–	–	–
	Liberal Party	U	U	U	U	U	–	–	–	–	–
	LDP Liberal Democratic Party	–	–	–	–	–	–	–	D	D	D
	Conservative Party	U	–	U	U	U	U	U	H	H	–

Notes: U = Internally Undemocratic Party; H = Hybrid Party; D = Internally Democratic Party; – = not in sample.

Sources: Katz and Mair (1992), Kenig (2009), and Cross and Blais (2012).

C Intra-Party Democracy and Coalition Survival

C.1 Additional Determinants of Agreement Area Size

Besides intra-party democracy, cabinet parties' policy positions matter for agreement area size. The center panel of Figure C1 shows how the agreement area is affected by shifts in party B's policy position. In the first alternative scenario (top panel), the size of the agreement area decreases. In the second scenario (bottom panel), B shifts its position as well but not as radically as before. Here, the size of the agreement area does not change (even though its position changes). Again, there is no unconditional effect of ideological divisions on agreement area size. Hence,

> *Ideological Divisions Hypothesis:* As a coalition government's ideological divisions increase *ceteris paribus*, its duration decreases or remains the same.

Turning now to the number of cabinet parties and Figure C2, it is obvious that adding another party to a coalition may decrease the agreement area size or leave it unchanged. This leads to the Party Count Hypothesis:

> *Party Count Hypothesis: Ceteris paribus*, as the number of members in a coalition government increases, its duration decreases or remains the same.

Another aspect that affects coalitions' duration via agreement area size is the lack of a parliamentary majority. Since a majority is essential for passing legislation and appointing officials, minority governments have to look out for opposition

Figure C1: Changes in Agreement Area Size as Parties' Policy Positions Change
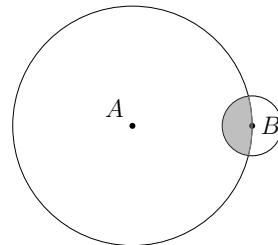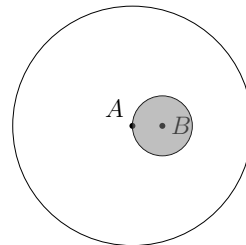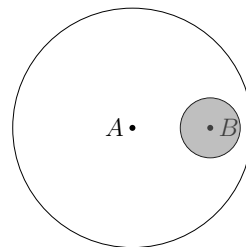
Notes: Filled circles indicate parties' ideal points, large circles their policy horizons, and shaded areas are the intersections of all policy horizons (i.e., the "agreement area").

support. Even though these opposition parties (or individual legislators) are not formally cabinet members, their policy preferences matter for what policy the government can successfully suggest to parliament. Following the logic that leads to the Party Count Hypothesis, policy agreement cannot become any easier as the number of players involved increases *ceteris paribus*. As a lack of majority is equiv-

Figure C2: Changes in Agreement Area Size as the Number of Coalition Members Increases
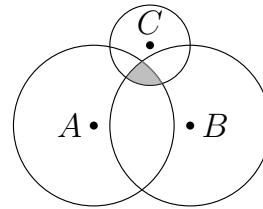
C added
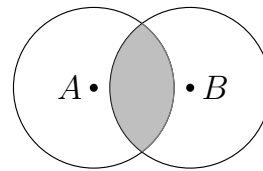
Baseline Case
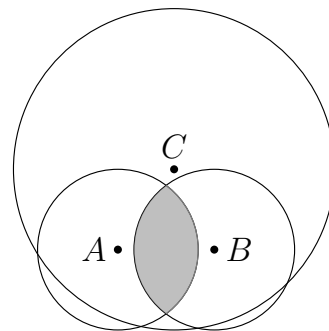
C added

Notes: Filled circles indicate parties' ideal points, large circles their policy horizons, and shaded areas are the intersections of all policy horizons (i.e., the "agreement area").

alent to recognizing that the coalition is dependent on additional parliamentary players, the following hypothesis can be derived:

Majority Hypothesis: Ceteris paribus, if a coalition government controls a majority in parliament, it endures as long or longer than a minority coalition government.

These expectations give rise to the additional variables included in the empirical models presented in the chapter. Below, I discuss the results of their empirical assessments.

C.2 Additional Results

Before turning to the substantial results, recall that some of the variables in the empirical models are interacted with time (see Tables 4.1 and 4.2). Figure C3 shows marginal effects for these variables after 50% of a governments term.

Substantively, the Ideological Divisions Hypothesis implies that ideologically divided coalitions should be at least as likely to break early as ideologically cohesive coalitions. As the second column of the top row in Figure C3 shows, the effect is indeed substantially irrelevant after 50% of the average government's term. Recall, however, that in the model estimated the effect of ideological divisions is time-dependent. And indeed, in the first 20% of their term ideologically divided coalitions are significantly less likely to terminate early (see Model 1 in Table 4.1). Later on, they are more likely to terminate early even though this effect is not statistically significant.[7]

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[7]This finding seems odd at first sight. As mentioned before, however, this study leaves for future research interactions between government formation and coalition duration. With regard to this, parties may self-select into ideologically diverse governments only after a rather precise coalition agreement has been sealed. Ideologically cohesive governments, on the other hand, may even be formed without these clear agreements. Provided such a selection effect exists, it would not be surprising to see ideologically cohesive governments to be more fragile at the beginning of their term. Unfortunately, Chiba et al.'s (forthcoming) joint model of government

Figure C3: Marginal Changes in Hazards and Accelerated Failures Times for Different Government Survival Models
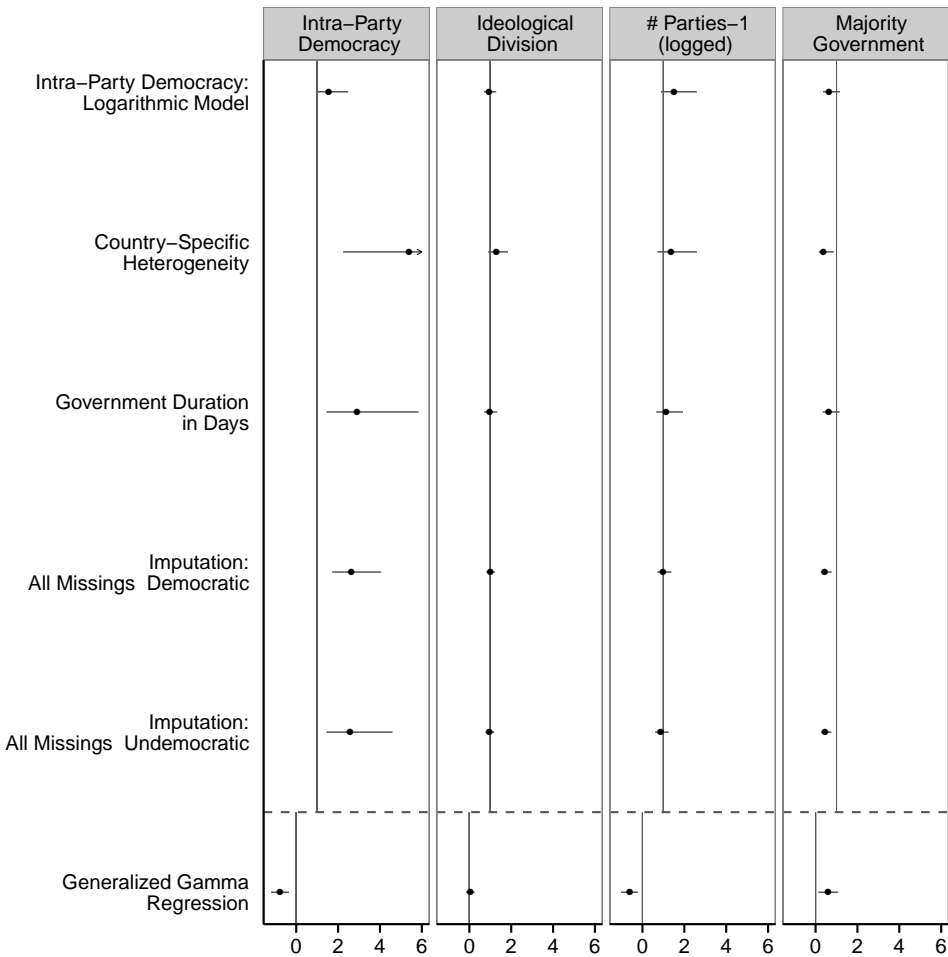
Notes: Above the dashed line, full circles indicate hazard rates factors (exponentiated Cox proportional hazard coefficients) as covariates increase by one unit (columns) in different model specifications (rows). Below the dashed line, full circles show marginal effects on accelerated failure time. In all cases, bars give 90% confidence intervals. For covariates that are interacted with time (see Tables 4.1 and 4.2), effects at 50% of maximal government duration are shown. For the model "Government Duration in Days" the effect of Number of Parties is shown at the median government survival time in the sample (698 days).

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formation and government termination would not pick up such an effect because it is based on a Weibull regression in the government duration stage which assumes proportional hazards. Their findings are thus not conclusive for this question.

Figure C4: Expected Survival Rates of Coalitions with Different Levels of Ideological Divisions
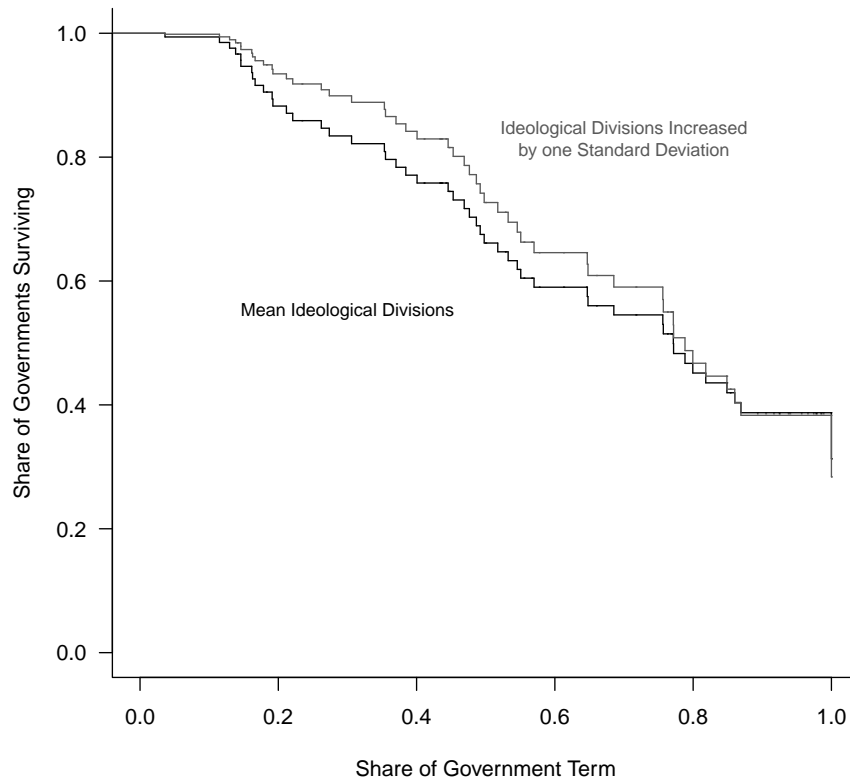
Notes: Predictions are based on Model 1 in Table 4.1 assuming a three-party, majority coalitions with at least one internally democratic party (sample means and medians of variables, respectively).

Despite this temporal difference, Figure C4 reveals that in the long run ideologically divided coalitions are no more stable than ideologically cohesive coalitions. And even though this initial superiority of ideological divisions is not in line with the Ideological Divisions Hypothesis, there is no substantially significant effect for most of the governments' term. Neither is there an effect in the long run. Thus, I conclude that the results provide some support for the Ideological Divisions Hypothesis.

To support the Party Count Hypothesis, the effect shown in Figure C3's third column (# Parties-1 (logged)) should be either substantially 1 or greater. In the baseline model, it is in fact greater than 1 and statistically significant at the 90% confidence level. Since this covariate is measured on a log-scale, its interpretation is not straightforward. Figure C5 shows the survival functions of two otherwise identical three-party and four-party coalitions, respectively. While 31% of three-party coalitions are expected to serve until the end of their term, only 24% of four-party coalitions are expected to do so. This finding is in line with the Party Count Hypothesis.

Finally, the Majority Hypothesis suggests that the predicted marginal effect on the Majority Coalition covariate should be smaller than or equal to 1. Looking at the last column of Figure C3's first row, this expectation is confirmed by the model. The estimated effect is indeed smaller than 1 (.64), yet, it is not statistically significant at conventional levels. Nevertheless, this finding corroborates the Majority Hypothesis.

Overall, the results are in line with the hypotheses and thus provide support for the suggested theory. In the following, I also summarize the sensitivity analyses reported in the chapter to evaluate the additional hypotheses.

C.3 Sensitivity Analyses

Alternative Aggregation of Intra-Party Democracy

As mentioned in the chapter, the expected effect of internal party democracy on the probability of early government breakdown hinges to a certain extent on the way it is aggregated to the coalition-level. Moreover, comparing the first to the

Figure C5: Expected Survival Rates of Three-Party and Four-Party Coalitions
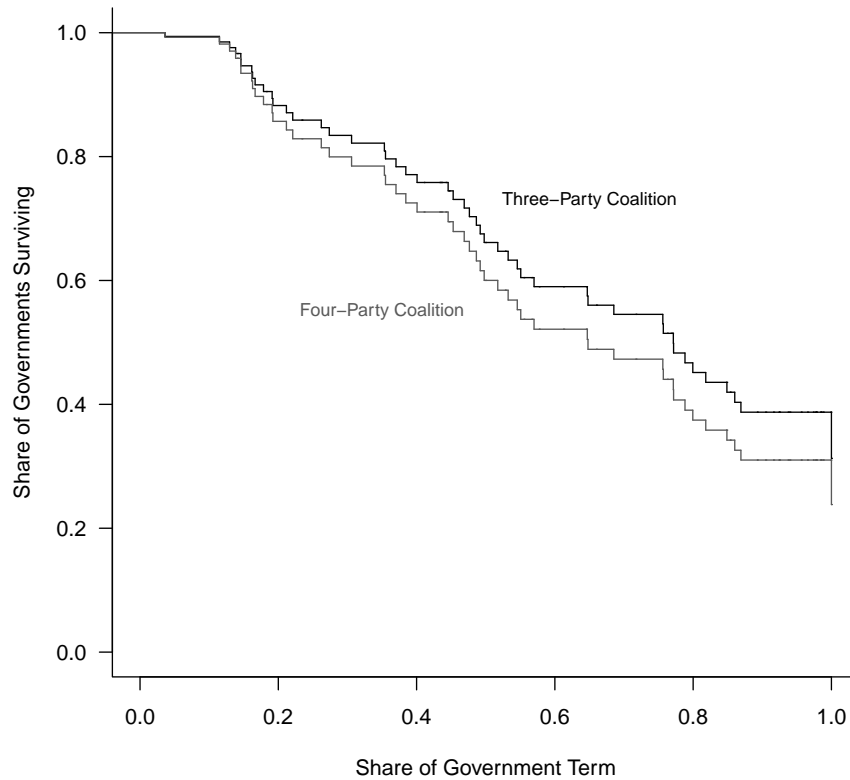
Notes: Predictions are based on Model 1 in Table 4.1 assuming majority coalitions with at least one internally democratic party and 1.43 points of Ideological Divisions (sample means and medians of variables, respectively).

second and third rows in Figure C3 (Models 2 and 3 in Table 4.1), we find that all substantive conclusions derived from the baseline model can also be drawn relying on the alternative ways to aggregate intra-party democracy.

Country-Specific Heterogeneity

The fourth row of Figure C3 and Model 4 of Table 4.1 show the results of a Cox proportional hazards model with shared frailty for countries which controls

for country-specific heterogeneity. In this model, the effects of both intra-party democracy and majority governments increase relative to the baseline specification.[8] The effects of the number of parties and ideological divisions decrease and become statistically insignificant.

Overall, the assessment of the hypotheses is unchanged.

Alternative for Controlling for Maximal Government Duration

Model 5 of of Table 4.2 and the fifth row of Figure C3 show the results of the model using days in government as dependent variable (instead of the share of the maximal term served).

When comparing these results to the first rows in Figure C3 (Baseline Model), it is striking that substantial interpretations of predictions do not change much. The only effect that changes is the effect on the number of cabinet parties. It is, however, time-dependent in this model.[9] The effect shown in Figure C3 is based on the median survival of all coalitions in the sample (698 days). In fact, it is positive for governments that last less than roughly 800 days and turns negative afterward. Nevertheless, larger coalition are never substantially more likely to end early than smaller coalitions. Figure C6 visualizes this point.

Apart from this finding, all results are robust to using the alternative way to control for maximal government duration.

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[8]Recall that Figure C3 does not show the entire confidence interval for the effect of Intra-Party Democracy.

[9]A Grambsch and Therneau (1994) test of proportional hazards indicates that this variable may violate the proportional hazard assumption. The corresponding p-value is p=.043. As before, I interact the variable with the log-transformed dependent variable (Government Survival Time).

Figure C6: Expected Survival Rates of Three-Party and Four-Party Coalitions in a Model of Government Duration (in Days)
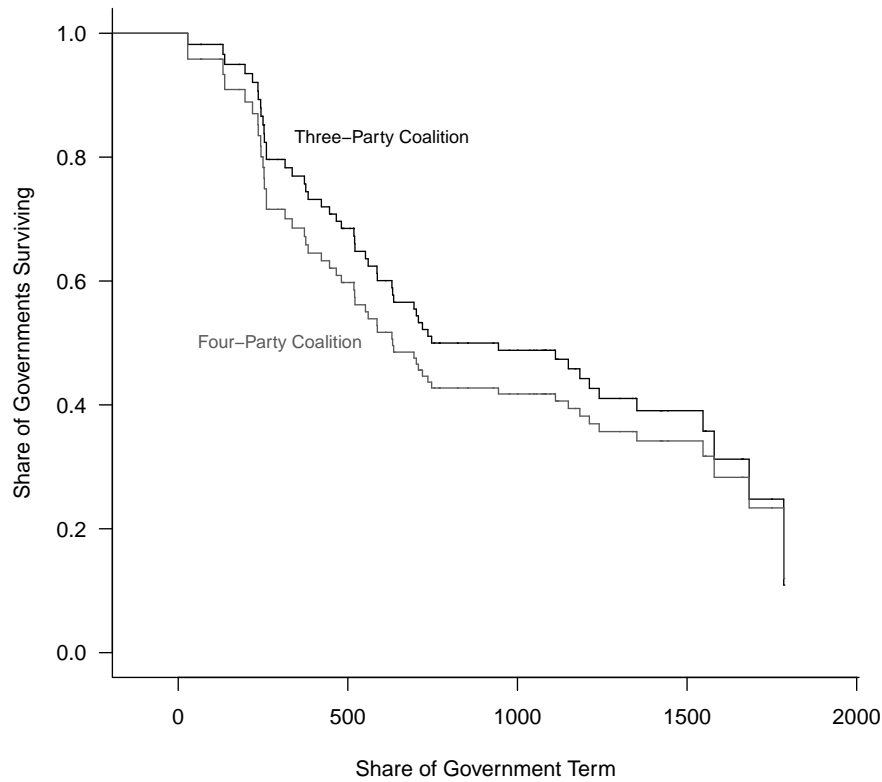
Notes: Predictions are based on Model 5 in Table 4.2 assuming majority coalitions with at least on internally democratic party and scoring 1.43 points in Ideological Divisions (sample means and medians of variables, respectively).

Dealing with Missing Data

Row 6 in Figure C3 (Model 6 in Table 4.2) shows the results for assuming that all parties with missing intra-party information are internally democratic. Row 7 (Model 7) does so for guessing that these parties are internally undemocratic. As discussed in the chapter, the effect of intra-party democracy is robust to data imputation. For the other variables, results are rather similar to the baseline

model as well even though the effect size increases for majority governments and decreases for the number of cabinet parties.

Overall, this is evidence that the conclusions drawn from the baseline model are not too much affected by listwise deletion of certain cases.

Relaxing the Proportional Hazards Assumption

Recall that the Generalized Gamma model presented in Model 8 in Table 4.2 and the bottom row of Figure C3 is parameterized in terms of accelerated failure time, whereas the Cox model is parameterized in terms of hazards.

The most striking difference between the baseline model and the Generalized Gamma model is that the statistical significance of many coefficients changes: Governments controlling a majority in parliament and coalitions with fewer parties are expected to endure statistically significantly longer. By contrast, increasing ideological divisions is no longer statistically significantly linked to government duration. Solely the statistical significance of the intra-party democracy variable remains unchanged.

Substantively, these findings indicate that either the imposition of a parametric form on the baseline hazard (which is econometrically more efficient), or the violation of the proportional hazards assumption affect our conclusions whether particular factors affect government duration. In terms of the hypotheses, however, this does not matter too much because both models' results are still in line with the hypotheses. Overall, these support the suggested theory.

In conclusion, the alternative hypotheses are supported by the empirical evidence. Moreover, they prove robust in the various sensitivity analyses. These

findings strengthen our beliefs in the theoretical argument presented in the chapter.

Table C8: List of Coalitions in Data Sample

	Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
Australia							
	Menzies V	11. May 51	29. May 54	3	0	1115	No
	Menzies VI	9. Jul 54	10. Dec 55	3	0	520	Yes
	Menzies VII	11. Jan 56	22. Nov 58	3	0	1047	No
	Menzies IIX	10. Dec 58	9. Dec 61	3	0	1096	No
	Menzies IX	22. Dec 61	30. Nov 63	3	0	709	No
	Menzies X	18. Dec 63	25. Jan 66	3	0	770	No
	Holt I	26. Jan 66	26. Nov 66	3	0	305	No
	Gorton III	12. Nov 69	9. Mar 71	3	0	483	No
	Whitlam I	19. Dec 72	18. May 74	3	0	516	No
	Whitlam II	12. Jun 74	10. Nov 75	3	0	517	No
	Fraser IV	3. Nov 80	5. Mar 83	3	0	853	No
	Hawke I	11. Mar 83	1. Dec 84	3	0	632	No
	Hawke III	24. Jul 87	24. Mar 90	3	0	975	No
Austria							
	Figl III	8. Nov 49	1. Apr 53	2	1	1241	Yes
	Raab I	2. Apr 53	28. Jun 56	2	1	1184	Yes
	Raab II	29. Jun 56	15. Jul 59	2	1	1112	Yes
	Raab III	16. Jul 59	10. Apr 61	2	1	635	Yes
	Gorbach I	11. Apr 61	26. Mar 63	2	1	715	No
	Gorbach II	27. Mar 63	1. Apr 64	2	1	372	Yes
	Klaus I	2. Apr 64	18. Apr 66	2	1	747	Yes
	Sinowatz	24. May 83	15. Jun 86	2	2	1119	No

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Table C8: List of Coalitions in Data Sample *(continued)*

Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
Vranitzky I	16. Jun 86	20. Jan 87	2	2	219	Yes
Vranitzky II	21. Jan 87	16. Dec 90	2	2	1426	No
Vranitzky III	17. Dec 90	28. Nov 94	2	2	1443	No
Belgium						
Eyskens III	6. Nov 58	24. Apr 61	2	2	901	Yes
Lefevre	25. Apr 61	26. Jul 65	2	2	1554	No
Harmel	27. Jul 65	18. Mar 66	2	2	235	Yes
Canada						
Trudeau V	3. Mar 80	29. Jun 84	3	3	1580	Yes
Turner	30. Jun 84	4. Sep 84	3	3	67	No
Mulroney II	7. Dec 88	24. Jun 93	3	3	1661	No
Campbell	25. Jun 93	25. Oct 93	3	3	123	No
Denmark						
Kampmann II	18. Nov 60	2. Sep 62	2	1	654	No
Krag I	3. Sep 62	25. Sep 64	2	1	754	No
Jorgensen IV	30. Aug 78	25. Oct 79	2	2	422	Yes
Schlüter I	10. Sep 82	9. Jan 84	4	4	487	No
Schlüter II	10. Jan 84	9. Sep 87	4	4	1339	No
Schlüter III	10. Sep 87	2. Jun 88	4	4	267	No
Schlüter IV	3. Jun 88	17. Dec 90	3	3	928	No
Schlüter V	18. Dec 90	24. Jan 93	2	2	769	No
Finland						
Koivisto II	26. May 79	18. Feb 82	4	4	1000	No

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Table C8: List of Coalitions in Data Sample (*continued*)

	Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
	Sorsa IV	19. Feb 82	30. Dec 82	4	4	315	Yes
Germany							
	Adenauer VII	7. Nov 61	15. Oct 63	2	2	708	Yes
	Erhard I	16. Oct 63	27. Oct 66	2	2	1108	No
	Kiesinger	1. Dec 66	20. Oct 69	2	2	1055	No
	Brandt I	21. Oct 69	13. Dec 72	2	2	1150	Yes
	Brandt II	14. Dec 72	15. May 74	2	2	518	Yes
	Schmidt I	16. May 74	14. Dec 76	2	2	944	No
	Schmidt II	15. Dec 76	4. Nov 80	2	2	1421	No
	Schmidt III	5. Nov 80	30. Sep 82	2	2	695	Yes
	Kohl I	1. Oct 82	28. Mar 83	2	2	179	No
	Kohl II	29. Mar 83	10. Mar 87	2	2	1443	No
Ireland							
	FitzGerald I	30. Jun 81	8. Mar 82	2	0	252	No
	FitzGerald II	14. Dec 82	9. Mar 87	2	0	1547	Yes
	Haughey IV	12. Jul 89	10. Feb 92	2	0	944	Yes
	Reynolds I	11. Feb 92	11. Jan 93	2	0	336	Yes
	Reynolds II	12. Jan 93	14. Dec 94	2	1	702	Yes
	Ahern I	26. Jun 97	15. May 02	2	0	1785	Yes
Italy							
	Fanfani IV	21. Feb 62	20. Jun 63	3	0	485	No
	Moro I	4. Dec 63	23. Jun 68	4	0	1664	No
	Rumor I	12. Dec 68	4. Aug 69	3	1	236	Yes

Table C8: List of Coalitions in Data Sample *(continued)*

	Cabinet Name	Date in	Date out	Parties	Democratic Parties	Days in Office	Event
	Rumor III	27. Mar 70	5. Aug 70	4	1	132	Yes
	Colombo	6. Aug 70	16. Feb 72	4	1	560	Yes
	Andreotti II	26. Jun 72	6. Jul 73	3	1	376	Yes
	Rumor IV	7. Jul 73	13. Mar 74	4	1	250	Yes
	Rumor V	14. Mar 74	22. Nov 74	3	0	254	Yes
	Moro II	23. Nov 74	11. Feb 76	2	2	446	Yes
	Andreotti IV	20. Mar 79	3. Aug 79	3	2	137	Yes
	Cossiga I	4. Aug 79	3. Apr 80	3	2	244	Yes
	Cossiga II	4. Apr 80	17. Oct 80	3	2	197	Yes
	Forlani	18. Oct 80	27. Jun 81	4	2	253	Yes
	Spadolini	28. Jun 81	30. Nov 82	5	4	521	Yes
	Fanfani V	1. Dec 82	3. Aug 83	4	3	246	No
	Craxi	4. Aug 83	16. Apr 87	5	5	1352	Yes
	Goria	28. Jul 87	12. Apr 88	5	5	260	Yes
	De Mita	13. Apr 88	22. Jul 89	5	5	466	Yes
Netherlands	De Quay	19. May 59	23. Jul 63	4	3	1527	No
	Marijnen	24. Jul 63	13. Apr 65	4	3	630	Yes
	Cals	14. Apr 65	21. Nov 66	3	2	587	Yes
	De Jong	5. Apr 67	5. Jul 71	4	3	1553	No
	Den Uyl	11. May 73	18. Dec 77	5	4	1683	Yes
	Van Agt II	11. Sep 81	28. May 82	3	3	260	Yes
	Lubbers I	4. Nov 82	13. Jul 86	2	2	1348	No

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Table C8: List of Coalitions in Data Sample (*continued*)

	Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
	Lubbers II	14. Jul 86	6. Nov 89	2	2	1212	Yes
	Lubbers III	7. Nov 89	21. Aug 94	2	2	1749	No
Norway							
	Lyng	28. Aug 63	24. Sep 63	4	4	28	Yes
	Borten I	12. Oct 65	6. Sep 69	4	4	1426	No
	Borten II	7. Sep 69	12. Mar 71	4	4	552	Yes
	Willoch II	8. Jun 83	7. Sep 85	3	3	823	No
	Willoch III	8. Sep 85	8. May 86	3	3	243	Yes
	Syse	16. Oct 89	2. Nov 90	3	3	383	Yes
New Zealand							
	Frazer III	20. Dec 46	30. Nov 49	2	0	1077	No
	Holland I	8. Dec 49	31. Aug 51	2	0	632	Yes
	Holland II	1. Sep 51	13. Nov 54	2	0	1170	No
	Holland III	26. Nov 54	25. Sep 57	2	0	1035	No
	Holyoake I	26. Sep 57	30. Nov 57	2	0	66	No
	Nash	11. Dec 57	26. Nov 60	2	0	1082	No
	Holyoake II	12. Dec 60	30. Nov 63	2	0	1084	No
	Holyoake III	20. Dec 63	25. Nov 66	2	0	1072	No
	Marshall	7. Feb 72	25. Nov 72	2	0	293	No
	Kirk	8. Dec 72	5. Sep 74	2	0	637	No
	Rowling	6. Sep 74	29. Nov 75	2	0	450	No
	Muldoon I	12. Dec 75	25. Nov 78	2	0	1080	No
	Lange II	19. Aug 87	7. Aug 89	2	0	720	Yes

Table C8: List of Coalitions in Data Sample *(continued)*

Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
Sweden						
Fälldin I	7. Oct 76	12. Oct 78	3	3	736	Yes
Fälldin II	11. Oct 79	18. May 81	3	3	586	Yes
Fälldin III	19. May 81	6. Oct 82	2	2	506	No

Sources: Chiba et al. (forthcoming); Döring and Manow (2012); Katz and Mair (1992); Cross and Blais (2012); Keesing's World Archive; ECPR Political Yearbooks.

Table C9: Summary Statistics of Data Used for Analysis

	Observations	Mean	Std. Dev.	Min	Max
Share of Maximal Term Served	106	0.65	0.31	0.04	1.00
Event	106	0.47	0.50	0.00	1.00
Intra-Party Democracy (Dummy)	106	0.68	0.47	0.00	1.00
Internally Democratic Parties (square root)	106	1.02	0.76	0.00	2.24
Internally Democratic Parties (+1, then logged)	106	0.79	0.61	0.00	1.79
Ideological Divisions	106	1.43	0.91	0.00	4.93
# Cabinet Parties (logged)	106	0.45	0.48	0.00	1.39
Majority Government	106	0.80	0.40	0.00	1.00
Maximal Duration log(Months)	106	6.99	0.53	4.23	7.49

Table C10: List of Coalitions in Imputed Data Sample

Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
Australia						
Chifley II	1. Nov 46	10. Dec 49	6	3	1136	No
Menzies IV	19. Dec 49	28. Apr 51	4	1	496	No
Menzies V	11. May 51	29. May 54	3	0	1115	No
Menzies VI	9. Jul 54	10. Dec 55	3	0	520	Yes
Menzies VII	11. Jan 56	22. Nov 58	3	0	1047	No
Menzies IIX	10. Dec 58	9. Dec 61	3	0	1096	No
Menzies IX	22. Dec 61	30. Nov 63	3	0	709	No
Menzies X	18. Dec 63	25. Jan 66	3	0	770	No
Holt I	26. Jan 66	26. Nov 66	3	0	305	No
Holt II	14. Dec 66	18. Dec 67	4	1	370	No
McEwen	19. Dec 67	9. Jan 68	4	1	22	No
Gorton I	10. Jan 68	25. Oct 69	4	1	655	No
Gorton III	12. Nov 69	9. Mar 71	3	0	483	No
Whitlam I	19. Dec 72	18. May 74	3	0	516	No
Whitlam II	12. Jun 74	10. Nov 75	3	0	517	No
Fraser II	22. Dec 75	10. Dec 77	4	1	720	No
Fraser III	20. Dec 77	18. Oct 80	4	1	1034	No
Fraser IV	3. Nov 80	5. Mar 83	3	0	853	No
Hawke I	11. Mar 83	1. Dec 84	3	0	632	No
Hawke II	13. Dec 84	11. Jul 87	4	1	941	No
Hawke III	24. Jul 87	24. Mar 90	3	0	975	No
Hawke IV	4. Apr 90	19. Dec 91	4	1	625	Yes

continued

Table C10: List of Coalitions in Imputed Data Sample *(continued)*

	Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
	Keating I	20. Dec 91	13. Mar 93	4	1	450	No
	Keating II	24. Mar 93	2. Mar 96	4	1	1075	No
	Howard I	11. Mar 96	3. Oct 98	5	2	937	No
	Howard II	21. Oct 98	10. Nov 01	4	1	1117	No
	Howard III	26. Nov 01	9. Oct 04	5	2	1049	No
	Howard IV	26. Oct 04	24. Nov 07	5	2	1125	No
Austria							
	Figl III	8. Nov 49	1. Apr 53	2	1	1241	Yes
	Raab I	2. Apr 53	28. Jun 56	2	1	1184	Yes
	Raab II	29. Jun 56	15. Jul 59	2	1	1112	Yes
	Raab III	16. Jul 59	10. Apr 61	2	1	635	Yes
	Gorbach I	11. Apr 61	26. Mar 63	2	1	715	No
	Gorbach II	27. Mar 63	1. Apr 64	2	1	372	Yes
	Klaus I	2. Apr 64	18. Apr 66	2	1	747	Yes
	Sinowatz	24. May 83	15. Jun 86	2	2	1119	No
	Vranitzky I	16. Jun 86	20. Jan 87	2	2	219	Yes
	Vranitzky II	21. Jan 87	16. Dec 90	2	2	1426	No
Belgium							
	Lefevre	25. Apr 61	26. Jul 65	2	2	1554	No
	Harmel	27. Jul 65	18. Mar 66	2	2	235	Yes
	Van den Boeynants I	19. Mar 66	16. Jun 68	2	2	821	Yes
	Eyskens IV	17. Jun 68	20. Jan 72	3	3	1313	No

continued

Table C10: List of Coalitions in Imputed Data Sample *(continued)*

	Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
	Eyskens V	21. Jan 72	25. Jan 73	3	3	371	Yes
	Leburton	26. Jan 73	24. Apr 74	5	5	454	Yes
	Tindemans	25. Apr 74	11. Jun 74	4	4	48	Yes
	Tindemans II	12. Jun 74	5. Mar 77	5	5	998	Yes
	Tindemans III	6. Mar 77	2. Jun 77	4	4	89	No
	Tindemans IV	3. Jun 77	19. Oct 78	5	5	504	Yes
	Martens I	3. Apr 79	22. Jan 80	5	5	295	Yes
	Martens II	23. Jan 80	17. May 80	4	4	116	Yes
	Martens III	18. May 80	21. Oct 80	6	6	157	Yes
	Martens IV	22. Oct 80	5. Apr 81	4	4	166	Yes
	M Eyskens	6. Apr 81	16. Dec 81	4	4	255	Yes
	Martens V	17. Dec 81	27. Nov 85	4	4	1442	No
	Martens VI	28. Nov 85	8. May 88	4	4	893	Yes
Canada							
	King III	11. Jun 45	14. Nov 48	8	8	1253	No
	St-Laurent I	15. Nov 48	26. Jun 49	8	8	224	No
	St-Laurent II	27. Jun 49	9. Aug 53	5	5	1505	No
	St-Laurent III	10. Aug 53	10. Jun 57	5	5	1401	No
	Diefenbaker I	21. Jun 57	30. Mar 58	5	5	283	No
	Diefenbaker II	31. Mar 58	17. Jun 62	4	4	1540	No
	Diefenbaker III	18. Jun 62	8. Apr 63	5	5	295	No
	Pearson I	22. Apr 63	8. Nov 65	4	4	932	No
	Pearson II	18. Dec 65	19. Apr 68	6	6	854	No

6 Appendix

Table C10: List of Coalitions in Imputed Data Sample (continued)

	Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
	Trudeau I	20. Apr 68	25. Jun 68	6	6	67	No
	Trudeau II	6. Jul 68	30. Oct 72	5	5	1578	No
	Trudeau III	27. Nov 72	8. Jul 74	5	5	589	Yes
	Trudeau IV	8. Aug 74	22. May 79	5	5	1749	No
	Clark	4. Jun 79	18. Feb 80	4	4	260	Yes
	Trudeau V	3. Mar 80	29. Jun 84	3	3	1580	Yes
	Turner	30. Jun 84	4. Sep 84	3	3	67	No
	Mulroney II	7. Dec 88	24. Jun 93	3	3	1661	No
	Campbell	25. Jun 93	25. Oct 93	3	3	123	No
	Chretien I	4. Nov 93	2. Jun 97	6	6	1307	No
	Chretien II	11. Jun 97	26. Nov 00	6	6	1265	No
	Chretien III	27. Nov 00	11. Dec 03	5	5	1110	Yes
	Martin I	12. Dec 03	28. Jun 04	5	5	200	No
	Martin II	20. Jul 04	23. Jan 06	5	5	553	Yes
Denmark							
	Kampmann I	21. Feb 60	17. Nov 60	3	2	271	No
	Kampmann II	18. Nov 60	2. Sep 62	2	1	654	No
	Krag I	3. Sep 62	25. Sep 64	2	1	754	No
	Baunsgaard	22. Feb 68	10. Oct 71	3	2	1327	No
	Jorgensen IV	30. Aug 78	25. Oct 79	2	2	422	Yes
	Schlüter I	10. Sep 82	9. Jan 84	4	4	487	No
	Schlüter II	10. Jan 84	9. Sep 87	4	4	1339	No
	Schlüter III	10. Sep 87	2. Jun 88	4	4	267	No

Table C10: List of Coalitions in Imputed Data Sample *(continued)*

Cabinet Name	Date in	Date out	Parties	Democratic Parties	Days in Office	Event
Schlüter IV	3. Jun 88	17. Dec 90	3	2	928	No
Schlüter V	18. Dec 90	24. Jan 93	2	2	769	No
Finland						
Kekkonen III	20. Sep 51	8. Jul 53	3	3	658	Yes
Kekkonen IV	9. Jul 53	4. May 54	2	2	300	Yes
Törngren	5. May 54	19. Oct 54	3	3	168	Yes
Fagerholm II	3. Mar 56	1. Sep 57	4	4	548	Yes
Fagerholm III	29. Aug 58	12. Jan 59	5	5	137	Yes
Karjalainen I	13. Apr 62	17. Dec 63	4	3	614	Yes
Virolainen	12. Sep 64	26. May 66	4	3	622	No
Paasio I	27. May 66	21. Mar 68	4	3	665	No
Koivisto I	22. Mar 68	13. May 70	5	5	783	No
Karjalainen IIa	15. Jul 70	25. Mar 71	5	5	254	Yes
Karjalainen IIb	26. Mar 71	28. Oct 71	4	4	217	Yes
Sorsa I	4. Sep 72	12. Jun 75	4	4	1012	Yes
Miettunen II	30. Nov 75	28. Sep 76	5	5	304	Yes
Miettunen III	29. Sep 76	14. May 77	3	3	228	Yes
Sorsa II	15. May 77	1. Mar 78	5	5	291	No
Sorsa III	2. Mar 78	25. May 79	4	4	450	No
Koivisto II	26. May 79	18. Feb 82	4	4	1000	No
Sorsa IV	19. Feb 82	30. Dec 82	4	4	315	Yes
Sorsa V	31. Dec 82	5. May 83	4	4	126	No
Sorsa VI	6. May 83	29. Apr 87	4	4	1455	No

Table C10: List of Coalitions in Imputed Data Sample *(continued)*

	Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
	Holkeri a	30. Apr 87	27. Aug 90	4	4	1216	Yes
Germany							
	Adenauer V	22. Oct 57	1. Jul 60	2	2	984	Yes
	Adenauer VII	7. Nov 61	15. Oct 63	2	2	708	Yes
	Erhard I	16. Oct 63	27. Oct 66	2	2	1108	No
	Kiesinger	1. Dec 66	20. Oct 69	2	2	1055	No
	Brandt I	21. Oct 69	13. Dec 72	2	2	1150	Yes
	Brandt II	14. Dec 72	15. May 74	2	2	518	Yes
	Schmidt I	16. May 74	14. Dec 76	2	2	944	No
	Schmidt II	15. Dec 76	4. Nov 80	2	2	1421	No
	Schmidt III	5. Nov 80	30. Sep 82	2	2	695	Yes
	Kohl I	1. Oct 82	28. Mar 83	2	2	179	No
	Kohl II	29. Mar 83	10. Mar 87	2	2	1443	No
Ireland							
	Ahern II	6. Jun 02	24. May 07	8	7	1814	No
	Ahern III	14. Jun 07	6. May 08	7	6	328	Yes
	Cowen	7. May 08	25. Feb 11	7	6	1025	No
Italy							
	Fanfani II	1. Jul 58	14. Feb 59	2	1	229	Yes
	Fanfani IV	21. Feb 62	20. Jun 63	3	0	485	No
	Moro I	4. Dec 63	23. Jun 68	4	0	1664	No
	Rumor I	12. Dec 68	4. Aug 69	3	1	236	Yes
	Rumor III	27. Mar 70	5. Aug 70	4	1	132	Yes

Table C10: List of Coalitions in Imputed Data Sample *(continued)*

	Cabinet Name	Date in	Date out	Parties	Democratic Parties	Days in Office	Event
	Colombo	6. Aug 70	16. Feb 72	4	1	560	Yes
	Andreotti II	26. Jun 72	6. Jul 73	3	1	376	Yes
	Rumor IV	7. Jul 73	13. Mar 74	4	1	250	Yes
	Rumor V	14. Mar 74	22. Nov 74	3	0	254	Yes
	Moro II	23. Nov 74	11. Feb 76	2	2	446	Yes
	Andreotti IV	20. Mar 79	3. Aug 79	3	2	137	Yes
	Cossiga I	4. Aug 79	3. Apr 80	3	2	244	Yes
	Cossiga II	4. Apr 80	17. Oct 80	3	2	197	Yes
	Forlani	18. Oct 80	27. Jun 81	4	2	253	Yes
	Spadolini	28. Jun 81	30. Nov 82	5	4	521	Yes
	Fanfani V	1. Dec 82	3. Aug 83	4	3	246	No
	Craxi	4. Aug 83	16. Apr 87	5	5	1352	Yes
	Goria	28. Jul 87	12. Apr 88	5	5	260	Yes
	De Mita	13. Apr 88	22. Jul 89	5	5	466	Yes
	Andreotti V	23. Jul 89	12. Apr 91	5	5	629	No
Netherlands							
	De Quay	19. May 59	23. Jul 63	4	3	1527	No
	Marijnen	24. Jul 63	13. Apr 65	4	3	630	Yes
	Cals	14. Apr 65	21. Nov 66	3	2	587	Yes
	De Jong	5. Apr 67	5. Jul 71	4	3	1553	No
	Biesheuvel I	6. Jul 71	8. Aug 72	5	4	400	Yes
	Den Uyl	11. May 73	18. Dec 77	5	4	1683	Yes
	Van Agt I	19. Dec 77	10. Sep 81	2	2	1362	No

continued

Table C10: List of Coalitions in Imputed Data Sample *(continued)*

	Cabinet Name	Date in	Date out	Parties	Democratic	Days in Office	Event
	Van Agt II	11. Sep 81	28. May 82	3	3	260	Yes
	Lubbers I	4. Nov 82	13. Jul 86	2	2	1348	No
	Lubbers II	14. Jul 86	6. Nov 89	2	2	1212	Yes
	Lubbers III	7. Nov 89	21. Aug 94	2	2	1749	No
Norway							
	Lyng	28. Aug 63	24. Sep 63	4	4	28	Yes
	Borten I	12. Oct 65	6. Sep 69	4	4	1426	No
	Borten II	7. Sep 69	12. Mar 71	4	4	552	Yes
	Willoch II	8. Jun 83	7. Sep 85	3	3	823	No
	Willoch III	8. Sep 85	8. May 86	3	3	243	Yes
	Syse	16. Oct 89	2. Nov 90	3	3	383	Yes
New Zealand							
	Frazer III	20. Dec 46	30. Nov 49	2	0	1077	No
	Holland I	8. Dec 49	31. Aug 51	2	0	632	Yes
	Holland II	1. Sep 51	13. Nov 54	2	0	1170	No
	Holland III	26. Nov 54	25. Sep 57	2	0	1035	No
	Holyoake I	26. Sep 57	30. Nov 57	2	0	66	No
	Nash	11. Dec 57	26. Nov 60	2	0	1082	No
	Holyoake II	12. Dec 60	30. Nov 63	2	0	1084	No
	Holyoake III	20. Dec 63	25. Nov 66	2	0	1072	No
	Holyoake IV	26. Nov 66	29. Nov 69	3	1	1100	No
	Marshall	7. Feb 72	25. Nov 72	2	0	293	No
	Kirk	8. Dec 72	5. Sep 74	2	0	637	No

continued

Table C10: List of Coalitions in Imputed Data Sample *(continued)*

	Cabinet Name	Date in	Date out	Parties	Democratic Parties	Days in Office	Event
	Rowling	6. Sep 74	29. Nov 75	2	0	450	No
	Muldoon I	12. Dec 75	25. Nov 78	2	0	1080	No
	Muldoon II	12. Dec 78	28. Nov 81	3	1	1083	No
	Muldoon III	11. Dec 81	14. Jul 84	3	1	947	No
	Lange I	26. Jul 84	15. Aug 87	3	1	1116	No
	Lange II	19. Aug 87	7. Aug 89	2	0	720	Yes
	Palmer	8. Aug 89	3. Sep 90	3	1	392	Yes
	Moore	4. Sep 90	27. Oct 90	3	1	54	No
	Bolger I	2. Nov 90	6. Nov 93	3	1	1101	No
	Bolger II	28. Nov 93	29. Feb 96	4	1	824	No
	Bolger IV	16. Dec 96	7. Dec 97	6	2	357	Yes
	Shipley I	8. Dec 97	13. Aug 98	6	2	249	Yes
	Shipley II	14. Aug 98	27. Nov 99	7	3	471	No
	Key I	19. Nov 08	25. Nov 11	7	4	1102	No
Sweden							
	Fälldin I	7. Oct 76	12. Oct 78	3	3	736	Yes
	Fälldin II	11. Oct 79	18. May 81	3	3	586	Yes
	Fälldin III	19. May 81	6. Oct 82	2	2	506	No
UK							
	Blair III	6. May 05	26. Jun 07	11	11	782	Yes
	Brown	27. Jun 07	6. May 10	11	11	1045	No

Sources: Chiba et al. (forthcoming); Döring and Manow (2012); Katz and Mair (1992); Cross and Blais (2012); Keesing's World Archive; ECPR Political Yearbooks.

Table C11: Summary Statistics of Imputed Data Used for Analysis

	Observations	Mean	Std. Dev.	Min	Max
Share of Maximal Term Served	200	0.64	0.32	0.03	1.00
Event	200	0.44	0.50	0.00	1.00
Intra-Party Democracy Dummy (when guessing 1)	199	0.83	0.38	0.00	1.00
Intra-Party Democracy Dummy (when guessing 0)	200	0.67	0.47	0.00	1.00
Majority Government	200	0.86	0.34	0.00	1.00
# Cabinet Parties (logged)	200	0.80	0.59	0.00	2.30
Ideological Divisions	200	1.72	0.99	0.00	4.93

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