The political consequences of coalition governments : multiparty cabinets and accountability

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Abstract: La tesis fue defendida en la Universidad Complutense de Madrid, bajo la dirección de José María Maravall. La tesis estudia cómo opera el voto retrospectivo que juzga la tarea realizada por el gobierno en el contexto de los gobiernos de coalición. ¿Cómo se asignan responsabilidades en ese caso? ¿Qué partidos, de los que forman la coalición, son recompensados, y cuáles son castigados? ¿Cómo se reparten premios y castigos? La investigación se basa en una base de datos original rigurosa y exhaustiva que abarca todos los gobiernos en 22 democracias parlamentarias de la OCDE entre 1945 y 2006. El principal resultado del estudio es que los votantes premian o castigan en función de los resultados económicos en las coaliciones sólo al partido del primer ministro, con independencia de su tamaño. Incluso si el primer ministro pertenece a un partido minoritario en la coalición, es este partido el que se lleva tanto los beneficios como los costes de los resultados económicos. El resto de los partidos son juzgados según criterios que desconocemos.

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THE POLITICAL CONSEQUENCES OF COALITION GOVERNMENTS: MULTIPARTY CABINETS AND ACCOUNTABILITY

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To my family.
Especially to my grandmother, who will never see what I did

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Chapter 1

Introduction

> "A coalition is like a mule. It has no pride of ancestry and no hope of posterity"
>
> James Callaghan. British Prime Minister, Chancellor of the Exchequer, Home Secretary and Foreign Secretary

In 1998, the German Socialist Party (SPD) and the Green Party formed the first red-green german coalition. It was the first time that these parties agreed to form a coalition cabinet. Four years later, the SPD lost 2.43 percentage points of total support whereas the Greens won 1.91 percentage points. Moreover, in spite of these electoral results, after the 2002 elections, both incumbent parties continued holding the cabinet. During that legislature, the GDP growth fell from 2% in 1998 to 0% in 2002,[1] inflation increased from 0.93% to 1.59% and unemployment dropped from 8.1% to 7.7%. The electoral results are intriguing because both parties faced the same problems, but their electoral payoffs differed: the small party was rewarded while the big one lost electoral support.

[1] Source: Eurostat

Therefore, it seems to me that the SPD were blamed by the electorate for the poor economic performance. Thus, we may wonder: why have these electoral results ocurred? Or, to put it another way, if both incumbent parties were responsible for economic performance, how do we explain the voters' behavior? The second question that emerges is: if one party was penalized and the other was rewarded, why did both parties continue holding the cabinet after the elections? These questions frame this dissertation. But, in order to address this apparent conundrum, we ought to start at the beginning of the story.

1.1 The argument

For a long time, philosophers and social scientists have wondered how citizens can protect themselves from the power of the governing class. In order to do that, democratic regimes have established control mechanisms that restrict the freedom of politicians. The mechanisms at play may be twofold: vertical and horizontal. Vertical mechanisms suggest that citizens control politicians through elections. Horizontal mechanisms refer to the control between institutions: the legislative controls the executive, constitutional courts control legislation and so on. Nevertheless, if we combine both types of mechanisms, sometimes the outcomes may be unsatisfactory. When does it occur? To answer this question, we need to know how those mechanisms work.

Elections have been studied from two points of view: as mechanisms of sanction and as mechanisms of selection. The first school argues that elections are mechanisms for assigning responsibilities. Thus, citizens use the past, the incumbent's performance, to judge the politicians. In the second school of thought, scholars have argued that the most relevant feature is selection. Thus, people use elections as mechanisms for choosing between different kinds of politicians. In this scenario, the incumbent's performance does

not matter.

As mentioned above, horizontal mechanisms entail the control between powers. These mechanisms are a matter of degree. It means that there are different types of division powers. Let's assume that we may classify them on an axis. In one extreme we would find a perfect separation between the three branches of power: legislative, executive and judiciary. That is, the three branches would be independent and they would not maintain any relation between them. At the other extreme we would find the opposite case: the three branches encroach on each other. In this scenario, each power would counterbalance the others. In between these extremes, we would find varying models of division of powers.

A problem arises when we assume that elections are a question of assigning responsibilities and the distribution of powers is not clear (Powell and Whitten 1993; Powell 2000; Nadeu, Niemi, and Yoshinaka 2002; Bengtsson 2004). Scholars have concluded that "if citizens in a democracy cannot identify responsibility for policy, they cannot use elections precisely to hold policymakers re-trospectively accountable for their actions" (Powell 2000, 51). Thus, divided power may be a challenge for elections as mechanisms for accountability.

Moreover, we may consider another scenario where power is divided within a branch. That is, the division of power is not just produced between institutions; it is produced within institutions. As in the case of coalition governments. In this example, several parties share power and it is not therefore absolutely clear who is responsible for the policies. At this point, the previously mentioned problem appears again. Thus, the consensus of academic literature on elections and coalition governments was that voters are not able to assign responsibilities to multiparty cabinets. This hypothesis has been termed as 'clarity of responsibility' and it is commonly discussed in the literature (Lewis-Beck 1986; Lewis-Beck 1988; Powell and Whitten 1993; Mershon 1996; Bosch, Díaz,

and Riba 1999; Przeworski, Stokes, and Manin 1999; Whitten and Palmer 1999; Anderson 2000; Powell 2000; Mershon 2002; Nadeu, Niemi, and Yoshinaka 2002; Strom, Bergman, and Muller 2003; Bengtsson 2004). However, as we shall see in this dissertation, far from this issue being settled, several loose ends remain that require explanation.

The first open question is that we do not know exactly how accountability works in coalition governments. Scholars have not developed theoretical arguments that explain how voters behave when they pass judgement on this type of cabinet. Researchers have assumed, for example, that voters may not know who is in charge of formulating specific policies. However, they have not developed the causal mechanisms that explain that theoretical outcome. For instance, they do not explain how citizens may weigh up information when they consider the fate of coalition governments.

The second issue that is considered by this dissertation, is that of the electoral results of incumbent parties, as single actors. Perhaps, this is the principal oversight that is observable in studies of voting behavior and accountability. Most scholars analyze the cabinet as if it is a single actor and they do not take into account the intra-government electoral results. Thus, they contrast government and opposition, considering each as single actors (Lewis-Beck 1986; Lewis-Beck 1988; Norpoth, Lewis-Beck, and Lafay 1991; Powell and Whitten 1993; Whitten and Palmer 1999; Powell 2000; Nadeu, Niemi, and Yoshinaka 2002; Barreiro 2007; Bengtsson 2004). However, if we want to more appropriately study accountability, we ought to consider political parties themselves as the object of study and even more so when cabinets are formed by two or more parties. Accountability is a question about parties, not about governments. Therefore, any study of accountability ought to consider parties as the main actors.

Thirdly, academics have dealt with cabinet dissolution but the result has not been very satisfactory (Browne, Frendreis, and Gleiber

1988; King, Alt, Burns, and Laver 1990; Lupia and Strom 1995; Laver and Shepsle 1998). For instance, scholars have not analyzed how party survival and accountability are related, considering both concepts as synonymous (Przeworski, Stokes, and Manin 1999, 225). However, each concept entails different processes, actors and outcomes. Thus, we need to build a theory that distinguishes both concepts and explains how they are related. Moreover, as we shall see later, the causal mechanisms of the relationship between survival and accountability depend on the type of government.

In sum, this research seeks to address these academic gaps and to provide answer that explain the electoral results of incumbent parties and their survival. Thus, the questions that arise are: Who wins and who loses after a multiparty cabinet? Who survives? And, why?

1.2 Research Strategy

To answer these questions, I have developed my own database. I have collected information on all governments during the last 60 years in 22 OECD parliamentary democracies.[2] Using that database, I have developed two different empirical methods of analysis. In the first part of my research, I study the process of assigning responsibilities to politicians. At this point, the dependent variable is the electoral results of incumbent parties, measured as electoral gains or losses. The main aim is to analyze what factors explain why incumbent parties improve or worsen their voters' support, considering the type of government. Or, in other words, I study whether the electoral results of coalition parties are affected by the same as single party cabinets.

[2] The countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom

But, what factors may explain the electoral support of incumbent parties? In the literature, the prevailing school of thought is known as 'economic voting'. The main idea is that the electorate punishes or rewards politicians based on the state of the economy and their policies. Therefore, economic variables are the key factors that explain the electoral gains and losses. However, as we shall see in this dissertation, that theory is not entirely convincing. On the one hand, the empirical evidence is poor. On the other, it considers few political variables when it tries to explain a political outcome. For that reason, I shall develop a research strategy that analyze economic voting clearly, by considering the main actors -the parties-. Moreover, I shall introduce several political factors that may affect economic voting. For instance, does the type of portfolio play any role in the process of assigning responsibilities? Or, does the ideological distance between coalition parties have an influence on accountability? In the following chapters, I shall try to throw light on these questions.

In the second empirical analysis, I study why some parties are able to continue holding power whereas other parties do not survive after elections. Here the dependent variable is categorical and measures either the survival or the surrendering of the power after the citizens' judgement. In the literature, that outcome has been explained as the result of a triangular agency relationship between politicians, voters and party members (Maravall 2007b). How does it work? On the one hand, as we have seen previously, voters control politicians and use elections for punishing or rewarding them. Those electoral results may influence the decision of holding the cabinet. On the other hand, politicians are controlled by party members as well and the party plays an important role in the process of forming a new government. Moreover, depending on the type of party organization, its control will vary.

However, in the case of coalition governments, a new actor appears: coalition partners. In this scenario, the triangular agency re-

lationship becomes quadrangular. It involves multiparty cabinets, in which formation of a cabinet involves more actors and survival after an election may be more complicated. How this quandrangular agency relationship might work is one of main questions of this research. Moreover, I have made an effort to measure these relationships, creating variables that may explain why some parties survive and others give up.

In sum, this dissertation tries to fill the academic gaps that I outlined above. In order to meet the objectives, I have developed two empirical research strategies. Moreover, these statistical analyses are accompanied by theoretical arguments that explain the causal mechanisms. Therefore, the research strategy combines theory and empirical analysis.

1.3 The structure of the dissertation

This dissertation is divided into three sections. First, I present the theory (chapters 2 and 3). Chapter 2 reviews the literature and summarizes the most important academic debates. In this chapter, I firstly present how control mechanisms -vertical and horizontal- work and the problems that we find. Part of these problems affects coalition governments as well. However, in spite of the large amount of literature about multiparty cabinets, I argue that scholars have fully not resolved the main questions surrounding them. Subsequently, I develop a general theory about party systems and accountability. If accountability is a question about parties, we need to know whether the type of party system affects the process of assigning responsibilities. Chapter 3 deals with the theoretical model and presents the causal mechanisms. In order to meet the objectives, I have developed a formal model that comes from the economic literature of contract theory. Moreover, some of these arguments are extended to multiparty cabinets. Information and opposition will play a key role.

The second section of the dissertation details the development of the database and the methodology (chapter 4). In this part of the dissertation I present the dependent and independent variables: how I measure them and their source of information. Futhermore, I briefly explain the use of statistical models. I argue that a problem of self-selection bias appears (Przeworski 2007). What does this mean in effect? The database has been created randomly and it is a good sample of reality. However, the world is not random and the origin of any object has an explanation. Perhaps we do not observe the factors that explain that origin, but they exist. For that reason, I ought to correct that self-selection bias using Heckman models.

The third section (chapters 5 and 6) develops the empirical research and tests the validity of the theory presented in chapters 2 and 3. Chapter 5 analyzes the electoral consequences of multiparty cabinets and compares them with single party governments. Using my database, I scrutinize what factors explain electoral results and whether incumbent parties are accountable to citizens. If the aca-demic's argument were correct, economic variables would be the only explanation required to understand the electoral gains and losses of single party governments. However, in the case of coalition go-vernments, we would not observe any relationship between the state of the economy and the electoral results. Moreover, I introduce political variables that may give us a complete picture of the process of assigning responsibilities. Thus, the type of portfolio, the party size and the ideological distance between coalition parties may help us to explain how accountability works in multiparty cabinets.

Chapter 6 analyzes incumbent survival. Which incumbent parties continue holding the government after elections? Using my database, I check why some parties survive elections and why others are forced to surrender government. In the same way as in the previous chapter, I test whether there are differences between single-party and coalition governments. The main theoreti-

cal idea is that multiparty cabinets are controlled by more actors than single-party government.

In both empirical chapters, I shall use several dependent variables that measure the same political consequences, considering different assumptions. There are various ways of measuring the electoral results and survival that include, for example, the calculation of the electoral results from actual votes cast or from the total number of eligible voters. In sum, the main aim is to present different perspectives of the same facts, looking for the most complete picture of the analysis.

Finally, the last chapter summarizes the main conclusions and raises new issues. As we shall see, the implications of this dissertation open new questions for future research.

Chapter 2

The Theoretical Puzzle: Making Coalition Governments Work

> "Unable to make a unique partisan attribution of responsibility, the voter does not take economics into account"
>
> Michael S. Lewis-Beck. *Economics and Elections. The major Western Democracies*

> - Yes, people will more easily grin and bear the reforms from a big coalition
>
> Klaus Zimmermann, President of German Institute for Economic Research. *El País 10/2/2005*

One of the main questions in the classical liberal theory of democracy is how citizens may protect themselves from the despotism of the governing class (Montesquieu 1949; Hamilton, Madison, and Jay 1961; Locke 1990). The problem arises once the power of the state has been established because it has no incentives for

self-restraint. Thus, institutional frameworks have emerged in democracies in order to protect people from the power of the government. In democratic regimes, the institutional designs contain control mechanisms that restrict the freedom of the governing class. These mechanisms help ensure that politicians explain their decisions to citizens and institutions. These control mechanisms may be differentiated into two types: horizontal and vertical (Maravall and Przeworski 2003, 9). Horizontal mechanisms constitute the control between institutions: parliament controls the government, judges control politicians and so on. On the other hand, vertical mechanisms theoretically mean that people control politicians through elections. Nevertheless, the working of these control mechanisms is not simple.

2.1 Horizontal mechanism: the division of powers

One of most well-known debates in the Federalist papers is the necessity of establishing a division of powers in the American constitution.[1] The main target of this institutional framework is to preserve the liberty of the people. In Madison's words:

> "The accumulation of all powers, legislative, executive, and judiciary, in the same hands, whether of one, a few, or many, and whether hereditary, self-appointed, or elective, may justly be pronounced the very definition of tyranny." Madison. No 51. *The Federalist Papers*

However, division of powers is a matter of degree (Manin 1994). Classical thinkers such as Locke (1990) or Montesquieu (1949) argue that the three branches of powers -executive, legislative and

[1] For more information on this debate, see Fernandez-Albertos (2005)

judiciary- should be separated. That is, the three branches should be independent and not maintain any relation between them: they ought to be unconnected with each other. Thus, any two institutions would not be led by the same person, and they would not deal with the same subjects. The main idea is that there is no communication between the three powers. It is known as the separation of powers.

Nevertheless, as Madison pointed up, "there is not a single instance in which the several departments of power have been kept absolutely separate and distinct" (Hamilton, Madison, and Jay 1961, 304). Madison analyzed thirteen constitutions of the confederation[2] and he found that the states did not establish strict models of separation of powers.[3] Madison observed a 'mixture' of powers. The branches encroached on each other and shared responsibility for some of the same areas. The main aim is that each institution counterbalances the other institutions: the legislative appoints the executive, executive and legislative councils appoint the members of the judiciary, judges revise the laws and so on. In this model of the division of powers, the three branches are not isolated and, in fact, cooperate. This institutional design has been coined 'checks and balances'.

After defining the main models of division of powers, we have to consider two important issues: who appoints the institutions and which subjects the institutions deal with. As I have illustrated in the previous paragraphs, the main difference between separation of powers and 'checks and balances' is the responsibility over competences. In the case of separation of powers, institutions are

[2] New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina and Georgia (Hamilton, Madison, and Jay 1961, 304-307)

[3] There is only one case in which constitution established a strict separation of powers: the constitution of Massachusetts. However, as Madison showed, in fact the working of these institutions "violated the rule established by themselves" (Hamilton, Madison, and Jay 1961, 305)

independent and they do not share any subjects: they are isolated. However, in the case of 'checks and balances', the main feature is that institutions counterbalance other institutions. In this case, the branches share some duties. Thus, the issue of subjects is different for each model, although they produce the same result: none of the branches have enough power to restrict the liberty of people. Therefore, the division or share-out of competences is a necessary condition, although it is not sufficient to guarantee the freedom of citizens.

The second factor that allows division of powers to work is the question of appointment: who appoints who? For instance, in a parliamentary democracy people elect deputies while parliament appoints the government and so on. If the main aim is to avoid the despotism of the ruling class, the problem may arise that all branches are appointed by the same majority and the division of powers does not produce a conflict of interests. If the interests of the three branches collude, the division of powers does not work appropriately. In sum, in horizontal mechanisms, a second relevant issue is: who appoints who?

When an institution is formed, two variables are important: the electorate and the rules. If two different institutions share the same electorate and rules, the resulting majority will be the same. Therefore, the appointment will not produce a conflict of interest. For instance, we can think about a bicameral system: congress and the senate. If both chambers are appointed by the same electorate, following the same rules, the outcome will be identical. Thus, to have two chambers would be irrelevant. In sum, the appointment of institutions is the second 'leg' of the institutional framework. It leads to the second control mechanism: election.

2.2 Vertical mechanism: elections

Contemporary democracies are defined by elections: citizens choose politicians. If elections are important in the theory of democracy, it is because they pursue two goals: the control and selection of politicians (Przeworski, Stokes, and Manin 1999). Control implies the possibility of sanction, whereas to select means to choose 'good types'. These two objectives summarize the two perspectives of elections in the academic literature.

The Founders of the American constitution did not see any conflict between these two views. They viewed elections as a mechanism of concurrently selecting 'good types' and maintaining responsibility. On the one hand, elections were described as an instrument for selecting the 'natural aristocracy', or the 'virtuous government'. Therefore, when federalists instituted elections, they wanted to create a mechanism that permitted people to select the best: "a few of the members, as happens in all such assemblies, will possess superior talents" (Hamilton, Madison, and Jay 1961, 335) or "a small number of persons, selected by their fellow-citizens from the general mass, will be most likely to possess the information and discernment requisite to so complicated an investigation" (Hamilton, Madison, and Jay 1961, 412). These elite would look for the 'common good'. Thus, in Madison's words, "the aim of every political constitution is, or ought to be, first to obtain for rulers men who possess most wisdom to discern, and most virtue to pursue, the common good of the society" (Hamilton, Madison, and Jay 1961, 350). On the other hand, federalists also considered elections to be a mechanism of holding politicians to account. Thus, virtuosity was not sufficient as a mechanism to protect the liberty of the people. Elections ought to guarantee responsibility too: "the means relied on in this form of government for preventing their degeneracy are numerous and various..... as will maintain a proper responsibility to people" (Hamilton, Madison, and

Jay 1961, 351) or, in other words, "the want, in some important cases, of a due responsibility in the government to the people, arising from that frequency of elections which in other cases produces this responsibility" (Hamilton, Madison, and Jay 1961, 383). To sum up, classics considered that elections have two aims, to select and to control, and there were not in conflict.

2.2.1 Selecting 'good types'

The current literature in the field of political science picks up the 'gauntlet' thrown down by the classics. Contemporary scholars have developed formal models where selection and distinction are the main feature of elections (Downs 1957; Harrington 1993). They are known as prospective models of voting. These models assume that voters look to the future and they entrust a program. Politicians are supposed to implement this electoral manifesto. The main assumption is that politicians are distinctive: there is a feature that distinguishes them from the rest of the candidates. In these models, voters may differentiate between politicians, taking into account a criterion of selection. Each model has established a criterion that differentiates politicians. If this criterion is observed, the voter will support the candidate. Therefore, prospective models of voting argue that people select politicians according to a criterion of distinction.

In prospective models of voting, the main difference between them is the criterion of distinction. In the case of Downs' model, electors compare the incumbent's policies with the opposition's hypothetical actions if they were in government (Downs 1957, 45). Down's criterion constitutes policies. Harrington (1993) points out that the criterion of distinction consists of 'preferences': electors believe in politicians' promise because they share preferences about policies. And finally, Fearon's model continues with the tradition of 'good types'. These 'good types' are politicians who share voters' policy preferences, who are competent, and who have moral

integrity (Przeworski, Stokes, and Manin 1999, 77). But, how do voters distinguish 'good types' from 'bad types'? According to Fearon, electors use signals. One of these signals is incumbent performance. Another signal is 'preferences'. Thus, voters support governments that get good performance and share electors' interests. If voters just consider performance, then the 'bad type' will have incentives for appearing good (Przeworski, Stokes, and Manin 1999, 78). Therefore, Fearon's favored criteria are performance and policy preferences.

However, prospective models of voting present problems (Ferejohn 1986; Przeworski, Stokes, and Manin 1999). First, once politicians are in government, there are no instruments that force parties to carry out their pledge. The threat of future elections may be considered an instrument. However, politicians may argue that there were changes in circumstance that justified their failure to keep their promises. Thus, we find problems of enforcement and monitoring (Ferejohn 1986). The second problem that arises, is 'adverse selection'. Voters are unsure about the real candidates' characteristics and this generates two problems. First, if 'good types' do not find the political market attractive.[4] only 'bad types' will run for election. As we shall see in the theoretical model, this affects the participation constraint. Second, because of asymmetric information, citizens may not distinguish 'good types' from 'bad types'. Hence, in both cases, the probability of selecting a 'bad type' would increase.

2.2.2 When elections imply sanction

There is an alternative view of election as a prospective mechanism: accountability. As I said above, classic academics considered this possibility too. However they did not recognize that these two views of elections were in conflict. As we shall see bellow, accoun-

[4] For instance, incentives for reelection.

tability models imply different assumptions to those of prospective models.

The current literature on political science has offered several definitions of elections as mechanisms of sanctioning (Pitkin 1967; Fiorina 1981; Przeworski, Stokes, and Manin 1999; Strom, Bergman, and Muller 2003). For instance, Pitkin pointed out that: "a representative is someone who is to be held accountable, who will have to answer to another for what he does. The man or men to whom he must eventually account are those who represent" (Pitkin 1967, 55). If we take into account the broad range of definitions and use principal-agent theory, an agent would be accountable when the principal could punish or reward her because of her performance. Thus, with complete information, a principal can observe the agent's performance and then, decide either to support or reject the agent. Therefore, the main objective of an election is to sanction: the principal has the capacity of 'fining' the incumbent. In accountability models, the main assumption is that politicians are alike or, in other words, that there is no distinction between candidates. If previous models were known as prospective models of voting, elections as mechanisms of accountability have been described as retrospective models of voting.

Moreover, as we shall see in the following pages, we should distinguish accountability from survival in government. In a parliamentary democracy, accountability does not necessarily mean to survive in power.[5] Accountability is the capacity of punishment. However, to survive in government means to continue holding the responsibility to govern. Sometimes, these two facts can work together, or they can work separately. Perhaps one example may clarify this issue. Take, for example, a parliamentary democracy

[5] On this point, Cheibub and Przeworski's study (Przeworski, Stokes, and Manin 1999) may be mistaken. When they analyze the survival of the 'chiefs of executive' in 135 countries, they argue that accountability is being studied. However, in some cases accountability and survival in the government are separate issues.

that has more than two parties. The support for incumbent party A will not necessarily mean that party A will continue in government. Voters can lose direct influence on who forms the government. Sometimes it has been the case that the majority party is in opposition. Why? Because in parliamentary democracies, votes are not necessarily translated into a particular party in government, even though the majority of voters may have supported them. Perhaps, Swaan is right when he affirms that at this moment, the vote loses its 'rationality' (Swaan 1973, 290).

Accountability may be defined as the criterion of re-election.[6] Which criterion does the principal use for supporting the agent? The majority of the models assume that there is a 'threshold of well-being', k_t, which guarantees re-election (Ferejohn 1986; Persson and Tabellini 2000; Adsera, Boix, and Payne 2003; Przeworski 2003). Citizens will support the incumbent if she achieves the minimum threshold value k_t, otherwise electors will punish her. Thus, in these models the criterion of sanctioning is a threshold of well-being. As Maravall says, "their threshold for re-electing the incumbent will be arbitrary" (Maravall 2007a, 18). Hence, "voters will punish the government at the polls when economic performance is poor" (Maravall 2007a, 23). The question that arises is: what is 'poor'? Nevertheless, this is not an unique criterion of punishing or regarding incumbents. Barro's model assumes that an office-holder would be re-elected if the public spending was equal to voters' preferences of public output (Barro 1973). Now, the

[6] Re-election is an important issue. If politicians do not have incentives for re-election, accountability will not work. Or in Barro's words: "the electoral process is an instrument which, through the threat of non-reelection, can be used to induce the officeholder to" (Barro 1973, 26) act as voters' desires. What are these incentives? The earnings that politicians extract (Barro 1973; Adsera, Boix, and Payne 2003; Przeworski 2003), the value of office (Ferejohn 1986) or the value of the state of the world (Ferejohn 1986) are incentives for politicians. If they are not favorable to their interests, politicians will not invest effort in reelection.

criterion of sanctioning is public spending. In Austen-Smith and Banks' models (1988, 1989), incumbent would be re-elected if policy outcomes and electoral promises matched up. Otherwise, if voters observed large disparities, they would vote for the challenger. Hence, the criteria of sanctioning are policies and promises (Austen-Smith and Banks 1988; Austen-Smith and Banks 1989, 128).

Hence, each model establishes its criterion. If we analyze the criteria of punishing and rewarding, we shall observe that the authors establish a relationship between economic variables and electoral support. Thus, most of scholars focus on economic criterion. Or, in other words, the main idea is that "economic conditions have an enduring place in the voter calculus" (Lewis-Beck 1986, 104). However, the empirical evidence does not correlate well with this idea. First, as Susan Stokes (1996) pointed out, poor economic performance can produce electoral reward when people expect an optimistic future. Or, vice versa, a good economic performance can produce electoral punishment when citizens expect a pessimistic future (Stokes 1996). Therefore, accountability is not explained by a simple association between past economic performance and electoral outcomes. Stokes argued that models ought to consider voter's expectation of the future and the administration of the policies.

Secondly, Cheibub and Przeworski (1999) also argue that the survival of the prime minister's party does not depend on economic performance. They suggest that labor force growth, as a proxy of unemployment, is the single most important variable that affects electoral results (Przeworski, Stokes, and Manin 1999, 227-229). However, as I said above, survival in the government is not necessarily equivalent to accountability. Nevertheless, Cheibub and Przeworski's findings introduce more uncertainty in the studies of voting.

Thirdly, we know that in parliamentary democracies the sur-

vival of "prime ministers depends in one half of the cases on decisions by politicians, not by voters" (Maravall 2007a, 30). Maravall presents a model where politicians, taking into account the possible verdict of the following election, choose to support or bring down the prime minister. When economic conditions are bad, the risk of an electoral defeat increases. However, when the economy is good, the risk of being the victim of a conspiracy goes up. Thus, "if re-election is the incentive for a prime minister to be representative, such non-electoral threats undermine this incentive" (Maravall 2007a, 30). In other words, the desires of voters may be supplanted by the criteria of politicians.

And finally, Maravall and Przeworski (1999) interpret economic voting as a process of rationalization. After studying the Spanish case, they hold that people use economic opinion as a process of rationalizing their vote. People decide their partisan preferences and after that, they look for arguments -in this case economic arguments- that justify their vote. Therefore, the empirical evidence that supports the relationship between economy and electoral results, as a mechanism of accountability, is unclear.

Moreover, another important point on the topic of accountability is that responsibility assignment is a matter of degree (Barreiro 1999; Sánchez-Cuenca and Barreiro 2000). Policies can be classified according to accountability: "at one extreme we find policies that escape government control. An example is terrorism (.....). At the other extreme there are policies that could be controlled by the government. One example of a policy that does not depend on exogenous conditions is the struggle against corruption" (Sánchez-Cuenca and Barreiro 2000, 11). In consequence, there are issues that the government has more capacity to influence. Voters will assign more responsibility to such issues as education, corruption, infrastructure and so forth. However, there are other issues where the government has less capacity of influence, such as unemployment or terrorism. When considering those policies, voters would

be more 'understanding'. In sum, accountability is a matter of degree and it depends on the policies.

Finally, to consider elections as a mechanism of sanctioning presents several problems. First, the vote is a rough tool for punishing or rewarding all the performance of the government. Second, politicians should have incentives to stay in government.[7] Third, voters have less information than politicians. In this case, citizens face a problem of 'moral hazard'. Voters may not be able to make a complete retrospective assessment of past performance. When voters look at the past, they may not have full information. Thus, officeholders may shirk their responsibilities. And fifth, voters should have capacity to assign responsibilities.

The final issues that are raised here relate to those discussed at the beginning of this chapter. As I said above, classics argue that the combination of division of powers and elections protect the liberty of people. This would be true if we consider that elections are a mechanism for selecting 'good types'. However, if we accept that the purpose of the election is to sanction, then this combination may not work correctly. In the literature, it is widely argued that if power is divided, citizens will not be able to assign responsibilities (Powell and Whitten 1993; Powell 2000; Nadeu, Niemi, and Yoshinaka 2002; Bengtsson 2004). In other words, "if citizens in a democracy cannot identify responsibility for policy, they cannot use elections precisely to hold policymakers retrospectively accountable for their actions" (Powell 2000, 51). Therefore, in some institutional frameworks people do not have the capacity to assign responsibilities. Nevertheless, as we know, division of powers is a matter of degree. If powers are separated between different institutions and competences are clearly distributed -as they should be under a separation of powers-, citizens may know who is in charge. However, if the institutional design has established a system of 'checks and balances', people may find it difficult to as-

[7] For instance, some political systems do not permit reelection.

Table 2.1: Division of powers and elections

		Division of powers	
		Separation of powers	Checks and balances
Elections	Selection	Possible	Possible
	Sanction	Possible	Difficult

sign responsibilities. Table 2.1 summarizes these ideas. Therefore, a problem arises when we assume that elections are a question of accountability and that the distribution of powers is not transparent.

2.3 Coalition governments and elections

The literature on multiparty cabinets is very large. We know a great deal about the birth and composition of multiparty cabinets (Riker 1962; Browne and Franklin 1973; Swaan 1973; Luebbert 1983; Franklin and Mackie 1984; Luebbert 1984; Schofield and Laver 1985; Luebbert 1986; Budge and Keman 1990; Laver and Schofield 1990; Laver and Shepsle 1990; Strom 1990a; Taylor 1991; Laver and Budge 1992; Schofield 1993; Sjolin 1993; Mershon 1994; Laver and Shepsle 1996; Sened 1996; Muller and Strom 1999; Back 2003; Warwick 2005; Back and Dumont 2007). We have a broad knowledge of their survival and duration (Dodd 1976; Browne and Dreijmanis 1982; Lijphart 1984; Browne, Frendreis, and Gleiber 1988; Strom 1988; Budge and Keman 1990; King, Alt, Burns, and Laver 1990; Laver and Schofield 1990; Lupia and Strom 1995; Laver and Shepsle 1998; Huber 1998). And we have some ideas about the economic effects of coalition governments (Roubini and Sachs 1989; Huber 1998; Mulas 2002). However, knowledge about their electoral consequences is scarce. There is a lack of empirical evidence, and that evidence shows contradictory results. Strom, after analy-

zing 15 democracies and drawing on other research, concludes that coalition governments, on average, lose more votes than majority and single party cabinets (Strom 1990b, 69-70,124). On the other hand, Bingham Powell comes to the opposite conclusion: majority and single party governments lose more votes than minority and coalition cabinets (Powell 2000, 54). In short, we do not know much about the electoral consequences of coalition governments, and the existing empirical studies are poor and contradictory.

As we observed at the end of the previous section, a division of powers may be a challenge for voters trying to evaluate the incumbent. Citizens cannot know who is really in charge. Moreover, we may consider that subjects are divided within a branch. That is, the division of power does not only occur between institutions, it exists within institutions. Coalition governments are an excellent example of this. In the case of coalitions, several parties share the power and the same problem arises: citizens cannot assign responsibilities. As a result, elections as a mechanism of accountability may not work properly.

In theory, accountability is easy in the case of majority and single-party cabinets. There is one party, and it has the majority. It is clear to the voter who is responsible for the policies. However, in the case of coalition and minority governments, accountability may be more difficult to achieve. The literature illustrates that when we find a coalition cabinet, voters are not sure of who is in charge. In addition, when the cabinet is formed by one party and it does not have a majority in parliament, the governing party has to come to a compromise with other parties if it wants to develop a policy. Following those arguments, scholars have concluded that citizens will have difficulties in holding politicians accountable. Thus, we can read findings like: "the more political parties in the governing coalition, the less strong the economic voting" (Lewis-Beck 1986, 109) or "where clarity of responsibility is low, the economic factors will be blurred" (Powell and Whitten 1993,

405). This hypothesis has been termed as 'clarity of responsibility' and it is widespread in the literature (Lewis-Beck 1986; Lewis-Beck 1988; Powell and Whitten 1993; Mershon 1996; Bosch, Díaz, and Riba 1999; Przeworski, Stokes, and Manin 1999; Whitten and Palmer 1999; Anderson 2000; Powell 2000; Mershon 2002; Nadeu, Niemi, and Yoshinaka 2002; Strom, Bergman, and Muller 2003; Bengtsson 2004).

This idea is not new. Alexander Hamilton, in *The Federalist Papers*, already warned about this issue:

> "But one of the weightest objections to a plurality in the executive, and which lies as much against the last as the first plan is that it tends to conceal faults and destroy responsibility. Responsibility is of two kinds -to censure and to punishment. The first is the more important of the two, especially in an elective office. Men in public trust will much oftener act in such a manner as to render them unworthy of being any longer trusted, than in such a manner as to make them obnoxious to legal punishment. But the multiplication of the executive adds to the difficulty of detection in either case. It often becomes impossible, amidst mutual accusations, to determine on whom the blame or the punishment of a pernicious measure, or series of pernicious measures, ought really to fall. It is shifted from one to another with so much dexterity, and under such plausible appearances, that the public opinion is left in suspense about the real author. The circumstances which may have led to any national miscarriage or misfortune are sometimes so complicated that where there are a number of actors who may have had different degrees and kinds of agency, though we may clearly see upon the whole that there has been mismanagement, yet it may be impracticable to pronounce to whose account the

> evil which may have been incurred is truly chargeable"
>
> Alexander Hamilton. No 70. *The Federalist Papers*

Two centuries after the American constitutional debate, Karl Popper held the same ideas:

> "Proportional representation –and the greater number of parties as a result thereof- may therefore have a detrimental effect on the decisive issue of how to get rid of a government by voting it out of office, for instance in a parliamentary election. The voters are led to expect that perhaps none of the parties will obtain an absolute majority. With this expectation in their minds, the people hardly vote against any of the parties. As a result, on election day none of the parties is dismissed, none is convicted. Accordingly, nobody looks on election day as a Day of Judgment; as a day when a responsible government stands to account for its deeds and omissions, for its successes and failures, and a responsible opposition criticises this record and explains what steps the government ought to have taken, and why. The loss of 5% and 10% of votes by one or other of the parties is not seen by the voters as a verdict of guilty. They look at it, rather, as a temporary fluctuation in popularity. In time, the people became used to the idea that none of the political parties or their leaders can really be made accountable for their decisions which may have been forced on them by the necessity to form a coalition"
>
> Karl Popper. *The open society and its enemies revisited*

Therefore, coalition cabinets are seen as a problem for democracy. However, if this argument is correct, we would then wonder:

how would we explain the electoral results of multiparty governments? In other words, why do voters support one party if the responsibility is unclear? If scholars were right and people could not assign responsibility to coalition cabinets, the electoral results would be random. Is chance the main explanatory variable? However as Einstein said: "God does not play dice with the universe".

This is the main aim of this dissertation. I seek to study the process of assigning responsibilities to coalition governments when we assume that elections are a mechanism of accountability. In fact, we do not know who wins and who loses when a multiparty cabinet has to face elections. However, the reader is not going to find an 'index of accountability'. There is not a variable that measures 'the assignment of responsibilities'. Specifically, I am going to deal with survival, and how accountability and survival are related. Therefore, the research strategy of this dissertation is to answer the following questions: who wins and who loses after a coalition government? And, who survives after elections? How do we explain these results? If there is something -economy, policies, ideological consistency....- that explains the electoral results of multiparty cabinets, then, voters may hold politicians accountable. Hence, the research strategy is to study the political consequences of this type of cabinets. I shall try to shed light on that topic by developing different approaches and testing several hypotheses.

2.4 Party systems and elections

When studying the process of assignment responsibilities to incumbents, we ought to consider an important assumption: as Elster affirms, "accountability is individual rather than collective" (Przeworski, Stokes, and Manin 1999, 255). Or, in other words, "collective responsibility has leaked out of the system. Officeholders appear responsible only for their personal actions and activities,

not for their part in the collective enterprise of governing" (Fiorina 1981, 210). Hence, it is argued here that parties are the agent that the principal wants to hold accountable. Perhaps, this is the principal error that I have observed in studies of voting behavior and accountability. Most researchers analyze the government as if it is a single actor and they do not take into account intra-government electoral results.[8] Thus, they contrast government and opposition, considering each as if they were single agents (Lewis-Beck 1986; Lewis-Beck 1988; Norpoth, Lewis-Beck, and Lafay 1991; Powell and Whitten 1993; Whitten and Palmer 1999; Powell 2000; Nadeu, Niemi, and Yoshinaka 2002; Barreiro 2007; Bengtsson 2004). However, if we want to study the political consequences of elections correctly, we ought to consider political parties as the agent and, in many cases, cabinets are formed by two or more parties.

As we know, party systems are not identical. Taking into account the number of parties, party systems may be classified as: bipartisan[9] and multiparty system.[10] Do elections work in the same way in all party systems? Unfortunately, we do not know enough about it to give a simple and direct answer to that question.[11]

[8] Those studies would have been right if intra-government electoral results have been a zero-sum game. Thus, if party A loses 5% of the votes, party B will have to win 5% of the votes. However, in several cases we do not find that trade-off.

[9] I define a bipartisan system as one that consists of two parties that have the possibility of holding the cabinet, for instance, in the case of Great Britain.

[10] I define multiparty system as more than two parties that have the possibility of holding the government. For instance, in the cases of Germany or France.

[11] In the literature, there is just one theoretical argument that deals with party systems and accountability, and it criticizes the hypothesis of 'clarity of responsibility'. This argument is put forward by Royed, Leyden and Borrelli (2000). They point out that voters have more options in multiparty systems than in a democracy with two parties. For that reason, accountability would work better in a political system with several parties (Royed, Leyden, and Borrelli 2000). One example can clarify this issue. In a majoritary system, we usually find a single-party government and an opposition party. We can imagine

Let us consider that elections[12] have two political consequences: to survive in the government and to win or to lose votes. Taking into account the party systems, these political consequences may develop together or separately. In a two-party system, where single-party governments are more probable (Gallagher, Laver, and Mair 2001, 357), winning elections implies to survive. Thus, if an incumbent wins the election, it will continue holding the cabinet. Therefore, to survive and to have an electoral victory develop together. That is, voting may imply the two political consequences: to win votes and survival. The voters' desires are easily interpreted by elections and the ballot paper may be a credible threat.

However, in multiparty systems, where coalitions and minority cabinets are more likely, to win elections does not imply to survive, and vice versa. In this case, survival and electoral results are not necessarily the same. For instance, incumbent parties may win votes, although an alternative coalition may be removed from the cabinet. Now, voters' desires are interpreted by politicians and then, politicians may be more free to act in their interest.

Therefore, votes may have different political consequences, if we take into account the party system. In addition, this distinction

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a case where a voter considers that the cabinet's policies are negative. However, he looks at the opposition and observes that the alternative is worse. What can he do? He does not support the government's policies nor the opposition party. How can he hold the government accountable? Abstention and blank ballot are the only alternatives that he has. However, they will be imperfect accountability tools if the voter wants to support one party. In a multiparty system, we find several alternatives. In fact, voters have more options. For that reason, accountability would be more probable in a multiparty system.

Nevertheless, to have more alternatives does not imply that there is accountability. As we shall see bellow, the process of assigning responsibilities involves more assumptions.

[12] Voting does not just mean polls. For instance, in a parliamentary democracy, politicians can support or reject the government in parliament. Thus, politicians are voting for other politicians and, as I argue bellow, that implies accountability too.

is important because it involves different actors, preferences and consequences.

2.4.1 Bipartisan system

As I have previously explained, in two party systems, electoral victory and survival develop together. That is, the party that wins an election will govern. Hence, we may assume that an election, as a mechanism of accountability, is only one game with two main actors: voters and politicians.[13]

Voters want to hold politicians accountable. As we know from previous models, people evaluate incumbent performances and then, they decide on their vote. To evaluate the government, voters establish a criterion of punishment. Let's consider that this criterion is a threshold of well-being, k_t. If the incumbent achieves it, voters will support her. Otherwise, they will vote for the opposition.

Politicians have three main interests: votes, offices[14] and policies (Strom 1990a; Strom 1990b; Muller and Strom 1999). Each interest implies different targets. If politicians prefer votes, v, they will develop strategies that maximize their electoral result. If politicians prefer public offices, o, they will develop strategies that maximize their positions in the government or in the parliament. Finally, if politicians prefer policies, p, they will follow strategies that maximize the implementation of their political preferences.[15] These interests are not mutually exclusive.[16] Hence, a politician

[13] To simplify the argument, I assume that parties are unified and I do not consider the existence of different factions. In the following chapter, we shall see that party members are relevant actors too. However, I want to start with the simplest state of the world.

[14] I assume that office implies portfolios or seats. Both of them are public offices.

[15] It does not imply to stay in government. In parliamentary democracies, opposition parties can influence policies, for instance, through committees of parliament.

[16] Some authors have pointed out that there is a trade-off between office

may wish for all three aims. Algebraically,

$$s_i = (\sigma_v(v), \sigma_o(o), \sigma_p(p)) \quad \forall i, i = 1, 2, 3.....n \tag{2.1}$$

and restricted to

$$\sum_{i=1}^{n} \sigma_i = 1$$

where s_i is the strategy that a politician i follows and σ_i is the probability that politician i desires one of the objectives. σ_i assumes values between 0 and 1, $\sigma_i \epsilon \{0, 1\}$. Politicians will follow different strategies for achieving their desires: v, o and p. In a bipartisan system, one strategy boils down the three desires. That is, if politicians win polls -votes-, they will hold the government -office-. And if they hold the cabinet, they will implement their favorite policies. Therefore, politicians may achieve three aims with only one strategy.

The consequences of this party system are that in only one game, voters can assign responsibilities to parties and politicians may maximize their targets. Hence, we find a direct relation between voters and politicians, and the resulting government is produced as a result of citizens' votes.

2.4.2 Multiparty system

Unlike the situation in the previous framework, in a multiparty system the resulting government after elections is not directly produced by voters' preferences. As we know, in this type of party system, coalition and minority governments are more probable.

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and votes(Strom 1990b, 46). They conclude that to stay in government involves electoral costs. However, I believe that it is not necessarily true. For instance, if an incumbent demonstrates good performance, voters will support her. Therefore, there is not a deterministic trade-off between office and votes.

That is, it is extremely so difficult that any party to achieve an absolute majority (Strom 1990b; Gallagher, Laver, and Mair 2001). Therefore, an incumbent party is accountable to al least two principals: voters and party members. In parliamentary democracies, government is elected by the parliament and parliament is elected by voters. Hence, parliament holds the government accountable and voters hold parties accountable. If a party wants to maximize its position in the cabinet (office-seeking), it should persuade the parliamentary groups that support the government. At this point, voters have very few control mechanisms. People can only wait until the next election and then, citizens will evaluate that agreement. However, nothing will guarantee that politicians will not act freely in the process of reaching a new agreement after an election. In sum, we find two processes of assigning responsibilities: winning/losing and survival in the cabinet. In a bipartisan system, these two processes develop together. Now, they develop separately, although they are related.

As in the previous model, voters want to hold politicians accountable. People evaluate incumbent outcomes and then, they punish or reward her. The criterion of sanctioning is not different from the previous model, k_t.

The problem arises when we analyze politicians. Now, politicians will follow different strategies taking into account the principal and the timing. First, if the principal is voters, politicians will be vote-maximizers. Algebraically,

$$[\sigma_v(v) > \sigma_o(o)] \wedge [\sigma_v(v) > \sigma_p(p)] \qquad \forall i, i = 1, 2, 3.....n \quad (2.2)$$

However, if the principal is members of parliament, politicians will be office-seeking. That is,

$$[\sigma_o(o) > \sigma_v(v)] \wedge [\sigma_o(o) > \sigma_p(p)] \qquad \forall i, i = 1, 2, 3.....n \quad (2.3)$$

Second, timing is a relevant issue too. Let's consider that the process of assigning responsibilities has three steps. First, at t_1, voters choose politicians. The outcome is a parliament. Second, at t_2, politicians elect the cabinet. The outcome is the government. Finally, at t_3, voters evaluate incumbent parties and polls take place. In a bipartisan system, I did not stress this fact because voters keep control over the processes of forming the government and forming the parliament. That is, in a bipartisan system, at t_2 politicians do not have many alternatives because there are just two parties and one of them has a majority. However, in a multiparty system, once elections take place, we find several parties in parliament, and a government may be formed by varying combinations. The consequences of this framework are that the process of assigning responsibilities to parties has different steps, where actors change. Therefore, the conclusion is not that accountability is not possible. The main idea is that the game of assigning responsibilities to multiparty and minority cabinets is more complex.

2.5 Conclusion

Classics were worried about the despotism of the governing class. Hence, they wanted to build an institutional framework that protects people from the ruling class' thirst for power. Their solution was to combine division of powers and elections. However, if we assume that elections are a question of sanctioning, this combination may not work correctly because voters cannot assign responsibilities. Thus, people may not know who is in charge of policies when they face coalition cabinets. This idea is widespread in the literature, and can be applied to multiparty cabinets.

However, this argument is underdeveloped. First, we do not know so much about the microfoundations of this hypothesis. As I said in the introduction, accountability is a question about parties, not about governments. For that reason, the theoretical models

of accountability ought to consider parties as the main actors and, as I have shown, accountability works differenly if we take into account the party systems. If I assume that voting has two political consequences -to win or to lose votes and to survive-, in a multiparty system, these two electoral consequences will develop separately. As we shall see below, this fact is relevant when we want to study how elections work.

Secondly, we know very little about the electoral results of coalition governments. Knowledge about their electoral outcomes is scarce and we do not know why those electoral results are produced.

These issues frame my dissertation and may be boiled down to the following questions: who wins and who loses after elections? Who survives? And why? But before resolving these questions, I ought to explain how elections work. This is the main aim of the next chapter where I shall develop the microfoundations of allocating responsibilities to parties. As we shall see, information is the key issue in that story. The theory developed in this chapter did not explain how voters get information. Moreover, parties are presented as unified actors. Therefore, I ought to complete the theoretical model.

Chapter 3

The Theoretical Model

> "In sum, I would argue that the major advantage of using formal models is the precision and clarity of thought which these models require, and the depth of argument with they allow"
>
> Morris P. Fiorina. "Formal models in Political Science" *American Journal of Political Science*

To this point, we have learnt that the combination of division of powers and accountability is problematic: voters may not know who is in charge. Moreover, scholars have extended this argument to coalition governments. Thus, accountability may not work correctly when people face a multiparty government. However, as we have seen, this problem is related to the type of party system. I have just developed the main ideas about party systems and accountability. In the following lines, I further develop these theoretical arguments and deal with the microfoundations of elections. I focus my analysis on two political consequences of elections: votes and survival. The first one may imply accountability, whereas the second one explains who holds government after elections.

In sum, the main aim of this chapter is to develop a theory that explains how elections work. Thus, the chapter is divided into the

following sections. First, I present a simple model of accountability that may be applied to single-party cabinets. Second, I expand that model to coalition governments. And third, I analyze why some parties survive and others fail at elections.

3.1 A simple model of accountability

Elections may be presented as a 'political contract': citizens delegate to politicians. That is, citizens contract politicians to run the government. In that contract, citizens would be parties to the contract and officeholders would be the contracted agents. However, this contract is not a simple agreement. As we know from the previous chapter, citizens are fearful of the despotism of the governing class. For that reason, control mechanisms have emerged in democracies. How do those control mechanisms work? How do citizens guarantee that the contract is carried out? The main aim of this section is to explain the microfoundations of that 'political contract'.

In microeconomy, contracts have been analyzed using principal-agent models (Laffont and Martimort 2002; Macho and Pérez 2005). In fact, principal-agent models are common in the literature of the social sciences (Moe 1984; Stiglitz 1998; Pollack 1997; Weingast, McCubbins, and Noll 1998; Williamson 2002; Kassim and Menon 2003; Strom, Bergman, and Muller 2003; Shapiro 2005; Hawkins, Lake, Nielson, and Tierney 2006). Taking into account agent theory, the main goal of a contract is that an agent carries out a task that benefits the principal. For instance, entrepreneurs take on workers, people underwrite insurances and so on. In all these economic relations, the principal -entrepreneurs- delegates a function to an agent -workers- and the principal hopes that the agent carries out that task.

Principal-agent models are not exempted from problems. When principals delegate a task to agents, agents have to take two deci-

sions: to participate in the game and to strive. Thus, principals have to create a framework of incentives that look attractive for agents. For instance, let us consider a relation between a landlord and a tenant. The landlord wants to rent an apartment and looks for a reliable tenant. The landlord wants the tenant to sign a contract and then, when he is in the apartment, to take care of the furnitures, kitchen.... That is, landlords do not want tenants to damage their apartment. If the landlord wants to get both goals, he will have to propose incentives and penalties to the tenant. For instance, the landlord offers a low rent on the apartment, but the tenant should pay for everything that he damages. These two constraints -participation and effort- frame principal-agent models.

Another important problem in principal-agent models is information. If the relation between principals and agents emerges in a world with perfect information, principals will know the agents' level of effort and they will only pay them if they strive. However, asymmetric information is quite frequent. Asymmetric information implies that the principal is unaware of the level of effort that the agent invested -that is, the 'moral hazard'- or the agents know something about their features that the principal is unaware -that is, 'adverse selection'-. Those two problems have been studied by using microeconomic models . This section is a straightforward extension of those works (Berganza 2000; Laffont and Martimort 2002; Macho and Pérez 2005).

3.1.1 The model

I start with a simple theoretical model that explains how accountability works for single-party governments. Then, I shall extend part of these arguments to coalition cabinets. The model has two main actors: politicians and voters. Moreover, this game consist of two points in time: t_1 and t_2. Each of these points represents an election, where citizens choose politicians.

In this theoretical model, the politicians' task is to get good

economic performance, x, that improves the well-being of the citizens. Those economic results depend on the effort that the agent invests, e, and a random variable that has the same distribution for both actors.[1] Moreover, to simplify the game, let's assume that the possible economic outcomes are finite. Then, we can say that

$$\Pr[x = x_i | e = e_i] = p_i(e) \quad \text{where} \quad i \in \{1, 2, ...n\}$$

Therefore, if $X = \{x_1, x_2....x_n\}$,[2] then we can affirm that $\sum_{i=1}^{n} p_i(e) = 1$. And I shall assume that

$$p_i(e) > 0 \quad \forall i, \quad \forall e$$

that is, there are not negative probabilities.

The next step is to present actor's preferences. In this model, I am expressing actors' preferences as utility functions. I am using the concept of expected utility that Von Neumann-Morgensten proposed.

Voters are concerned about the well-being that politicians produce, x, and the rents that they have to pay for their work, w. Thus, voters' utility function is

$$B(x - w) \tag{3.1}$$

[1] That assumption means that economic results are not produced because of a level of effort. If economic results were the product of a level of effort, effort would foretell the agent behavior. However, to assume that random variables influence economic results is more realistic than to assume that there is a direct causal relation between policies and outcomes.

[2] Moreover, I assume that we may order the economic performances, X, from the better to the worst: $x_1 < x_2 < x_3....x_n$. This assumption will be important when I consider the different levels of effort.

and I shall assume that citizens are risk-averse, such that $B' > 0$, $B'' < 0$ and $B(0) = 0$. What does this assumption mean? Citizens do not like risk. Therefore, they support politicians who maximize function 3.1 while maintaining risks at a minimum. This is a realistic assumption. The majority of voters are concentrated in moderate ideological positions because they imply less risk than extreme positions. For instance, to support leftist parties may be seen as more risky. Those parties develop reforming policies, and those policies involve changes and uncertainty. Finally, an important feature of this utility function is that it does not depend on the level of politicians' effort.

As I said above, this game has two steps, t_1 and t_2. Voters' utility functions are different for each time, because I assume that actors discount time. Thus,

$$\begin{cases} B(x_{1i} - w) & t = 1 \\ \delta_v B(x_{2i} - w) & t = 2 \end{cases} \tag{3.2}$$

where δ_V is the discount rate for voters and assumes values between 0 and 1, $\delta_V \in \{0, 1\}$. If δ_V is close to 1, voter will be patient and will allow that politician's policies time to work. However, if δ_V is close to 0, the voter will be impatient and will wish that the next election arrives as soon as possible. In the last case, voters' utility decreases. When will voters be impatient? There are two situations that may influence their desire for prompt elections. First, some voters prefer opposition parties because they believe that they will provide them with more well-being. For that reason, they will want to throw the incumbent party out as soon as possible. Therefore, if elections are a long way off, they will be impatient and their utility will decrease. Second, perhaps the voters' incumbent consider that their party is losing political support. That is, government popularity decreases. For that reason, those voters will want those elections to take place as soon as possible. They suspect that if the government does not call elections, that they will lose power in the future. Then, their

utility function decreases as elections are a long way off.

After defining voters' utility function, I shall present the agent: politicians. Their utility function may be defined as

$$U(w, e) = u(w) - v(e) \tag{3.3}$$

In words, politicians receive a rent, w, when they hold public offices. That rent produces a utility $u(\cdot)$, such that $u' > 0$, $u'' < 0$ and $u(0) = 0$. That is, politicians are risk-averse too. In this 'political contract', politicians are hired by citizens because they may produce well-being. However the production of that economic performance has a cost: the effort of politician, e. If politicians strive to improve well-being , their cost will increase. Algebraically,

$$v' > 0,\ v'' \geq 0$$

Note that politicians' utility function is an additive and separable function. That is, politician's risk-aversion does not vary when effort changes.

Moreover, as we know, this game has two points in time: t_1 and t_2. At t_2, agent's utility function introduces some changes. First, politicians discount the time too. That is, time matters and affect agent's function. Second, when elections take place at t_2, incumbent -the agent- looks for reelection. Hence, we ought to consider the probability of winning. Therefore, politicians' utility function are,

$$\begin{cases} U(w, e) = u(w) - v(e) & t = 1 \\ U(w, e) = D\delta_P[u(w) - v(e)] & t = 2 \end{cases} \tag{3.4}$$

where D is the probability of being re-elected and δ_P is a discount rate for politicians. Both variables assume values between 0 and 1, $D \in \{0, 1\}$ and $\delta_P \in \{0, 1\}$. As voters' functions, if a politician is patient, δ_P will be close to 1 and if a politician is impatient, δ_P will be close to 0. Why are politicians patient or impatient?

And, how does it affect their utility functions? Officeholders know a lot about the future. They may have information about when the state of economy will improve, for example, or when their popularity will decrease and so on. These forecasts may explain why politicians sometimes bring forward elections. Two possible results appear on the horizon and may have an influence their strategies. On the one hand, politicians forecast that the future will be quite successful. They hope that inflation will fall, employment will increase and that voters will increase their electoral support. Hence, to wait until the end of legislature is a good idea. If politicians were impatient,[3] they would get less benefits than if they waited until the end. On the other hand, politicians may forecast that the future is gloomy. It means that their utility is negative: the effort that they have to invest is higher than their income. Thus, as the legislature develops, their cost will increase. Or, in other words, if they were patient,[4] their negative utility would increase.

Once we know the utility functions, we have to deal with the problems. When elections take place, we can assume that citizens have some intuition about what the government did. However, politicians have more information than voters and public officeholders do not pass up the opportunity to use that to their advantage. In this theoretical model, I shall assume that voters do not know whether politicians strive: the 'moral hazard' problem. In other words, citizens observes the results of the 'political contract' but they do not know what the government did: whether politicians strived.

I assume that politicians may choose between two level of effort: high, H, and low, L, and that the principal -voters- prefer high effort to low effort. Citizens do not like lazy public officeholders. However, for politicians, the disutility of hard work is bigger than the disutility of low effort. That is,

[3] It means to bring forward elections.

[4] It means to wait until the end of term of office.

$$v(e^H) > v(e^L)$$

I shall define the probability of observing high or low effort as:

$$p_i^H = \Pr[x = x_i | e = e^H] \qquad \forall i \in \{1, 2, 3....n\}$$

$$p_i^L = \Pr[x = x_i | e = e^L] \qquad \forall i \in \{1, 2, 3....n\}$$

What does high effort mean? I assume that when agents strive, they will increase their output. Algebraicly, it means that p_i^H dominates p_i^L, in the sense of stochastic domination. Algebraically,

$$\sum_{i=1}^{k} p_i^H < \sum_{i=1}^{k} p_i^L \quad \forall k = 1, 2, ..., n-1 \tag{3.5}$$

In words, if we consider the previous assumption that economic performances may be tidy, assumption 3.5 means that to get bad economic performances will be easier than to get good economic performance. This is the productivity constraint. Moreover, it's always true,

$$\sum_{i=1}^{n} p_i^H = \sum_{i=1}^{n} p_i^L = 1 \tag{3.6}$$

As previously mentioned, the next problems that arise are participation and incentive constraints. The first question that I have to answer is: why do politicians decide to take part in elections? A simple answer would be: 'when they do not have a better alternative'. Let us assume that politicians can choose between two options: run for election or an alternative activity. If they run for election, they will get the previous utility functions 3.4. However, if they choose an alternative activity, they will get an utility U. When do politicians participate in the 'political contract'? When

to govern produces more utility than the alternative activity. That is,

$$\begin{cases} u(w) - v(e) \geq U & t = 1 \\ (u(w) - v(e))D\delta_P \geq (1 - D)U & t = 2 \end{cases} \tag{3.7}$$

That constraint implies a strong assumption: politicians want to be reelected. It is not an unrealistic assumption. For that reason, participation constraint appears at $t = 2$. But reelection depends on the probability of being reelected -D- and the utility of the alternative activity -U-.

The second important constraint deals with incentives. Voters do not like lazy politicians. They want politicians to strive. Moreover, citizens do not know whether public officeholders made a tremendous effort during their last period in office, because of asymmetric information. If voters want politicians to make a low effort, they will give them a fixed rent. The problem emerges if citizens want that politicians strive. How do they achieve it? Citizens ought to offer a contract that relates to economic performance. Thus, incentives constraints will be

$$\begin{cases} \sum_{i=1}^{n} p^H u(w(x_{1i})) - v(e^H) \geq \sum_{i=1}^{n} p^L u(w(x_{1i})) - v(e^L) \\ \sum_{i=1}^{n} D\delta_P[p^H u(w(x_{2i})) - v(e^H)] \geq \sum_{i=1}^{n} D\delta_P[p^L u(w(x_{2i})) - v(e^L)] \end{cases} \tag{3.8}$$

In words, politicians will make a high effort if the benefits are bigger or equal to making a low effort. Note that at t_2 I have to consider discount rate and the possibility of being re-elected.

Once the game is defined, I present the programs. I start with P^1, that defines the model at t_1.

$$\max_{[\{w(x_i)\}_{i=1,2\ldots n]}} \sum_{i=1}^{n} p^H[x_{1i} - w(x_{1i})]$$

$$[P^1] \qquad s.t. \quad \sum_{i=1}^{n} p^H u(w(x_{1i}) - v(e^H) \geq U \tag{3.9}$$

$$\sum_{i=1}^{n} p^H u(w(x_{1i})) - v(e^H) \geq \sum_{i=1}^{n} p^L u(w(x_{1i})) - v(e^L) \tag{3.10}$$

For resolving the program, I need to get the optimal contracts. The lagrangian of that system is:[5]

$$\begin{aligned} L\left(w(x_{1i}), \lambda_1, \mu_1\right) \quad = \quad & \sum_{i=1}^{n} p^H [x_{1i} - w(x_{1i})] + \lambda_1 [\sum_{i=1}^{n} p^H u(w(x_{1i}) - v(e^H) - U] + \\ & + \mu_1 [\sum_{i=1}^{n} (p^H - p^L) u(w(x_{1i})) - v(e^H) + v(e^L)] \end{aligned} \tag{3.11}$$

And the first order conditions of lagrangian with respect $w(x_{1i})^*$ yield,

$$-p^H + \lambda_1 p^H u'\left(w(x_{1i})\right) + \mu_1 \left(p^H - p^L\right) u'\left(w\left(x_{1i}\right)\right) = 0 \qquad \forall i = 1, 2....n \tag{3.12}$$

If we operate on this equation, the result is that,

$$\frac{p^H}{u'\left(w\left(x_{1i}\right)\right)} = \lambda_1 p^H + \mu_1 \left(p^H - p^L\right) \qquad \forall i = 1, 2....n \tag{3.13}$$

We can rewrite first order conditions 3.13 as,

[5] The program P^1 satisfies the conditions of Kuhn-Tucker. First, the objective function is concave and then, Langragian and Kuhn-Tucker results match. Second, for further demonstrations, see Macho and Pérez (2005).

$$\frac{1}{u'\left(w\left(x_{1i}\right)\right)} = \lambda_1 + \mu_1\left(1 - \frac{p^L}{p^H}\right) \qquad \forall i = 1, 2....n \tag{3.14}$$

One of the most important findings of this program is that the value of μ_1. μ_1 is the 'shade price' of incentive constraint.[6] The interpretation of that result is that asymmetric information is a cost for the principal (Macho and Pérez 2005, 57). Since one of the Kuhn-Tucker conditions is $\mu_1 > 0$, the agent payoffs will change when the performance changes. That is, the agent benefit, $w\left(x_{1i}\right)$, increases when μ_1 increases. And μ_1 increases when $\frac{P^L}{P^H}$ decreases. In statistics, $\frac{P^L}{P^H}$ is termed the 'verisimilitude quotient'. This quotient is a signal of the value P^H when x_i is observed. Thus, the quotient is low when P^H increases with regard to P^L. Therefore, the signal will be strong if politicians choose effort e^H. "In other words, when the 'verisimilitude quotient' decreases, the probability that politicians chose effort e^H when x_i is observed, increases" (Macho and Pérez 2005, 57).

Now, I analyze the 'political contract' at t_2. The program, P^2, is,

$$\max_{[\{w(x_i)\}_{i=1,2...n}]} \sum_{i=1}^{n} [p^H(x_{2i} - w(x_{2i}))]\delta_V$$

$$[P^2] \qquad s.t. \quad \sum_{i=1}^{n} [p^H u(w(x_{2i}) - v(e^H)]\delta_P D \geq (1 - D)U \tag{3.15}$$

$$\sum_{i=1}^{n} [p^H u(w(x_{2i})) - v(e^H)]\delta_P D \geq \sum_{i=1}^{n} [p^L u(w(x_{2i})) - v(e^L)]\delta_P D \tag{3.16}$$

[6] That is, the 'shade price' of a constraint is the increase in the optimal objective value of the objective function when the variables that affect 'shade price' increase one unit.

The lagrangian of P^2 is,

$$L\left(w(x_{2i}), \lambda_2, \mu_2\right) = \sum_{i=1}^{n}[p^H(x_{2i} - w(x_{2i}))]\delta_V +$$
$$+\lambda_2[\sum_{i=1}^{n}(p^H u(w(x_{2i}) - v(e^H))\delta_P D - (1-D)U] +$$
$$+\mu_2[\sum_{i=1}^{n}(p^H - p^L)u(w(x_{2i})) - v(e^H) + v(e^L)] \qquad (3.17)$$

And the first order conditions of 3.17 with respecto to $w(x_{2i})^*$ yield,

$$\frac{\delta_V}{u'(w(x_{2i}))} = \lambda_2\delta_P D + \mu_2\left(1 - \frac{P^L}{P^H}\right) \qquad \forall i = 1, 2....n \qquad (3.18)$$

The findings of this program are similar to 3.14. The 'shade price' of incentive constraint is affected by the same variables. That is, the optimal salary increases when $\frac{P^L}{P^H}$ decreases and, as I said above, this quotient is a signal of the value P^H when x_i is observed.

To sum up, elections may be presented as a political contract between politicians and citizens. In spite of asymmetric information, that contract may work. First, politicians have incentives to strive because their payoff depends on their economic performance. Second, the agent uses the unique verifiable variable that he observes: the economic performance. Economic performance works as statistical inference (Macho and Pérez 2005, 58). That is, well-being gives information about the effort of politicians and this information forms part of the contract. The probability that politicians have made a high effort when economic performance is observed, affects the optimal payoff that politicians receive. In sum, economic performance will be the verifiable variable that voters

use for guaranteeing that the contract has been carried out. Those findings agree with other models of accountability (Ferejohn 1986).

3.2 Coalition governments and accountability

The next question that arises is: how does accountability work for multiparty cabinets? The previous theoretical model may be applied to single-party governments: there are one agent and one principal. However, in coalition governments, we find one principal -voters- and several agents -parties-. Hence, I need to add more pieces to the puzzle.

As was mentioned above, the problem of accountability in multiparty cabinets is that citizens may not know who is in charge of incumbent performance. If principal-agent model has problems of information,[7] then multiparty cabinets will multiply those problems. For that reason, the solution centers around information, and this is the key feature of the following theoretical arguments.

3.2.1 Accountability and information: the third agent

The argument that information matters is not new in the literature about accountability (Fiorina 1981; Ferejohn 1986; Adsera, Boix, and Payne 2003). Thus, for instance, Adsera et al. conclude that "political control of public officials turns out to depend on (.....) the degree of information of citizens" (Adsera, Boix, and Payne 2003, 478-479). More precisely, if degree of information increases, accountability improves. In a bipartisan system, we can assume that people have some intuition about what government did. However, in a multiparty system, obtaining information can be more difficult.

[7] Adverse selection and moral hazard

Academic literature has proposed some mechanisms that can improve asymmetric information in principal-agent models. As we have seen before, if the principal faces a problem of 'moral hazard', the solution will be a set of constraints and incentives. That is the outcome of the previous model. However, if the principal faces a problem of 'adverse selection', the solution will be signals. That is, agents send signals that permit the principal to distinguish between the true features of agents. Multiparty governments produce both problems and this is the reason that accountability is more difficult in those type of cabinets. On the one hand, voters are not sure whether politicians strive during the legislature -'moral hazard'-. On the other hand, citizens have different parties in the government and they cannot distinguish between them -'adverse selection'-. How can we solve this problem?

I consider that the 'moral hazard' problem has been resolved in the previous theoretical model. This is because, in spite of a multiparty cabinet, voters use incumbent performance to know whether politicians have made an effort during the legislature. Or, in other words, well-being will be the verifiable variable that voters use to guarantee that the political contract has been fulfilled by the coalition parties. But, how do we know who is responsible for that well-being ? The answer is signals. However, signals involve several problems. First, who gives out these signals? And second, why are some signals more credible than other signals?

I start with the speakers. Signals may be emitted by the agents -incumbent parties- or by "third party testimony about agent actions" (Strom, Bergman, and Muller 2003, 49).[8] On the one hand, coalition partners have incentives to supply information and then, to increase accountability. A similar argument is presented by Ferejohn. He points out that sometimes politicians have incentives to increase accountability. Why would they do that? Because they want to get more resources for administration. If citizens can hold

[8] That is, a third actor may supply more information to principal.

politicians accountable, people will be willing to increase politician's resources (Przeworski, Stokes, and Manin 1999, 140-141). We can observe similar behavior in multiparty cabinets, although the theoretical reason is different. As I noted above, parties are vote-seeking. They are constantly thinking about the next election. When politicians share a government, that interest, votes, will not disappear. Therefore, parties may have incentives to supply information -and then, to increase accountability- because they want to be different from the cabinet's partner. That is, in coalition governments, a contradictory issue appears: parties are partner and future competitors simultaneously. Therefore, politicians may have incentives to supply information.

On the other hand, a third agent may supply information as well. Who is this agent? In this dissertation, I am focusing on opposition parties. The role of opposition is undeveloped in the literature. The opposition ought to seek to control the government and may supply information to voters. In other words, opposition parties can say who is responsible for the policies. In the case of multiparty governments, why does the opposition point to one coalition member as the party responsible for bad performances? Firstly, because that is its job. Secondly, perhaps it is because that opposition party aspires to be the next coalition partner, so it wants to blame one coalition party and come to an agreement with the other partner after the next election. Hence, opposition can play an important role in the process of allocating responsibilities.[9]

[9] In fact, we know that the role of opposition is not as simple as I argue here. First, institutional design may play an important role in the decision of joining the government. Thus, if opposition plays an important role in the policy-making process and can influence the policies, parties will not participate in the government (Strom 1990b, 152). Second, as I said above, the institutional design may have effects on the process of assigning responsibilities: "it seems reasonable to assume that when the experts gave high scores to opposition influence, the clarity of responsibility of the governing parties was lessened" (Powell 2000, 54). In other words, if opposition has a big influence in

Let's start with the simplest scenario where we only have a multiparty government and opposition parties. I do not assume anything about the features of those actors. Incumbent parties may send signals about what they did and opposition parties may supply information as well. In this situation, voters receive several messages from different agents. How do they distinguish credible signals from unbelievable messages? Austen-Smith deals with that problem and he concludes that "the harder it is to verify information, the less likely it is that such information can be communicated credibly in speech" (Austen-Smith 1992, 57). Then, after listening to all messages, voters would be confused and would only have two possibilities: don't assign responsibilities or simplify the messages. The literature has emphasized the importance of the first alternative and has not considered the second one. However, voters may process information and simplify it. How do they do that? They may focus on the most visible party, the Prime Minister's party, and blame it because of the performance. It is not unrealistic to assume that Prime Minister's party is in the spotlight: "in the majority of cases it is his party that dominates economic policy and makes the relevant economic decisions" (Lopez-Nava 2007, 24).

Perhaps, we would be able to think that voters focus on the biggest parties. However, if we think about the definition of accountability, it is not a question about size, it is a question about tasks. Citizens try to blame or to reward incumbent parties be-

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the policy-making process, to allocate responsibilities may be difficult. However, these arguments are not necessarily true. First, Strom will be right if politicians are policy-seeking. However, we know that politicians have more interests. Moreover, Strom's argument does not invalidate mine, because strong opposition will give a considerable amount of information. Second, in my opinion it is unclear whether powerful opposition makes accountability difficult. Powell's implicit assumption is that people cannot process a large amount of information correctly. But, is that really true? I believe that is more reasonable to point out that if information accumulates, the capacity for assigning responsibilities increases.

cause of their performance. The Primer Minister's party holds the most important task, to manage the government, and, in view of confused information, voters may focus on that party and assign it responsibilities. This is the first hypothesis that I want to study in my dissertation. To sum up, if we just think in a world of multiparty cabinets and opposition parties, voters will simplify information and focus on Prime Minister parties.

But, parties have different features and to assume that they are irrelevant is unrealistic. I would like to focus on one feature: ideology. Ideology has been presented as a variable that explains the birth and composition of multiparty cabinets (Swaan 1973; Franklin and Mackie 1984; Budge and Keman 1990; Laver and Schofield 1990; Laver and Shepsle 1990; Strom 1990a; Laver and Budge 1992; Schofield 1993; Sjolin 1993; Laver and Shepsle 1996; Sened 1996; Muller and Strom 1999; Back 2003; Warwick 2005; Golder 2006; Back and Dumont 2007). Its main exponent is Axelrod and his theory of *minimal connected winning* "predict that coalitions that form will be ideologically 'connected' in the sense that all members of the coalition will be adjacent to each other on this dimension" (Laver and Schofield 1990, 97). The simplest theories take into account one dimension of competition. However, more elaborate theories deal with the multi-dimensionality of policy space (Laver and Schofield 1990; Laver and Shepsle 1990; Laver and Shepsle 1996). In my theoretical arguments, I shall simply consider one dimension of competition: the left-right scale[10] and I shall measure the ideological distance within the government as the Euclidean distance (Hinich and Munger 2003).

[10]Ideology can be presented as a single dimension. Sanchez-Cuenca reviews several definitions and concludes that "ideology tends to produce a single dimensional space due to this capacity to create a view or image about how society should be organized. Once ideology is formulated, it serves to infer ideal points in the whole array of policy issues. The political space is reduced to a single dimension because of the 'organizing power of ideology'" (Sánchez-Cuenca 2003, 6)

Table 3.1: Accountability and ideology in coalition governments

	Ideological distances	
	Proximity	**Remoteness**
Accountability	Difficult	Possible

The main idea is that as ideological distance increases, accountability will increase. This is my second hypothesis and table 3.1 summarizes it. But, how do the pieces of this jigsaw puzzle fit?

When parties decide to form a multiparty government and use ideology as a criterion of selection, they may choose a partner that is far away or an ideologically close partner.[11] If they select the former, it will imply the cost of renouncing part of their political program, although it will involve the benefit of not competing for the same electorate. However, if the formateur decides to agree with its ideologically closest party, it will imply opposite consequences: they share several policies but they will compete for the same voters in the future. That decision has another political consequences: who stays in the opposition? And, as I said above, the role of the opposition is undeveloped in the literature, but it is a relevant actor. When coalition parties are ideologically close, it is quite probable that the opposition parties will be in the opposite ideological space. However, if coalition partners are ideologically far away, electoral competitors will exist in the same ideological space and they will not participate in the government. Thus, we have two scenes: a multiparty government without electoral competitors in the same ideological space and coalition parties that face opposition parties in the same ideological space.

Thus, the story is as stated below. During the term of office, parties supply information and, again, voters face the same problem: will they listen to the siren songs of parties? Now, the

[11] I am considering a multiparty system with at least four parties.

feature of parties is part of the solution. A second relevant point in Austen-Smith's finding is that information will be credible if voters and candidates share "some degree of common interests" (Austen-Smith 1992, 54). In fact, voters tend to believe signals that come from their ideologically closer parties.[12] But, how does it work? Let's assume a party system with four parties and a coalition government with two parties. If both incumbent parties are ideologically close, the mechanisms of accountability will not work properly. First, ideologically close voters would believe both and then, they would be confused because they receive credible signals from different sources. Second, voters will not have credible opposition parties as an alternative if they do not like the incumbent's performance. Thus, accountability will be difficult.

However, if coalition parties are ideologically distant, accountability may work. Now, voters have incumbent and opposition parties in their ideological space. Thus, voters receive credible information from only one incumbent party: their favourite. Further, if they do not like incumbent performance, they will have a credible opposition. In sum, the existence of a credible opposition will permit that accountability works and that opposition will exist with more probability than if coalition parties are ideologically far away.

3.3 Survival and type of government

Elections have a second political consequences: they may decide who forms the new government. But, we ought to distinguish votes to acceding to the government. In multiparty systems, winning an

[12] I assume that electors consider their ideology when they select a candidate. Thus, performance matters, but ideology matters as well. There is not any contradiction between ideology and incumbent's performance. Thus, "if policies are not consistent with the ideological stance of the party" (Sánchez-Cuenca 2003, 2), voters will punish. Further, there is strong empirical evidence that supports that hypothesis (Sánchez-Cuenca 2003)

election does not necessarily involve participating in the new government. We can find cases where incumbent's parties won votes, but they were removed from the cabinet. For instances, in Denmark in 1984, socialdemocrats won the election with 31.6% of total votes. However, the government was held by a coalition of conservative parties, in which the largest had only 23.45% of the total vote. Six years later, the main conservative party continued holding the cabinet though it lost 32% of its votes in three consecutive elections. On the other hand, socialdemocrats had increased their support, getting 37.38% of total vote. This is an example that shows why votes do not necessarily imply holding government.

A relevant study about survival is contained in a chapter by Cheibub and Przeworski's (Przeworski, Stokes, and Manin 1999, 222-250). However, I consider that their point of departure is wrong. They define accountability as "a retrospective mechanism, in the sense that the actions of rulers are judged ex-post by the effects they have. Rulers are accountable if the probability that they survive in office is sensitive to government performance" (Przeworski, Stokes, and Manin 1999, 225). Then, they link accountability to survival. However, those two actions do not always develop together: we may find accountability without survival or, vice versa, survival without accountability. For instance, incumbent parties may survive though the state of the economy is bad and voters punish them. In multiparty cabinets, after elections, voters lose part of their influence over choosing the government and thus, in spite of punishment, the same incumbent parties may continue holding the cabinet. Deep down incumbent performance is just one factor that may affect the probability of acceding to portfolios. As we shall see in this dissertation, there are more variables that influence the probability of surviving. For that reason, I consider that Cheibub and Przeworski confuse two different concepts: survival and accountability.

Why do we find this confusion? The theory of democracy has

stressed accountability as a mechanism designed to act as a deterrent. However, when accountability and survival do not develop together, this mechanism disappears. For that reason, multiparty cabinets are a problem for the theory of democracy: accountability as a measure designed to deter cannot work properly and then, citizens may lose their capacity of threat.

The question that arises is: what are the differences between accountability and survival? Accountability is a question about rewards and penalties, whereas survival entails several relationships of accountability. The results of those relations influence the probability of surviving. To put it another way, in a democracy, politicians are accountable to several actors: voters, party members and coalition partners. The results of these relationships determine whether politicians continue holding government.

Considering those differences, the type of cabinet is a relevant issue for both concepts. In the previous section, we have seen how accountability works depending on the type of cabinet. Now, I focus on survival. The main idea here is that each type of government is accountable to different actors. In single-party governments, voters and party members control an incumbent. However, in multiparty cabinets, incumbent parties are accountable to voters, party members and coalition partners. Therefore, coalition parties are controlled by more actors than they are in single-party cabinets and their survival depends on more relationships of accountability.

That confusion of concepts may bias Cheibub and Przeworski's study and, perhaps, this bias explains their findings. They analyze chief executives[13] in 135 countries and do not find strong relations between the economic performance and their survival in the cabinet. I observe two errors. First, as I said above, incumbent performance is only one of the factors that influence the probability of surviving, but there are other variables that affect it too. Second,

[13] "Presidents in presidential democracies, prime ministers in the parliamentary" (Przeworski, Stokes, and Manin 1999, 225)

they only distinguish parliamentarism from presidentialism when, theoretically, the type of government is a relevant variable too.

To sum up, we may wonder: what explains the survival of parties after elections? And, do we observe the same patterns in coalition governments as in single-party cabinets? The main aim of the following section is to shed light on these questions.

3.3.1 To survive after a single-party government

Why incumbent parties survive after a single-party government is explained by a triangular agency relationship (Maravall 2007b). In that relation, we find one agent and two principals: the agent is the incumbent party and the principals are the voters and the party members. That agency relationship is peculiar because "the two principals are not competing for the agent, although both party and the electorate want the government to give priority to their respective interests if in contradiction with those of the other principal" (Maravall 2007b, 6-7). However, I do not want to dwell excessively on that disagreement and prefer to focus my explanation on how each relation of accountability works separately.

Voters and politicians

The principal-agent relationship between parties and voters has been analyzed in the previous section. The main idea is that politicians are accountable to voters because of their performance. Thus, the electorate punishes or rewards incumbent parties by taking into account the state of the economy and the policies. The output of that agency relation is the electoral results. If survival depends on voters' judgment, those electoral results will influence the possibility of holding government after elections. That relation between voters and politicians is a relevant issue for the theory of democracy and representation. Maravall points out that if politicians dismiss to hold government because of the different criteria of vo-

ters, "political survival will not only depend on the will of people, and the incentives for an incumbent to be representative will disappear" (Maravall 2007a, 2). This statement reveals an important idea: survival in government is the unique incentive that influences whether politicians seek to better represent their citizens. In other words, if the probability of holding government does not depend on the votes, citizens will be irrelevant and politicians will not have incentives for being representative.

Party members and politicians

The second agency relation is between politicians and party members. We do not know very much about that relationship in spite of the very large literature on political parties. Over the last 60 years, 11,500 studies have dealt with this political organization. That literature has developed theoretical and analytical arguments that explain the working of political parties (Bille 2001; Carty 2004; Criado 2005; Gunter, Montero, and Linz 2002; Katz and Mair 1995; Katz and Crotty 2006; Lundell 2004; Michels 1962; Montero and Gunther 2003; Rahat and Hazan 2001; Rahat 2007; Ranney 1981). In these books and articles, the authors have tried to classify the different types of parties, to define the main concepts and to explain how organizational structures work. In order to achieve their goal, scholars have concentrated their efforts on analyzing individual parties. As a result, that literature is full of case studies where the authors simply focus on a single party or, at best, on party systems (Epstein 1964; Epstein 1977; Erickson and Carty 1991; Katz and Mair 1992; Johns 2000; Montabes and Ortega 1999; García-Guereta 2001; Young and Cross 2002). These studies however lack theoretical clarity and strong empirical evidence. That is, few scholars have tried to measure and to construct variables.

Perhaps, an exception is to be found in Maravall's work (Maravall 2007b): where he combines strong empirical evidence with an analytical framework. The author studies the political con-

sequences of party organizations. Maravall's main finding is that internal party democracy faces a trade-off between information and capacity. On the one hand, if parties discuss their policies openly and give explanations, voters will have more information. Moreover, the relationship between politicians and party members is useful for obtaining information on the evolution of public opinion. Thus, politicians will know whether their policies are unpopular. But, on the other hand, if these debates undermine the capacity of the government and the transmitted information to the public is a negative signal, internal party democracy will be a cost. In fact, voters penalize divided parties (Maravall 2007b).

Taking that research as a starting point, I am dealing with the political effects of party organization. When political elites decide to open up their parties, they permit their supporters to participate in three key decision processes: party manifesto, candidates selection and leader selection.[14] As a result, two questions arise: who may participate in these processes? And, what precisely do party members decide? The first question analyzes who can participate .[15] As in all election processes, there are two different ways of participating: to be selected and to select. Depending on the type of participation, parties establish restrictions. On the one hand, the possibility of being selected[16] is restricted to party members. Sometimes, they permit independent candidates, although

[14] At this point, I would like to point out that opening the party up is not a synonym for democratization. When politicians decide to widen the electoral base of these decision processes, it does not necessarily mean that they democratize the party. Many times, those enlargements just increase middle-level elites' power to the detriment of rank-and-files member.

[15] Scholars have classified democratizing participation by taking into account four dimensions: selectorate, candidacy, decentralization and voting versus appointment systems (Katz and Crotty 2006; Rahat and Hazan 2001). Taking into account these factors, they have measured how democratic a party is. However, those concepts are unclear and do not explain a lot. As I noted when I discussed the literature above, they lack clarity.

[16] I include presidential candidates, deputies, congress delegates...

they are an exception. On the other hand, the possibility of selecting is usually more open. Besides rank-and-file members, on several occasions parties have allowed sympathizers to participate too and, in the most open extreme cases, everybody may participate. For instance, in some North American states, all citizens may participate in primaries. In sum, the main idea is that the more people participate, the more democratic the process is.

The second question deals with the object of decision. In many studies, the distinction between candidate selection and leader selection processes is unclear (Criado 2005; Lundell 2004; Rahat and Hazan 2001; Rahat 2007), although it is relevant. Candidate selection implies choosing the politicians who run for election in each constituency, whereas leader selection means selecting the general secretary or party president, who will became the parliamentary leader or Prime Minister. Nevertheless, if party members decide the party manifesto, they will give their opinion on the policies.

To open a party up has costs and benefits and, as Maravall (2003) points out, they set up a trade-off. The costs of organizational opening may be the weakening of party discipline and cohesiveness (Boix 1998; Rahat and Hazan 2001; Criado 2005), although it is not a deterministic outcome. For instance, in the 1990s the British Labour Party decided to open the decision processes and the changes have not implied a relevant cost (Criado 2005, 29). But, when may it be a cost?

First, electoral costs are related with fragmentation. Hence, a prerequisite is that a party is divided between different "families" that compete for controlling the organizational structure. In that situation, to open the party up may not be a good idea, because that division will be more obvious, and, as we know, voters penalize divided parties (Maravall 2007b).

The second cost of opening parties is the resistance of middle-level elites. That elite is the "political heir". Moreover, they are the most implicated in the party structures and are the men who run

parties. But, if they lost their influence,[17] ideological consistency and organizational strength would decrease. Because they are less relevant in the party organization, they will not have incentives for being involved in it. The effect may be losing the capacity for winning elections and governing.

The benefits of organizational opening are two: improvement in accountability and an increase in party members. First, if politicians decide to open the parties, information will increase and electoral accountability will improve. Moreover, this increase will go in both directions: voters will know more about the politicians and policies; and the party will inform politicians "on the evolution of public opinion and to serve as an early warning instrument reporting on the costs of unpopular policies" (Maravall 2007b). The second benefit is that citizens would have more incentives to join a party. This increase of activists would have positive consequences in the electoral resources of the party because, as we know from the empirical evidence, the number of grassroots members in a constituency affects electoral participation (Boix and Riba 2000, 119). But these two benefits involve free debate without fear. If the debate fails to comply with those features, the opening will be an illusion and will not produce the results they expected. Thus, rank-and-file members will not transmit helpful information and grassroots members will not be very enthusiastic about getting involved in the electoral campaign.

Considering that theoretical framework, I may make inquiries about the agency relation between politicians and party members. I am focusing on the processes of candidates and leader selections. These decision processes have three main features that may affect the probability of surviving: publicity, risk of dissent and the kind of politicians that are selected.

I shall start by analyzing the latter one: the type of politicians.

[17] If all party members participate in the decision-making processes, middle-level elites will lose their powers of control and influence.

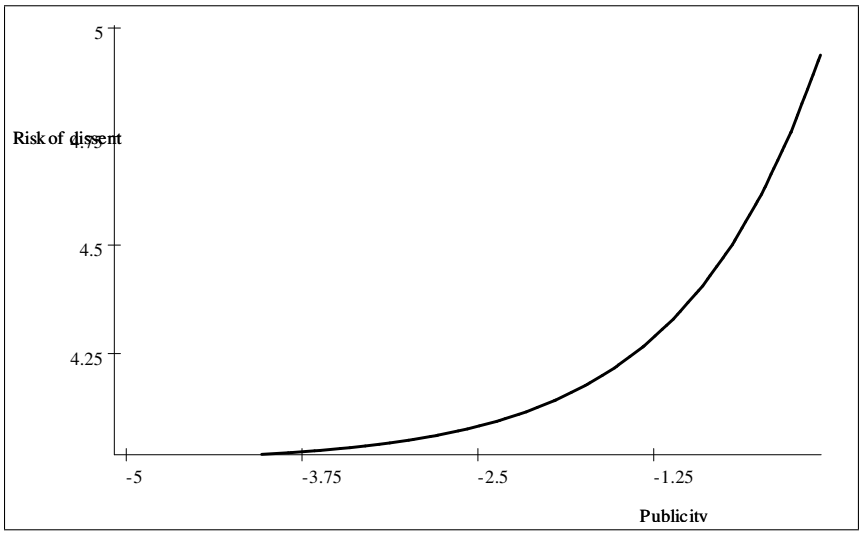
In the literature, the finding of May's law of curvilinear disparity (May 1973) that activists are more radical than leaders and voters is widespread. Therefore, if the political elite decided that grassroots members can take party decisions, the results would be extreme leaders and policies. However, the empirical evidence does not support May's hypothesis. First, Iversen, after analyzing seven countries, did not find any disparity between leaders and the middle-level elites (Iversen 1994b; Iversen 1994a). Second, Méndez and Santamaría have tested that hypothesis in Spain and have found that leaders are slightly more extreme than voters (Méndez and Santamaría 2001, 47). Similar results have been found in the British Labour Party (Norris 1995). In sum, I consider that rank-and-file members' extremism is not a problem for political elites and their decision of to open up the party.

Problems may arise because of publicity and the risk of dissent. Both factors are related, although their effects depend on the type of decision processes. I shall start with candidate's selection. This process basically involves forming the list of candidates for each constituency. In all fairness, citizens have a low level of awareness about how parties work. Perhaps, for that reason, media coverage is low and the media generally focus on internal disputes. Therefore, the capacity to inform is limited because the publicity is low and the benefits of organizational opening are low. But, this does not mean that candidate selections are irrelevant. As we have seen before, parties may follow different strategies to select their candidates. On the one hand, the most "democratic" version[18] is dominated by middle-level elites. This means that regional elites develop the list: they negotiate the positions, taking into account their control of the party. In this model, the risk of dissent is high. If "families" are not happy with the distribution of positions, the probability of internal dispute will increase. Thus, the

[18] I use "democratic" as a synonym for widening the electoral base of decision processes.

cost of opening up decision-making processes becomes apparent: division will be obvious and organizational capacity will decrease. In sum, "democratic" candidate selections may reduce the probability of surviving in the cabinet. On the other hand, centralized candidate selection may avoid some of those problems. In these type of parties, the existence of "families" is less probable. The central organs control the whole organization. Moreover, the possible internal disputes between "families" are settled by the center and its authority is high. In this case, the risk of dissent will be low and the probability of surviving will increase.

Figure 3.1: Leader selection, publicity and risk of dissent



Leader selection certainly has political consequences as well. Parties have three different ways of selecting their leaders: small committees, national congress and membership ballot. The difference between these three models is the electoral base that par-

ticipates in the decision process. Considering these three ways of leadership selection, publicity and risk of dissent vary. Graph 3.1 shows the relationship between these two variables. The different types of leadership selections are placed on the line. Small committees or *nomenklatura* involve low publicity and low risk of dissent. In this scenario, the political elite controls the entire process, and citizens have little information about how decisions are taken. For instance, in 2003, José María Aznar, leader of the Spanish conservative party, decided on his own replacement. Many years afterwards, we still do not know why the new leader, Mariano Rajoy, was selected. The process was completely opaque, but the middle-level elites moved quickly to support the new leader.

The second process, national congress, involves a medium risk of dissent and high publicity. In this case, political elite may control part of the decision process because the electoral base comes down to some congress delegates. To influence that electorate is easier than influencing all the party members. Moreover, national congress provides a lot of information because the process enjoys extensive coverage. Thus, national congress may be considered as the "perfect" model of leadership selections: it combines high publicity with medium risk of dissent. Perhaps, for that reason, this model of leader selection is the most common in my database. It has been used in 76.59% of the total cases.

The third process of leadership selection is primaries. This involves both a high risk of dissent and high publicity. American parties are the perfect stereotype. In this case, the electoral base is the total party membership. The way it is organized implies that the political elite loses its control over the process and that outsiders may run for election. Moreover, this type of way of selection is quite attractive for the mass media. For that reason, they echo and publicity is high. Perhaps, Spanish socialist primaries are a good example of these two ideas. In 1998, the socialist secretary general, Joaquín Almunia, convoked internal elections for Prime

Minister candidate and Josep Borrel, Almunia's partner in Felipe Gonzalez's cabinets, decided to run for election. The result was that Borrel gained the support of dissatisfied votes and won the primaries. The internal dissent increased. But the winner could not endure the criticisms and, finally, he resigned as party candidate. It was a novel process in Spanish party system and all the media dedicated a lot of time to these socialist primaries.

In sum, the leadership selection process will be a relevant variable for explaining party survival too. It gives more information than candidate's selection. How does leader selection affect the likelihood of surviving? National congress is the best option for politicians. It combines publicity with the possibility of controlling the process. Therefore I would expect that this organizational model would increase the possibility of holding government. However, primaries and *nomenklatura* lead to ambivalent outputs. On the one hand, primaries produce too much "noise" whereas small committees do not transmit any information.[19] As we have seen before, both results may lead to electoral costs. On the other hand, voters may positively assess internal democracy while small committees allow parties to present a unified front. In this case, the outcome will be electoral benefits. Which results will prevail? Perhaps, one output neutralizes the other.

3.3.2 To survive after a coalition government

In coalition cabinets, survival is explained by a quadrangular agency relation. At this point, we have to add a new actor: coalition partners. Coalition parties are submitted to three principals: voters, party members and coalition partners. In the previous subsection, I have dealt with voters and party organization. I have already spent enough time on these relationships of accountability. Bel-

[19] In both directions: from rank and file of the party to the elite and, vice versa, from the elite to the grass roots.

low I will develop theoretical explanations for the relation between coalition partners.

Politicians and their partners

When politicians decide to build a coalition government and look for partners, they are concerned about several issues: policies, electoral future, portfolios.... In this dissertation, I'm focusing on two of them: the partners' ideology and the stability of the government. How do they affect the possibility of surviving?

First, ideology has been presented as the variable that explains the birth and composition of coalition cabinets (Swaan 1973; Franklin and Mackie 1984; Budge and Keman 1990; Laver and Schofield 1990; Laver and Shepsle 1990; Strom 1990a; Laver and Budge 1992; Schofield 1993; Sjolin 1993; Laver and Shepsle 1996; Sened 1996; Muller and Strom 1999; Back 2003; Warwick 2005; Golder 2006; Back and Dumont 2007). The main finding of these studies is that politicians try to minimize the ideological distance between coalition parties. That conclusion is relevant to my theoretical argument because it may affect the probability of surviving. On the one hand, if the ideological distance between incumbent parties is high, their coexistence may be unstable. To reach an agreement will be difficult because parties have to agree a program, starting from distant preferences. Therefore, the government will have a high probability of transmitting instability and voters penalize that. On the other hand, ideological distance among coalition parties concerns party members. Rank-and-file members have strong preferences over policies. They have "interest in their candidate remaining in power. There is however a threshold to this interest if activists were to believe that the government is not carrying out their policy preferences and is therefore shirking as their agent. When the threshold is reached, the party will be indifferent about its agent surviving in power" (Maravall 2007b). If politicians agree with parties that are ideologically remote, party

members may consider that the threshold is reached. In sum, in both theoretical arguments high ideological distance reduces the probability of surviving in government.

Second, politicians want to build stable coalitions. They know that to coexist in a multiparty cabinet is not easy: politicians have to agree policies and hope that their partners carry out those agreements. Therefore, because they are concerned about their electoral future, they do not want to transmit an unstable image. How do they avoid that? Besides ideological distance, they look for possible partners that are flexible[20] and who keep their word. But, how do politicians know that? Parties have incentives to hide their real features. For that reason, because the possibility of asymmetric information exists, politicians look for signals that reveal the real characteristics of parties. How do they get those signals? They observe the past and analyze their possible partners' behavior. Thus, parties use previous experiences to guess whether their possible partners are a good choice. Therefore, if parties want to be chosen as coalition partners, they need a good reputation of stability and collaboration.

3.4 Conclusion

Elections have two political consequences: voters control politicians and a new government is formed. But, do these two processes work similarly in single-party governments as in coalition cabinets? In this chapter I have answered that question and have developed the causal mechanisms that involve both processes.

First, I have observed that accountability may work both single-party and multi-party governments. However, the causal mechanisms are different. On the one hand, in single-party cabinets, the solution is that voters assign responsibilities to governments

[20] Several times, they agree broad programs, and they have to relinquish some preferences.

because of their perfomance. In spite of asymmetric information, voters use data on well-being as a statistical inference of politicians' effort. On the other hand, in multiparty governments, voters have two possibilities. If they do not concern themselves about the features of the parties, citizens will simplify the received messages and will focus on Prime Ministerial parties as being chiefly responsible for well-being. However, because ideology matters and explains the birth and composition of coalition governments, I ought to introduce it into my explanations. Now, opposition parties are relevant actors that supply information and are considered as an alternative to incumbent parties. The existence of electoral competitors in the same ideological space may explain why accountability works in some multiparty cabinets.

Second, I have dealt with survival after elections. Again, there are differences between single-party and coalition cabinets. While the survival of single party governments depends on voters and party members, coalition cabinets are controlled by voters, party members and coalition partners. Hence, the survival of multiparty cabinets depends on more actors than single-party governments.

Chapter 4

Data and Methodology

In order to analyze the previous theoretical arguments, I decided to construct my own data. This chapter provides a summary of the data and methods used to develop the empirical evidence for Chapters 5 and 6. In the sections 4.1 and 4.2 I am presenting the database and the main variables of the dissertation. Before starting with the statistical analysis, I want to expound how I measure previous theoretical arguments, my sources of information and so on. Those sections describe the database and present a picture of the sample. Moreover, I discuss the advantages and disadvantages of some measures.

In section 4.3 I explain the methodology. This dissertation is framed by comparative studies and covers 22 OECD parliamentary democracies from 1945. I have also drawn on quantitative techniques. The first issue that arises is that there is no unique dependent variable. On the one hand, in Chapter 5, the dependent variable is the electoral results. On the other hand, in Chapter 6, the dependent variable is survival after elections. Thus, while the first dependent variable is linear, the second one is categorical. This suggests that I ought to use different statistical techniques. A second problem that I deal with is selection bias. The problem

is not the creation of the sample. The sample may be produced randomly although the world is not random. In other words, and using my unit of analysis as an example, the existence of coalition governments is not random. For that reason, I have to correct these possible bias problems.

4.1 The units of analysis: governments and parties

The database that I use in this dissertation is formed by all the governments from 1945 to 2006 in 22 OECD parliamentary democracies. The countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

The first problem that emerges is: when do we consider that a government is over? I have found that any of the possible answers is arbitrary and entails problems. As a result, I have decided to use the same definition used in Woldendorp, Keman and Budge's database. They consider that a new government exist when one of these events happens: elections, voluntary resignation of Prime Minister, resignation of Prime Minister due to health reasons, dissension within the government, lack of parliamentary support, intervention by the Head of the State and broadening of coalition (Woldendorp, Keman, and Dudge 1998).[1] Moreover, I am not just using their criterion, I am using their data as my main source of information as well. Woldendorp et al collected information on all the governments between 1945 and 1996 in 20 democracies.[2] I have increased

[1] This database was used before by Maravall (2007b) and he expanded the data until 2003.

[2] Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Sweden, Switzerland and United Kingdom

the database with two more countries -Spain and Portugal- and have updated it to 2006. In order to do that, I consulted Kessing's Contemporary Archive[3], Zarate's Political Collection[4] and Montabes' work (Montabes 1997). Tables 4.9, 4.10, 4.11, 4.12, 4.13, 4.14 and 4.15 of Appendix show the governments that I have added.[5]

Table 4.1 shows a picture of the database taking into account the type of governments. I have classified cabinets by taking into account two simple variables: the number of parties (i.e. single versus coalition governments) and parliamentary support (i.e. majority versus minority). If we compare that sample with other studies, it will be noted that I have increased the number of cases.[6] However, my data is not different from other databases, although majority governments represent a bigger portion than other samples. For example, in Strom's database majority governments represent 63.76% of the cases, 10 points less than in mine.[7]

A first relevant finding is that politicians share the government more frequently than not. Coalition governments make up 67.45% of the cases in my sample. However, the literature on electoral behavior and accountability has paid little attention to those type of governments.

A second important conclusion is that politicians are in minority with a high probability. This result is odd. If we think

[3] http://www.kessings.com

[4] http://www.terra.es/personal2/monolith/home.htm

[5] The only change that I have introduced is Japanese governments from 1993 to 1996. After checking different sources of information, I have observed that Woldendorp, Keman and Budge's database is wrong in those cases.

[6] For instance, Kaare Strom uses 15 democracies in his study (Strom 1990b), Powell considers 20 democracies (Powell 2000) and Powell and Whitten analyze 19 democracies (Powell and Whitten 1993). Moreover, I have expanded the period of analysis too.

[7] Strom doesn't include in his database the following countries: Australia, Austria, Germany, Japan, Luxembourg, New Zealand and Switzerland. In all these countries we find several majority and multiparty cabinets.

Table 4.1: Type of governments

	Majority	**Minority**	**Total**
Single	122 (16.97%)	112 (15.58%)	234 (32.55%)
Coalition	407 (56.61%)	78 (10.85%)	485 (67.45%)
Total	529 (73.57%)	190 (26.43%)	719 (100%)

about the origin and consequences of these type of governments, we may wonder why politicians are in minority. On the one hand, minority governments are a focus of instability. On the other, if we assume that politicians are office-seeking, why don't they want to take part in a cabinet when they have the opportunity? I explain that result using two different arguments. First, as we know from Duverge's law, electoral systems lead to different party systems and then, those party systems have an influence on the type of governments. Or, in other words, minority governments are the result of institutional design. In order to check that argument, I have run an empirical analysis using my own database. In the Appendix I present the empirical evidence that explains the formation of minority cabinets. Table 4.16 summarizes two models. Model 1 explains the effective number of electoral parties,[8] taking as independent variables the type of electoral systems and participation. We observe that proportional, mixed and multilevel electoral systems increase the number of parties. Moreover, participation has a negative influence: if participation increases, the effective number of electoral parties decreases. Those results coincide with Duverge's law. Model 2 uses the predictions of model 1 as an instrumental variable. I have approached it in this way because I

[8] The variable measures the type of party system.

want to avoid the problem of endogeneity.[9] It can be seen that all independent variables are statistically significant: both electoral systems and effective number of electoral parties have a positive influence. In sum, a portion of the results of table 4.1 is explained by two institutional factors: the electoral system and the number of parties.

Second, given those institutional designs, politicians may decide whether they join forces in a common cabinet or they stay in the opposition. That decision depends on the benefits that they would get in each case. For example, if politicians were able to take part in the development of policies without being in the cabinet[10] or if they expect a dark electoral future if they participate in government, then they would stay in opposition (Strom 1990b).

Once we know the distribution of the types of governments, I deal with the electoral results of those cabinets.[11] Table 4.2 summarizes the electoral payoffs by governments.[12] These electoral payoffs are calculated among electors or, in other words, among people who participated in the elections. The electoral outcomes match up with Strom's findings (Strom 1990b, 128). On the one hand, majoritary multiparty governments lose more votes than

[9] The existence of minority governments is related to the number of parties. Moreover, the number of parties may be determined by the type of government. Politicians work out whether they join a party or form a new one depending on their possibility of reaching the government.

[10] This means that the desire for policy-seeking is more important than preferences for office-seeking.

[11] The main sources of information are: Mackie and Rose (1982, 1997) and Caramani et al (2000). Moreover, I have updated those databases using some webpages (http://www.knesset.gov.il/description/eng/eng_mimshal_res.htm. http://cdp.binghamton.edu/era/elections/jpn83par.html, http://www.elections.org.nz/elections/pandr/vote/seats-1996-2002.html, http://pdba.georgetown.edu/Elecdata/Canada/canada.html, http://www.elecciones.mir.es/) and articles (Reed (1997) and Thies (2002))

[12] I present the average, the standard deviation in brackets and the number of cases that I have in my sample.

other cabinets. And on the other hand, minority single-party governments lose the least votes of all. Moreover, as in Powell's database (Powell 2000, 54), majority governments tend to lose more votes than minority governments. However, Powell concludes that majority single-party governments lose the most of all whereas in my sample it can be seen that majority coalition cabinets lose the most of all.

Reviewing the results of the table, I ought to add two further comments. First, there is a strong significant difference between minority and majority cabinets. If I perform the t test on the difference of means, it reveals that the electoral results of minority governments are different from majority cabinets at a statistically significant level. Coalition and single-party governments are not significantly different, although we are close to rejecting that both averages are statistically different.[13] The second observation relates to the electoral size of parties. Majority and coalition governments are bigger than minority and single-party governments.[14] These differences in the electoral size are quite relevant. Therefore, in our analyses we have to consider that it is not the same to lose 1% in minority single-party cabinets than in majoritarian coalition governments.

The electoral results of governments may be calculated among citizens too. That is, we may assume that abstention is part of the rewards and penalties. When citizens assign responsibilities, they have three options: incumbent, opposition or abstention. This does not mean that accountability explains the abstention entirely. However, we cannot forget that possibility. Table 4.3 shows the electoral outcomes of cabinets among citizens. The differences between type of governments that we observed in the previous table

[13] The t is 1.54 with 664 degrees of freedom.

[14] The biggest cabinets are majoritarian coalition governments, they have 61.48% of the votes. Then, we find majoritarian single-party cabinets (46.87% of votes), minoritarian coalition governments (40.73%) and, finally, minoritarian single-party cabinets (37.32% of votes)

Table 4.2: Electoral payoffs by governments (electors)

	Majority	**Minority**	**Total**
Single	-2.866 (6.219) N=118	-1.696 (6.933) N=109	-2.305 (6.583) N=227
Coalition	-3.418 (6.949) N=364	-1.834 (5.462) N=75	-3.147 (6.739) N=439
Total	-3.283 (6.775) N=482	-1.752 (6.359) N=184	-2.86 (6.693) N=666

Table 4.3: Electoral payoffs by governments (citizens)

	Majority	**Minority**	**Total**
Single	-2.3 (5.041) N=115	-1.331 (5.507) N=108	-1.83 (5.282) N=223
Coalition	-2.58 (7.763) N=363	-1.441 (5.323) N=73	-2.39 (7.418) N=436
Total	-2.513 (7.199) N=478	-1.375 (5.419) N=181	-2.2 (6.772) N=659

are similar to the results of Table 4.3. Majority coalition cabinets seem to be the losers whereas minority governments are the 'winners' after elections. As in the previous table, the electoral differences between coalition and single-party governments are not statistically significant, whereas those between majority and minority cabinets are at a 90% of confidence level.

Those results have been shown in other studies (Strom 1990b; Powell 2000). However, we know much less about parties. As I have said above, the literature of political science has studied governments as if they were single actors, paying little attention to the electoral results of parties. For that reason, I have constructed

Table 4.4: Electoral payoffs by parties (electors)

		Majority	Minority	Total
Single		-2.841 (5.897)	-0.79 (7.776)	-2.005 (6.774)
		N= 80	N=55	N=135
Coalition	All parties	-1.003 (4.066)	-0.229 (3.836)	-0.891 (4.042)
		N=604	N=90	N=700
	Prime Ministers	-1.242 (4.906)	-0.842 (4.031)	-1.173 (4.773)
		N=186	N=32	N=219
	PMs' Partners	-0.87 (3.622)	0.108 (3.717)	-0.737 (3.651)
		N=411	N=58	N=474
Total		-1.218 (4.355)	-0.442 (5.643)	-1.082 (4.612)
		N=684	N=145	N=835

a second database where parties are the unit of analysis.[15] Table 4.4 summarizes the dependent variable of Chapter 5: the electoral results of incumbent parties.[16]

One important finding, which contradicts previous conclusions, is that from the point of view of parties, participating in a coalition government is not worse than participating in a single-party government. In Tables 4.2 and 4.3, we saw that coalition cabinets

[15] I have considered any political organization that has participated in a government. When a party participates in a coalition government and a single-party government in the same legislature, I have selected the coalition case. Coalition cabinet prevails over single party government. Since the main aim of this dissertation is to study coalition governments, I have followed a strategy that widens the sample of coalition cabinets as much as possible. Moreover, when I find different coalition governments in the same legislature, I have considered the cabinet that survives for the longest period

[16] Perhaps, the reader may wonder why the electoral results of single party governments are different from the previous tables. As I argue above, in the government data set I consider a new unit of analysis, for instance, when the Prime Minister changes. This means that the only change is the Chief of government, and that the members of the cabinet remain the same. Thus, one electoral payoff may count in two or three units of analysis.

had higher electoral costs than single party governments. Nevertheless, if we use parties as the unit of analysis, we conclude quite the opposite: single party cabinets have more electoral costs than coalition governments. Thus, parties that take part in a multiparty cabinet, lose, on average, 0.891% of votes. However, parties that participate in single-party government, lose, on average, 2.005% of their votes. If we run the mean comparison test, we observe that these differences are highly statistically significant. Moreover, Table 4.4 presents the electoral results of parties taking into account their role in the coalition government: Prime Minister versus partner. We observe that to hold the Prime Minister portfolio is more 'dangerous' than to hold other portfolios. On average, Prime Minister parties lose more votes than their partners. These differences are statistically significant, as well.

Finally, as I did with governments, we may assume that abstention is relevant for the electoral payoffs. For that reason, I have calculated the electoral results of parties among citizens. Table 4.5 shows the data. The results are similar to Table 4.4 in that big differences are not observable. Prime Minister parties lose more votes than their partners, single-party governments lose more votes than coalition cabinets and majority governments lose more votes than minority cabinets. Majority single-party governments lose the most of all.

The questions that arise are: why do we observe those electoral results? How do we explain the outcomes? What factors do voters consider for punishing or rewarding parties? The answers to these questions are in Chapter 5.

The second dependent variable that I shall use is survival -Chapter 6-. But, how do we measure survival? I have followed two different strategies. First, we may consider that a party survives if it participated in a cabinet during the legislature and then, takes part in the new government after elections. In this scenario, we may find cases where politicians decide to oust the cabinet be-

Table 4.5: Electoral payoffs by parties (citizens)

		Majority	Minority	Total
Single		-2.452 (4.946)	-0.84 (6.16)	-1.787 (5.514)
		N=77	N=54	N=131
Coalition	All parties	-0.809 (3.683)	-0.082 (3.298)	-0.699 (3.646)
		N=591	N=86	N=683
	Prime Minister	-0.904 (4.661)	-0.28 (4.091)	-0.801 (4.575)
		N=182	N=30	N=213
	PMs' Partners	-0.712 (3.103)	0.024 (2.82)	-0.603 (3.091)
		N=402	N=56	N=463
Total		-0.998 (3.881)	-0.374 (4.611)	-0.89 (4.02)
		N=668	N=140	N=808

fore elections because they want to hold government in the future. Thus, I assume that to throw out the cabinet is part of a survival strategy. To leave the cabinet before elections is not exceptional. In my sample, I have 1.95 governments per legislature and 15.95% of parties leave the government earlier. Moreover, there is a strong relationship between the type of government and the probability of leaving it.[17] If the government is a coalition, 19.08% of total parties give up it before elections, whereas if the cabinet is single-party, that percentage drops to 4.38%.[18] Secondly, we may measure survival as parties that hold the government when elections take place and then, continue participating in the cabinet.

As I did before, I shall use parties as the unit of analysis. The

[17] I do not want to go into those arguments in any more depth at this point. In Chapter 6 I shall develop these data further.

[18] They are 6 cases above 137 governments. The reasons for termination were: dissension within government (Denmark 1982), intervention by the Head of State (Australia 1975) voluntary resignation of the Prime Minister (Norway 1972), lack of parliamentary support (Denmark 1950, Japan 1954) and broadening of the members of the cabinet (Japan 1955)

sample covers 21 OECD country. I do not include Switzerland because parties survive in spite of elections results; the same parties have stayed in government for the last 60 years. I only observe a small change from 1951 to 1959 when the Socialist Party left the government because of political disagreements. Variation in the survival of Swiss parties does not exist.

Table 4.6 shows the probability of surviving if I assume that to surrender the government before an election is part of a survival strategy. Thus, I consider all parties that have stayed in cabinet during the legislature and take part in the new government after elections. The findings are relevant. First, the rate of repeating in government is high. On average, parties that held the government in the previous legislature, take part in the new cabinet in 60.5% of total cases. The second conclusion is that there are no significant differences between single-party and coalition governments, whereas there are between majority and minority cabinets. The third relevant finding is that Prime Ministers of coalition governments survive the most of all. If we compare that output with the probabilities of single-party governments and their partners, the differences are statistically significant[19]. Hence, if a party wants to maximize its stay in government, it ought to hold the Prime Minister portfolio.[20]

Table 4.7 shows the results if I restrict my analysis to parties that do not give up government before elections. To put it another way, for incumbent parties that face elections, the outputs are similar. First, the difference between single-party and coalition governments is not statistically significant. Second, Prime Minister parties survive the most of all. The main differences with the previous table are in partners and the total average. Now, partners

[19] I have run the mean comparison test.

[20] Prime Minister parties aren't just surviving with more probability, they are staying in the government for a longer period as well. On average Prime Minister parties stay 1,212 days in the government, while their partners stay 1,049 days. This difference is statistically significant.

Table 4.6: Survival and parties I

		Majority	Minority	Total
Single		0.671	0.582	0.635
		(0.472)	(0.498)	(0.483)
Coalition	**All parties**	0.630	0.431	0.603
		(0.483)	(0.498)	(0.489)
	Prime Minister	0.737	0.656	0.726
		(0.441)	(0.482)	(0.447)
	PMs' Partners	0.587	0.317	0.551
		(0.492)	(0.469)	(0.498)
Total		0.635	0.486	0.605
		(0.482)	(0.501)	(0.489)

Standard Deviation in brackets

survive with more probability and the difference is statistically significant. Moreover, on average, parties that face elections survive with more probability as well. This is explained because parties that give up cabinets before elections survive in 40.7% of the cases, whereas parties that face elections, survive in 64.7% of total cases. Therefore, to wait until elections may be a good idea if parties want to maximize their stay in government. That difference is statistically significant as well.

The questions that arise are: why do we observe those results? How do we explain survival? Do coalition parties follow the same patterns as single-party cabinets? Chapter 6 will shed light on these intriguing questions.

4.2 The independent variables

In this section I am describing the independent variables: how I created them and the sources of information. The independent

Table 4.7: Survival and parties II

		Majority	**Minority**	**Total**
Single		0.675	0.62	0.654
		(0.471)	(0.49)	(0.477)
Coalition	**All parties**	0.669	0.47	0.646
		(0.471)	(0.502)	(0.479)
	Prime Minister	0.757	0.692	0.75
		(0.43)	(0.471)	(0.434)
	PMs' Partners	0.628	0.325	0.594
		(0.484)	(0.474)	(0.492)
Total		0.67	0.534	0.644
		(0.470)	(0.501)	(0.479)

Standard Deviation in brackets

variables that I shall use in my empirical evidences are economic and political. Table 4.8 shows all of them.

The economic independent variables are inflation,[21] unemployment,[22] economic growth[23] and public expenditure.[24] They are measured in different ways. Thus, inflation and unemployment are collected as the difference between the inflation rate in two successive elections; economic growth is measured as the relative diffe-

[21] The source is World Development Indicators (WDI) from Alvarez, Cheibub, Limongi and Przeworski (ACLP). It covers from 1960 to 2000.

[22] The source of information is World Development Indicators (WDI) from Alvarez, Cheibub, Limongi and Przeworski (ACLP). It covers from 1975 to 2000.

[23] The source is World Development Indicators (WDI) and covers from 1949 to 1996.

[24] I have collected total public expenditures, public expenditures on health and public expenditures on education. The source of information is World Development Indicators (WDI) and covers from 1965 to 1999. However, it depends on the country. In those variables there are several gaps in the information available. For instance, in the case of health, to collect data before 1984 is extremely difficult.

Table 4.8: Independent variables

Variables	N	Mean	Std. Dev.	Minimum	Maximum
Economy					
Inflation	232	-0.2642	30.2916	-357.5525	257.0205
Unemployment	139	0.1382	2.5503	-8.2	8.8
Economic Growth	298	5.4876	4.7101	-9.1608	23.6874
Total public expenditures	161	4.7229	12.0255	-44.0018	50.9042
Public expenditures on health care	133	3.9482	18.8906	-59.4737	90.449
Public expenditures on education	59	1.1665	8.5081	-20.8887	24.036
Politics					
Electoral payoffs	835	-1.0716	4.6089	-27	21.42
Left parties	934	0.3062	0.4611	0	1
Euclidean distance	708	0.7818	0.408	0	1.5
Coalition governments	719	0.6745	0.4688	0	1
Majority governments	719	0.7357	0.4412	0	1
Proportional electoral system	361	0.3712	0.4838	0	1
Multilevel electoral system	361	0.2468	0.4314	0	1
Mixed electoral system	361	0.0803	0.2721	0	1
ENEP	360	4.0786	1.4257	1.99	10.29
Candidates selection	636	3.7767	1.4221	1	6
Congress	551	0.7659	0.438	0	1
Primary	551	0.0381	0.1916	0	1
Duration	879	1091.595	473.5175	8	2008
Porcentage of governments	880	0.862	0.2389	0.0909	1

rence of real GDP per capita[25] between the election year and the two years prior to elections; and public expenditure are collected as the relative difference between expenditures as a percentage of GDP between two successive elections.

The main difference between them is the timing. Inflation, unemployment and public expenditures are observed in the whole period the incumbent was in office, whereas economic growth takes into account the GDP per capita growth rates of the two years preceding the election. This dissertation does not focus on accountability timing. The main aim is to know whether citizens have the capacity of assigning responsibilities in spite of coalition governments. This is the reason that I do not concern myself with whether or not voters are far-sighted or myopic. Moreover, the literature about accountability timing is not conclusive. On the one hand, some scholars have pointed out that voters take into account long periods of economic information (Peltzman 1990; Lopez-Nava 2007). On the other, Achen and Bartels have come to the opposite conclusions: voters are myopic and they only consider short-term results (Anchen and Bartels 2004). In view of that debate, I consider that both long and short-term measures are useful. After running several statistical analyses, I am using the measurements that explain more about the electoral results of parties.

The political variables that I have collected are:

a) electoral payoffs. This refers to the electoral gains or loses of parties. The sources of information are Mackie and Rose (1982, 1997) and Caramani et al. (2000). Moreover, in order to complete those databases, I have looked up other sources.[26]

[25] Per capita income in 1996 purchasing power parity (PPP) dollars.

[26] Israel: http://www.knesset.gov.il/description/eng/eng_mimshal_res.htm. Japan 1983, 1996 and 2000: http://cdp.binghamton.edu/era/elections/jpn83par.html, Reed (1997) and Thies (2002). New Zealand 1996, 1999, 2000: http://www.elections.org.nz/elections/pandr/vote/seats-1996-2002.html. Spain: Ministry of the Interior. Canada: http://pdba.georgetown.edu/Elecdata/Canada/canada.html

b) ideological variables: leftist parties and euclidean distance. Both variables have been created from Swank's categorization.[27] Sawnk classifies party ideology into six categories: left libertarian, left,[28] secular center,[29] centrist Christian Democratic,[30] right[31] and right-wing populist. On the one hand, the variable "left parties" assumes value 1 if parties are left libertarian or left and value 0 for the remaining values. On the other, the Euclidean distance within a coalition government has been calculated as the mean of Euclidean distances of each incumbent parties (Hinich and Munger 2003, 103). That is,

$$ED(i) = \sqrt{\sum_{j=1}^{n}(i_j - \bar{i})^2}$$

where i_j is the ideological location of party j, $\bar{i}$ is the mean of ideology within the government and n is the number of parties that form the cabinet.

c) type of governments: majority and coalition governments.[32] These are dummy variables. Thus, variable "majority" assumes value 1 if the cabinet has the majority of the seats in the parliament and value 0 for the remaining values. The variable "coalition" takes value 1 when the government is multiparty and value 0 otherwise.

d) electoral systems. This variable has been collected from Matt Golder's database (2004). I have split it into three dummy

[27] Duane Swank, *Comparative parties data set.* In the cases of Iceland, Israel and Luxembourg, I did it taking into account these categories.

[28] Communist, socialist, social democratic, labor and other various leftwing parties (e.g., left-libertarian parties)

[29] Non-catholic parties of the center.

[30] Non-conservative catholic parties.

[31] Far-right (e.g., neo-fascist, right-wing populist), classical liberal, conservative Christian Democratic, and other various right-wing parties.

[32] The sources of information are the same as I used to create variable "electoral payoffs".

variables: proportional, multilevel and mixed. We may observe that the majority of electoral systems are proportional -37.12%-, whereas a similar proportion of majoritarian and multilevel electoral systems exists -29.09% and 25.76% respectively-. Those variable are used to explain the origin of different types of governments.

e) ENEP: effective number of electoral parties. This is based on the following formula from Laasko and Taagepera:

$$\frac{1}{\sum v_i^2}$$

where v is the percentage of the vote received by the i^{th} party.[33] The source is Matt Golder's database (2004).

f) internal party democracy: candidate selection and selection of party Chairman. I consider that one of the relevant contributions of this dissertation is the creation of these variables. This is not the first time that scholars have tried to measure internal party democracy. For instance, Maravall does it (2008). However, I have expanded his data before 1975 and included all incumbent parties whereas he only considered Prime Minister parties. The first variable is candidate selection and this refers to how parties choose their candidates of each constituency. It is measured on a six-point opening scale in which 1 corresponds to complete control of national organs and 6 to membership ballot. Among these values, parties place on point 2 of the scale when subnational organs propose and national organs decide, on value 3 when national organs provide lists and subnational organs decide, on point 4 of the scale when subnational organs decide subject to national organs approval and on value 5 when subnational organs control completely.[34] Thus, democratic opening is defined as

[33] Independents or others are treated as a single party.

[34] The main sources of information are Katz and Mair (1992) and Bille (2001). Then, I have completed those databases for Australia (Epstein 1977; Johns 2000), Canada (Epstein 1964; Erickson and Carty 1991), Is-

the increase of actors that participate in the candidate selection. The second variable is selection of Party Chairman.[35] This depicts how a party elects its main leader -Secretary General or Party Chairman-. There are three possibilities: *nomenklatura,* national congress or primaries. The main difference between them is the size of the electoral base. In the first, only party managers or parliamentarians participate in the process. In the national congress rank-and-file members choose delegates who will select the party leader. Thus, it may be defined as indirect democracy. And finally, primaries imply membership ballot. We may observe that the favorite method of selection is national congress: 76.59% of total parties use it. For my empirical analysis I split that classification in two dummy variables. As we shall in Chapter 6, there are theoretical reasons that suggest that separate analysis would be worthwhile.

g) duration measures how long parties hold the government. It is assessed in days. I shall use it as a control variable.

h) percentage of governments means the times that parties participate in the government during the legislature. That is,

$$\frac{g_i}{G}$$

where g_i is the number of times that party i takes part in a cabinet and G is the total governments during a legislature. Thus, as that quotient is close to 1, we may draw the inference that party

rael (Rahat and Hazan 2001), New Zealand (http://www.labour.org.nz, http://www.national.org.nz), Portugal (Montabes and Ortega 1999), Spain (Montabes and Ortega 1999), Iceland (http://www.xd.is), Japan (http://www.jimin.jp) and Luxembourg (http://www.dp.lu, http://www.lsap.lu)

[35] The main source of information is Katz and Mair (1992). Moreover, I have increased their database by the following countries: Autralia (Epstein 1977; Johns 2000), Canada (Young and Cross 2002), Israel (Rahat and Hazan 2001), New Zealand (http://www.labour.org.nz), Iceland (http://www.xd.is) and Japan (http://www.jimin.jp).

i participates in all governments, whereas the quotient is close to 0, party i takes part in few governments. As I am developing in Chapter 6, I am using that variable as a proxy of reputation of stability and collaboration.

4.3 The statistical models

This dissertation is framed by comparative studies and covers 22 OECD parliamentary democracies from 1946. Then, I have to use quantitative techniques. In order to summarize the main features of the statistical models, in this section I am focusing on two aspects: one similarity and one difference. The remainder of the statistical details will be developed in the respective chapters.

I shall start with the similarity. All the statistical models in Chapters 5 and 6 have something in common: I need to control for the possibility of self-selection bias (Przeworski 2007). What does it mean? As I have said before, we may create a database randomly. It would be a good sample of reality. However, the world is not random. This means that the origin of any object has an explanation. Perhaps the researcher does not observe these factors, but they exist. Thus, coalition governments are not exogenous actors and there are several variables that may explain their existence. These variables may affect the independent variables of other statistical models too. Therefore, I ought to correct that self-selection bias. How do I do that? By developing Heckman models. In maths,

$$Y_i = \beta_i X_i + \gamma\lambda_i + u_i \tag{4.1}$$

$$Z_i = f(\alpha_i W_i + e_i) \tag{4.2}$$

$$Z_i = \begin{cases} 1 \text{ if } z_i \text{ is single-party -or coalition- government} \\ 0 \text{ otherwise} \end{cases} \tag{4.3}$$

$$\lambda_i = \frac{\phi(\alpha_i W_i)}{\Phi(\alpha_i W_i)} \tag{4.4}$$

$$\lambda_i \succeq 0 \tag{4.5}$$

where 4.1 is the outcome equation and 4.2 is the selection equation. That statistical model is known as *two-steps* (Heckman 1974; Heckman 1979; Breen 1996). How does it work? First, we calculate equation 4.2. This is a binomial probit[36] where Z_i is the dependent variable and the W_i is the matrix of independent variables that explain the existence of different types of governments. As we see in 4.3, Z_i assumes value 1 if the cabinet is single-party -or multiparty, depending on the subsample- and value 0 for the remaining values.

Second, we calculate the hazard rate, or inverse Mill's ratio, λ_i.This is calculated in equation 4.4, using the information from functions 4.2 and 4.3. In few words, the hazard rate is the probability of an event occurring given that it has not occurred prior to this time. In maths, it's the quotient between the probability distribution function -$\phi(\alpha_i w_i)$- and the survival function -$\Phi(\alpha_i w_i)$-. The only restriction on hazard rate, and implied by the properties of $\phi(\alpha_i w_i)$ and $\Phi(\alpha_i w_i)$, is that λ_i may not be negative and it may be greater than one. The hazard rate will correct the possible self-selection bias in equation 4.1.

Third, function 4.1, or outcome equation, is the statistical model that analyzes my theoretical arguments. Thus, Y_i and X_i are the matrix of dependent and independent variables that I have presented before. In order to correct for self-selection bias, I shall

[36] Bellow I explain how probit works.

introduce λ_i as independent variable and γ is the coefficient that describes its effect. Finally, u_i and e_i are the random disturbances.

In the Appendix, Table 4.17 presents the results of the selection equation 4.2 that I shall use in Chapters 5 and 6. The outcomes are probit coefficients. Therefore, we cannot say anything about the quantity of the effect, although we may focus on the signs. The independent variables are the type of electoral systems[37] and effective number of electoral parties. Thus, I explain the existence of single-party governments using institutional variables. The results fit what I expected: single-party governments are more likely in majority electoral systems[38] and as the number of electoral parties decreases, the probability of observing a single-party government decreases. Using that equation I get the hazard rate 4.4 that I shall introduce in the outcome equation.

The difference among the statistical analysis starts from the dependent variable. In Chapter 5 I am dealing with the electoral consequences of coalition governments -accountability-. In this case, the dependent variable will be linear. However, in Chapter 6 the main topic will be survival. Now, the dependent variable will be categorical. It means that function 4.1 will be different in each chapter. In the case of linear dependent variable, the outcome equation will have the same form as function 4.1. However, if the dependent variable is categorical, the outcome equation will be something like this:

$$Y_i = f(\beta_i X_i + \gamma\lambda_i + u_i) \tag{4.6}$$

where Y_i is the dependent variable and assumes values 1 and 0. X_i

[37] I use three dummy variables -proportional, mixed and multilevel electoral systems- and the category of reference is the majority electoral system.

[38] All dummy variables are negative and the category of reference is majority electoral systems. This means that single-party governments are less probable in proportional, mixed and multilevel electoral systems than in majority electoral systems.

is the matrix of independent variables, λ_i is the hazard rate and u_i the random disturbance. If equation 4.1 involves a linear relation between the dependent and independent variables, equation 4.6 implies that the relation between dependent and independent variables depends on a logistic function $f()$. To put it another way, when the dependent variable is categorical, I need to use a probit model[39] to estimate the probability of an event occuring -in this case survival-. How do probit models work?

That model of estimate has some problems compared to linear functions: the error term distribution is not normal, heterocedasticy[40] and the rank of estimate variation is not between 1 and 0 although we are talking about probabilities. For those reasons we use logistic functions. The mathematical form of a logistic function is

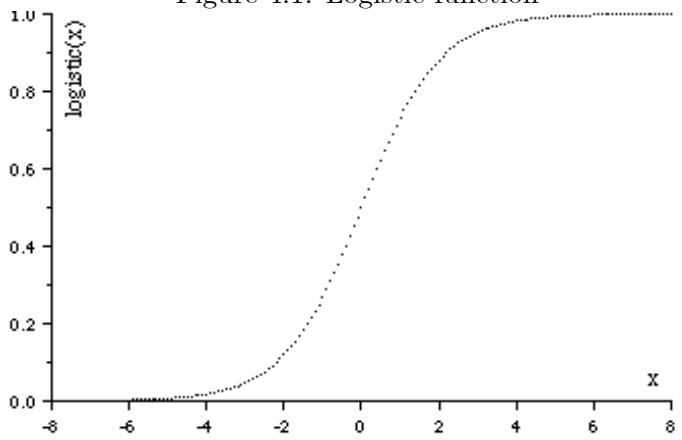
$$Y_i = \frac{e^{\beta X_i}}{1 + e^{\beta X_i}} \tag{4.7}$$

where e is the Euler's number or Napier's constant, Y_i is the independent variable, X_i is a column vector of the dependent variable and β is the determinant of the coefficient. Perhaps graph 4.1 may clarify the meaning of equation 4.7 and the relation between the dependent and independent variables. We may observe that the rank of Y_i values are 0-1. Then, the logistic function measures the probability that an event occurs in group 1 or in group 0. We estimate the parameters using Maximum Likelihood Estimate (MLE). This means that we look for the parameters that would produce a

[39] Perhaps, the reader wonders why I am not using logit models. The difference between them comes down to their functional form: "In probit models, the link function relating the linear predictor $\eta = x\beta$ to the expected value μ is the inverse normal cumulative distribution function, $\Phi^{-1}(\mu) = \eta$. In the logit model the link function is the logit transform, $\ln(\mu/1 - \mu) = \eta$" (Hahn and Soyer , 1). However, the outcomes are pretty similar and they produce identical probabilities (Greene 2003).

[40] It may be solved if we use Generalized Least Squares.

Figure 4.1: Logistic function



high probability within our sample. In order to do that, we shall maximize the likelihood function (Long 1997).

Perhaps, the most complicated part of logistic function is the interpretation of coefficients. Using these coefficients, we may say something about the direction of effect, although its size is not revealed. For that reason, some scholars calculate the odds ratio. In maths,

$$Ln(\frac{Y_i}{1-Y_i}) = Ln(e^{\beta X_i}) = \beta X_i \tag{4.8}$$

Now the interpretation is similar to linear function. e^{BX_i} measures the increase of the independent variable when the explanatory variable increases by one unit. To put it another way, when e^{BX_i} is more than 1, the probability of event 1 occurs is e^{BX_i} times larger. However, if e^{BX_i} is between 0 and 1, the probability of event 1 happening is e^{BX_i} times smaller. When e^{BX_i} is equal to 1, the explanatory variable does not affect the dependent variable. In spite

of that interpretation, I consider that a bad presentation may blur good empirical analyses (Beck, King, and Zeng 2000). For that reason, in Chapter 6 I shall simulate my results using the program Clarify.

4.4 Appendix

Table 4.9: Governments I

AUSTRALIA

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	NoM	Prime Minister (py)
24.03.93	11.03.96	1083	1	ALP 80						20	Keating, P. (ALP)
12.03.96	17.10.98	949	1	LIB 76	CNT 18						Howard, J. (LIB)
18.10.98	22.11.01	1131	1	LIB 64	CNT 16					30	Howard, J. (LIB)
23.11.01				LIB 69	CNT 13					30	Howard, J. (LIB)

AUSTRIA

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	NoM	Prime Minister (py)
12.03.96	18.01.97	312	2	SPÖ 71	FPÖ 40					14	Vranitzky, F. (SPÖ)
28.01.97	04.02.00	1102	1	SPÖ 71	FPÖ 40						Klima, V. (SPÖ)
05.02.00				ÖVP 52	FPÖ 52					16	Schüssel, W. (ÖVP)

BELGIUM

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	NoM	Prime Minister (py)
23.06.95	12.07.99	1480	1	CVP 29	PSB 21	BSP 20	PSC 12			15	Dehaene, J. L. (CVP)
13.07.99	01.05.03	1388	4	PVV 23	PSB 19	PRL 14	BSP 14	GREENS 11	AGALEV 9	18	Verhofstadt, G. (PVV)
02.05.03	12.07.03	71	1	PVV 23	PSB 19	PRL 14	BSP 14	GREENS 11	AGALEV 9	18	Verhofstadt, G. (PVV)
13.07.03				PVV 25	PSB 25	BSP 23	MR 18			21	Verhofstadt, G. (PVV)

CANADA

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	NoM	Prime Minister (py)
4.11.93	02.06.97	1306	1	LIB 177						23	Chrétien, J.-C. (LIB)
03.06.97	27.11.00	1273	1	LIB 155							Chrétien, J.-C. (LIB)
28.11.00	11.12.03	1108	2	LIB 172						28	Chrétien, J.-C. (LIB)
12.12.03	19.07.04	220	1	LIB 172						28	Martin, P. (LIB)
20.07.04	05.02.06	565	5	LIB 135						39	Martin, P. (LIB)
06.02.06				CON 124						27	Harper, S. (CON)

Table 4.10: Governments II

DENMARK

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	NoM	Prime Minister (py)
26.09.94	18.12.96	814	4	SD 62	RAD 8	CDM 5			20	Rasmussen, N. (SD)
19.12.96	22.02.98	430	1	SD 62	RAD 8					Rasmussen, N. (SD)
23.02.98	21.11.01	1368	1	SD 63	RAD 7				20	Rasmussen, N. (SD)
22.11.01				LIB 56	CON 16				18	Rasmussen, A. F. (LIB)

FINLAND

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	NoM	Prime Minister (py)
13.04.95	12.04.99	1460	1	SDP 63	KOK 39	VAS 22	VIHR 9		18	Lipponen, P. (SDP)
13.04.99	26.05.02	1139	4	SDP 51	KOK 46	VAS 20	VIHR 11	RKP 11		Lipponen, P. (SDP)
27.05.02	13.04.03	321	1	SDP 51	KOK 46	VAS 20	RKP 11			Lipponen, P. (SDP)
14.04.03	18.06.03	65	2	KESK 55	SDP 53	RKP 8			18	Jaatteenmaki, A. (KESK)
19.06.03				KESK 55	SDP 53	RKP 8			18	Vanhanen, M. (KESK)

FRANCE

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	NoM	Prime Minister (py)
08.11.95	01.06.97	571	1	RPR 257	UDF 213				28	Juppé, A. (RPR)
02.06.97	16.06.02	1840	1	PSF 241	PCF 38	GREEN 7	RSP 12		26	Jospin, L. (PSF)
17.02.02	21.09.02	96		RPR 355	UDF 29	DL 2				Raffarain, J.-P. (DL)
22.09.02				UMP 357	UDF 29					Raffarain, J.-P. (UMP)

GERMANY

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	NoM	Prime Minister (py)
17.11.94	26.10.98	1439	1	CDU 294	FDP 47				19	Kohl. H. (CDU)
27.10.98	2.11.98	6		SPD 298	GREEN 47				20	Schröder, G. (SPD)
3.11.98	21.10.02	1448	1	SPD 298	GREEN 47	PDS 2				Schröder, G. (SPD)
22.10.02				SPD 251	GREEN 55				15	Schröder, G. (SPD)

Table 4.11: Governments III

ICELAND

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	NoM	Prime Minister (py)
23.04.95	08.05.99	1476	1	IP 25	PP 15					10	Oddsson, D. (IP)
09.05.99	10.05.03	1462	1	IP 26	PP 12					10	Oddsson, D. (IP)
11.05.03				IP 22	PP 12					12	Oddsson, D. (IP)

IRELAND

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	NoM	Prime Minister (py)
15.12.94	25.06.97	923	1	FG 45	LAB 33	SDL 4				15	Brutton, J. (FG)
26.06.97	17.05.02	1786	1	FF 77	PD 4						Ahern, B. (FF)
18.05.02				FF 81	PD 8						Ahern, B. (FF)

ISRAEL

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	NoM	Prime Minister (py)
17.06.96	04.01.98	566	4	LIK 32	SHAS 10	NRP 9	IB 7	YIUD 4	THIRD 4	17	Netanyahu, B. (LIK)
05.01.98	06.07.99	547	1	LIK 27	SHAS 10	NRP 9	IB 7	YIUD 4	THIRD 4	17	Netanyahu, B. (LIK)
07.07.99	09.07.00	369	4	ONEI 26	SHAS 17	MRET 10	IB 6	CP 6	NRP 5	23	Barak, E. (ONEI)
10.07.00	06.03.00	240	1	ONEI 26	MRET 10	CP 6				17	Barak, E. (ONEI)
06.03.01	09.04.02	399	7	LAB 26	LIK 19	SHAS 17	IB 6	NU-YB 4		26	Sharon, A. (LIK)
10.04.02	20.05.02	40	4	LAB 26	LIK 19	SHAS 17	IB 6	NRP 5	NU-YB 4	29	Sharon, A. (LIK)
21.05.02	03.06.02	14	7	LAB 26	LIK 19	IB 6	NRP 5			23	Sharon, A. (LIK)
03.06.02	30.10.02	149	4	LAB 26	LIK 19	SHAS 17	IB 6	NRP 5		28	Sharon, A. (LIK)
31.10.02	28.02.03	121	1	LIK 19	SHAS 17	IB 6	NRP 5				Sharon, A. (LIK)
28.02.03				LIK 38	SNUI 15	NRP 6	NU 7			22	Sharon, A. (LIK)

ITALY

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	NoM	Prime Minister (py)
30.12.95	17.05.96	139	2								Maccanico, A.
18.05.96	08.10.98	873	4	PDS 173	PP 70	IR 26	GREENS 16			21	Prodi, R. (PP)
09.10.98	18.12.99	464	5	PDS 173	PP 70	IR 26	GREENS 16				D'Alema, M. (PDS)
19.12.99	17.04.00	120	5	PDS 173	PP 70	IR 26	GREENS 16			26	D'Alema, M. (PDS)
18.04.00	20.06.01	428	1	PDS 173	PP 70	IR 26	GREENS 16			24	Amato, G. (NONA)
21.06.01				FORZA 196	NA 99	NL 30	B 40	NPSI 3		25	Berlusconi, (FORZA)

Table 4.12: Governments IV

JAPAN

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	Py7	NoM	Prime Minister (py)
09.08.93	27.04.94	262	2	SDPJ 70	JRP 55	KOM 51	JNP	SDP	NHP	SDF		Hosokawa, M. (JNP)
							35	15	13	4		
28.04.94	29.06.94	63	2	SDPJ 70	JRP 55	KOM 51	JNP	SDP	NHP	SDF	20	Hrata, T. (JRP)
							35	15	13	4		
30.06.94	10.01.96	560	2	LDP 223	SDPJ 70	NHP 13					21	Murayama, T. (SDPJ)
11.01.96	06.11.96	300	1	LDP 223	SDPJ 70	NHP 13					21	Mashimoto, R. (LDP)
07.11.96	30.07.98	630	2	LDP 239								Mashimoto, R. (LDP)
01.08.98	04.10.99	429	7	LDP 239							21	Obuchi, K. (LDP)
05.10.99	04.04.00	182	3	LDP 239	NFP 156							Obuchi, K. (LDP)
05.04.00	03.07.00	89	1	LDP 239	NFP 156							Mori, Y. (LDP)
04.07.00				LDP 233	KOM 31	NCP 7					19	Mori, Y. (LDP)

LUXEMBOURG

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	Py7	NoM	Prime Minister (py)
26.01.95	13.06.99	1599	1	CSP 21	SD 17						10	Juncker, J. C. (CSP)
14.06.99	31.07.04	1874	1	CSP 19	DP 15							Juncker, J. C. (CSP)
31.07.04				CSP 24	SD 14						15	Juncker, J. C. (CSP)

NETHERLANDS

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	Py7	NoM	Prime Minister (py)
22.08.94	02.08.98	1441	1	PVDA 37	VVD 31	D66 24					14	Kok, W. (PVDA)
03.08.98	21.07.02	1448	1	PVDA 45	VVD 38	D66 14					15	Kok, W. (PVDA)
22.07.02				CDA 43	LPF 26	VVD 24					14	Balkenende, J. P. (CDA)

NEW ZEALAND

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	Py7	NoM	Prime Minister (py)
10.12.96	07.12.97	362	2	NP 44	NZF 17						20	Bolger, J. B. (NP)
08.12.97	08.12.99	730	1	NP 44	NZF 17							Shipley, J. (NP)
9.12.99	14.08.02	979	1	LAB 49	ALL 10						20	Clark, H. (LAB)
15.08.02				LAB 52	CPC 2						20	Clark, H. (LAB)

Table 4.13: Governments V

NORWAY

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	NoM	Prime Minister (py)
07.10.93	24.10.96	1113	2	LAB 67				18	Harlem Brundtland, G. (LAB)
26.10.96	12.10.97	352	1	LAB 67				19	Jagland, T. (LAB)
13.10.97	16.03.00	885	5	CCP 25	AGR 11	LIB 6		19	Bondevik, K. M. (CCP)
17.03.00	18.10.01	580	1	LAB 65				19	Stoltenberg, J. (LAB)
19.10.01				CON 38	CCP 22	LIB 2		19	Bondevik, K. M. (CCP)

PORTUGAL

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	NoM	Prime Minister (py)
25.03.75	14.07.75	111	4	PSP 116	PSD 81	PCP 30	MDP 2	21	dos Santos Goncalve, V.
15.07.95	18.09.75	65	5	PCP 30	MDP 2				dos Santos Goncalve, V.
18.09.75	22.07.76	308	1	PSP 116	PSD 81	PCP 30		15	Baptista Pinheiro, J.
23.07.76	25.01.78	551	7	PSP 107				22	Soares, M. (PSP)
26.01.78	24.07.78	179	5	PSP 107	CDS 42			16	Soares, M. (PSP)
01.08.78	24.10.78	84	5					16	Nobre da Costa, A.
25.10.78	29.07.79	277	5					18	Mota Pinto, C. A.
30.07.79	28.12.79	151	1					18	Pintassilgo, M. L.
29.12.79	05.10.80	280	1	PSD-CDS 128				15	Lumbarles Sa Caneiro, F. (PSD)
06.10.80	05.12.80	60	3	PSD-CDS 134					Lumbarles Sa Caneiro, F. (PSD)
06.12.80	04.06.83	910	1	PSD-CDS 134					Pereira Pinto Balsemao, F. J. (PSD)
04.06.83	13.06.85	740	5	PSP 101	PSD 75			17	Soares, M. (PSP)
14.06.85	06.10.85	114	1	PSP 101					Soares, M. (PSP)
06.10.85	19.07.87	620	1	PSD 88					Cavaco e Silva, A. A. (PSD)
20.07.87	06.10.91	1539	1	PSD 148				16	Cavaco e Silva, A. A. (PSD)
08.10.91	28.10.95	1481	1	PSD 135				17	Cavaco e Silva, A. A. (PSD)
29.10.95	10.10.99	1442	1	PSP 112				17	Guterres, A. (PSP)
11.10.99	17.12.01	798	2	PSP 115					Guterres, A. (PSP)
18.12.01	28.03.02	99	1	PSP 115					Guterres, A. (PSP)
28.03.02	08.07.04	833	2	PSD 96	PP 14				Durao Barroso, J. M. (PSD)
09.07.04	12.03.05	246	1	PSD 96	PP 14			20	Santana Lopes, P. (PSD)

Table 4.14: Governments VI

SPAIN

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	NoM	Prime Minister (py)
15.05.77	05.04.79	690	1	UCD 166					Suárez, A. (UCD)
06.04.79	25.02.81	691	2	UCD 168				23	Suárez, A. (UCD)
26.02.81	02.12.82	644	1	UCD 168				16	Calvo Sotelo, L. (UCD)
03.12.82	24.07.86	1329	1	PSOE 202				17	González, F. (PSOE)
25.07.86	05.12.89	1229	1	PSOE 184				17	González, F. (PSOE)
06.12.89	12.07.93	1314	1	PSOE 175				19	González, F. (PSOE)
13.07.93	04.05.96	1026	1	PSOE 159				18	González, F. (PSOE)
05.05.96	07.03.00	1402	1	PP 156				17	Aznar, J. M. (PP)
08.03.00	15.03.04	1468	1	PP 183					Aznar, J. M. (PP)
16.03.04				PSOE 164				14	Rodríguez Zapatero, J. L. (PSOE)

SWEDEN

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	NoM	Prime Minister (py)
06.10.94	16.03.96	527	2	SDA 161				22	Carlsson, I. (SDA)
17.03.96	20.09.98	917	1	SDA 161				22	Persson, G. (SDA)
21.09.98	20.10.02	1490	1	SDA 131				22	Persson, G. (SDA)
21.10.02				SDA 144	COM 30	GREENS 17		22	Persson, G. (SDA)

SWITZERLAND

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	NoM	Prime Minister (py)
13.12.95	03.12.96	356	1	SP 54	FDP 45	CVP 34	SVP 29	7	Delamuraz, J.-P. (FDP)
04.12.96	09.12.97	370	1	SP 54	FDP 45	CVP 34	SVP 29	7	Koller, A. (CVP)
10.12.97	08.12.98	363	1	SP 54	FDP 45	CVP 34	SVP 29	7	Cotti, F. (CVP)
09.12.98	14.12.99	370	1	SP 54	FDP 45	CVP 34	SVP 29	7	Dreyfuss, R.
15.12.99				SVP 44	SP 51	FDP 43	CVP 35	7	Blocher, C. (CVP)

Table 4.15: Governments VII

UNITED KINGDOM

Begin	End	Dur	RfT	Py1	Py2	Py3	Py4	Py5	Py6	NoM	Prime Minister (py)
11.04.92	07.05.97	1852	1	CON 336						23	Major, J. (CON)
07.05.97	07.06.01	1492	1	LAB 418						25	Blair, T. (LAB)
08.06.01	06.05.05	1428	1	LAB 412						23	Blair, T. (LAB)
07.05.05				LAB 355						23	Blair, T. (LAB)

Table 4.16: The existence of minority governments

Variables	**Model 1**	**Model 2**
Proportional	1.325***	1.026***
	(0.11)	(0.28)
Mixed	1.013***	0.917***
	(0.172)	(0.259)
Multilevel	1.275***	1.165***
	(0.158)	(0.228)
Partipation	-0.027***	
	(0.004)	
Predicted ENEP		-0.433***
		(0.155)
Intercept	5.461***	0.45
	(0.344)	(0.531)
N	690	688
R^2	0.1728	0.0392
F	69.32***	28.62***
Method	OLS	Probit

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 4.17: Selection equation

Variables	**Single-party governments**
Proportional	-0.706***
	(0.142)
Mixed	-1.22***
	(0.226)
Multilevel	-0.689***
	(0.154)
ENEP	-0.532***
	(0.06)
Intercept	2.279***
	(0.237)
N	689
R^2	0.2485
Wald χ^2	158.55
Method	Probit

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Chapter 5

Who Wins and Who Loses After a Coalition Government? The Electoral Results of Parties

One of the main gaps in the literature of political science is the analysis of the electoral results of parties, as a unit of analysis. Scholars have studied governments as if they were a single actor (Lewis-Beck 1986; Lewis-Beck 1988; Norpoth, Lewis-Beck, and Lafay 1991; Powell and Whitten 1993; Whitten and Palmer 1999; Powell 2000; Nadeu, Niemi, and Yoshinaka 2002; Barreiro 2007; Bengtsson 2004). However, as we shall see in the following pages, sometimes governments are made up of different parties and we do not know very much about them. In a democracy, when elections take place, citizens vote for parties or candidates. If voters face a coalition cabinet, they divide the rewards and penalties among

the government actors. Thus, we may wonder: who wins and who loses after a multiparty cabinet is formed? How do we explain these electoral results? Does accountability work in the same way that does in single-party governments? In fact, these questions are not answered by the literature.

The study most similar to my analysis can be found in the Powell and Whitten's article (1993). Powell and Whitten analyzed the economic vote when accountability may be blurred because of certain institutional features. However, it might be argued that their study contains two potentially important flaws that may cause bias in their empirical work.

Firstly, Powell and Whitten classify political contexts based on five features.[1] Their argument is that these characteristics contribute to unaccountability. However, I am unconvinced that these elements will produce unaccountability in all settings. Perhaps, the combination of institutions may produce the different outcomes that Powell and Whitten (1993) predict. For instance, together, bicameral opposition and coalition governments may improve accountability because there are several agents giving information.

Secondly, Powell and Whitten, as in so many of the other studies, do not distinguish between the electoral results of incumbent parties. Therefore, they are assuming that punishments and rewards are distributed equally within the cabinet. But this is a strong assumption because intra-government electoral outcomes are not a zero-sum game.

I would argue that my empirical analyses make an important contribution to this literature and help address these criticisms to Powell and Whitten's work. Firstly, as we shall see bellow, my statistical study is clearer. I simply consider one institutional variable -single-party versus coalition cabinets-. Secondly, if we

[1] Lack of voting cohesion, participatory and inclusive committee system in the parliament, bicameral opposition, minority governments and coalition governments.

assume that the other institutional variables are relevant, I shall control for them when I use fixed effects models. Thirdly, I have decided to deal with the electoral results separately.

The main aim of this chapter is to resolve these issues and present part of the empirical evidence of this dissertation. This chapter is divided into the following sections. Firstly, I shall analyze how accountability works in single-party governments. Secondly, I shall study responsibility to multiparty cabinets. And thirdly, I shall analyze the role of ideology in the process of assigning responsibilities to coalition governments.

5.1 When voters evaluate single party governments

What do voters take into consideration when they evaluate a government? This is an open question in the social sciences literature. Most researchers have concentrated their efforts on establishing a relationship between the economy and the electoral results. Economic voting is a widely discussed phenomena in the literature (Fiorina 1981; Kramer 1983; Chappel and Keech 1985; Strom 1985; Lewis-Beck 1986; Lewis-Beck 1988; Norpoth, Lewis-Beck, and Lafay 1991; Powell and Whitten 1993; Bosch, Díaz, and Riba 1999; Przeworski, Stokes, and Manin 1999; Whitten and Palmer 1999; Anderson 2000; Sánchez-Cuenca and Barreiro 2000; Royed, Leyden, and Borrelli 2000; Fraile 2001; Norpoth 2001; Fraile 2002; Nadeu, Niemi, and Yoshinaka 2002; Barreiro 2007; Bengtsson 2004; Duch and Stevenson 2005; Duch and Stevenson 2006). The main idea is that voters use the economy to evaluate government performance. That argument has been tested using three different strategies: individual, aggregate and multilevel analyses. At the first level, scholars use surveys and focus their attention on voters as the unit of analysis: this is known as micro-analyses. Voters' evaluations of the economy and the government's policies are the

main explanatory variables. At the second level, aggregated studies, scholars use macro-economic variables. Researchers use countries as unit of analysis and evaluate the relationships between the electoral results and specific economic variables (for instance, inflation, unemployment or economic growth). And finally, in multilevel analyses, scholars combine both strategies: individual and aggregate variables (Duch and Stevenson 2005). I have decided to follow the second strategy because I would like to cover countries and time as inclusively as possible.[2] This chapter is a straightforward extension of that literature.

To test the economic voting hypothesis, I have developed the following functions:

$$V_{it} = \beta_i X_{it} + \delta_{it} G_{it} + \gamma \lambda_{it} + u_{it} \tag{5.1}$$

$$Z_{it} = \alpha_i W_{it} + e_{it} \tag{5.2}$$

$$Z_{it} = \begin{cases} 1 \text{ if } z_{it} \text{ is single-party government} \\ 0 \text{ otherwise} \end{cases} \tag{5.3}$$

$$\lambda_{it} = \frac{\phi\left(\alpha_i W_{it}\right)}{\Phi\left(\alpha_i W_{it}\right)} \tag{5.4}$$

$$\lambda_i \succeq 0 \tag{5.5}$$

This system of equations is the Heckman model that I have described in Chapter 4. V_{it} indicates the electoral payoff by party i in each of t elections. B_i are the coefficients that describe the effects of economic variables. X_{it} is the matrix of the following economic variables: inflation, GDP per capita, unemployment and government expenditure. δ_{it} is a dummy variable that assumes value 1 if

[2] Moreover, I consider that the micro-analysis is not absent in this dissertation. The theoretical model chapter covers this part of the analysis.

the party ideology is on the left and value 0 if the party ideology is on the center and right. I have introduced the party ideology variable because I consider that government expenditures -G_{it}- affect the electoral results of parties depending on their ideology. The main idea is that left parties benefit from the increase of budgets. It does not mean that leftist governments spend more money than rightist cabinets. In fact, using my database, we can see that left-wing governments spend less than left-centre cabinets. Moreover, left-wing governments spend the same amount of money as right-wing cabinets. Therefore, ideology may not explain the differences between governments. The idea of interaction $\delta_{it}G_{it}$ is how citizens evaluate public spending. I assume that leftist voters reward an increase in public spending with more probability than rightist electors. γ is the coefficient that describes the effect of λ_{it} or hazard rate. The Mills' ratio, or hazard rate, is calculated in equation 4.4, using the information from functions 5.2 and 5.3. As we have seen in Chapter 4, the hazard rate corrects the possible self-selection bias. Finally, u_{it} and e_{it} are the random disturbances.

I would expect that if the economy improves, that the electoral results will improve too. This means that if inflation and unemployment rise, electoral performance will decline. However, if GDP per capita increases, the electoral performance will improve too. Moreover, I would argue that inflation, GDP per capita and unemployment are the key economic variables. Government expenditures are related to the party ideology.

Table 5.1 shows the statistical analyses. I have developed four models. Models 1 and 2 use as dependent variables the electoral results of parties among electors. However, in models 3 and 4, I consider that abstention accounts for part of the voters' rewards and penalties. This means that the electoral payoffs are calculated among citizens. Models 1 and 3 take Ordinary Least Squares (OLS) as the statistical method as it leaves out spatial and time controls.

Table 5.1: Single party governments. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation	-1.664**	-0.942**	-1.222**	-0.552*
	(0.699)	(0.38)	(0.506)	(0.303)
GDP per capita	-0.151	0.126	-0.175	0.147
	(0.539)	(0.313)	(0.378)	(0.241)
Unemployment	-2.025**	-0.921	-1.407**	-0.512
	(0.931)	(0.631)	(0.681)	(0.526)
Left party	3.109	3.19	1.572	2.59
	(3.773)	(2.215)	(2.976)	(1.637)
Government expenditures	-0.097	-0.067	-0.086	-0.092
	(0.115)	(0.049)	(0.084)	(0.063)
Left * Expenditures	0.461*	0.369**	0.388**	0.343**
	(0.234)	(0.154)	(0.187)	(0.136)
λ	-0.449	1.626	-0.627	0.803
	(3.775)	(2.208)	(2.774)	(1.665)
Intercept	-6.889	-11.438**	-4.425	-8.855**
	(10.089)	(5.601)	(7.571)	(4.119)
N	36	36	36	36
n		13		13
R^2	0.32		0.299	
F	1.51		1.56	
Wald χ^2		21.2***		14.54**
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

However, Model 2 and 4 introduce these controls by country.[3] The modified Wald test revealed a heteroskedasticity problem. For that reason, I have estimated the econometric analyses using Feasible Generalized Least Square (FGLS) (Castilla 1998; Hsiao 2003; Baltagi 2005). The statistical analyses fits as well as I had hoped. In all models, inflation, unemployment and the interaction between ideology party and government expenditures are highly significant and have the expected signs. Thus, when inflation and unemployment increase, the electoral payoffs decrease. Moreover, when government expenditures increase and the party ideology is on the left, the electoral payoffs increase. Once I use fixed effects -Models 2 and 4-, the empirical results just get worse in model 4: unemployment stops being significant.

One surprising outcome is that a GDP per capita increase is not statistically significant and has the opposite expected sign. The literature on the economic vote has stressed the relevance of economic growth (Lewis-Beck 1988; Norpoth, Lewis-Beck, and Lafay 1991; Powell and Whitten 1993; Whitten and Palmer 1999; Barreiro 2007). Nevertheless, my results question this widespread hypothesis. Perhaps, we may think that a problem of multicollinearity exists because the economic variables are highly correlated. For instance, the correlation between unemployment and the GDP per capita increase is -0.4804. For that reason, I have run statistical analyses where GDP per capita is the only independent variable. In this simple analysis, the explanatory variable has the right sign, but I have not found any significant links. Therefore, this result seems to suggest that economic growth is not as important as the literature of economic vote presupposes.

In the light of this outcome, we may wonder why scholars have

[3] I have used fixed effects models because it is the correct analysis when "we are focusing on a specific set of N" (Baltagi 2005, 12). Moreover, the F test suggests that this is the appropriate specification, and the correlation between the dependent variables and residuals is close to 0 in both analyses.

stressed the importance of GDP. The economy involves many variables and citizens may use them as a signal of incumbent performance too. Hence, it is unclear why GDP has to be the most relevant economic variable. In the literature, we do not find theoretical arguments that seek to demonstrate why GDP ought to be the key factor in economic voting.

In short, the empirical evidence of table 5.1 confirms the economic voting hypothesis for single party governments. That is, economic variables -inflation, unemployment and government expenditures when left parties hold the cabinet- explain the electoral results of parties that govern alone. We may infer from these outcomes that voters use the economy for assessing single party governments. The questions that arise are: do we observe the same behavior in multiparty cabinet? Is economy relevant when voters assess coalition governments? The next section deals with these questions.

5.2 When voters evaluate coalition governments

As I have argued previously, I believe that scholars have not correctly dealt with the process of assigning responsibilities to multiparty cabinets. They have downplayed the role of parties in their empirical analyses, treating governments as single actors (Powell and Whitten 1993; Whitten and Palmer 1999; Royed, Leyden, and Borrelli 2000; Nadeu, Niemi, and Yoshinaka 2002; Bengtsson 2004). I believe that a more appropriate way to study this topic is to consider parties as the unit of analysis. This is the strategy that I follow in this section.

However, if we consider parties as individual actors, there is a statistical problem: in each election, the dependent variable -the electoral payoffs- changes whereas the independent variables remain constant. That is, after a coalition cabinet, several incum-

bent parties compete for the votes and obtain different electoral results, although the economic indicators are the same for all parties. To put it another way, I cannot explain variability within a government when the explanatory variables keep constant. For that reason, I have decided to split the sample into groups and to analyze them separately. I have followed two criteria for classifying parties into groups: their role in the government -portfolio- and their size.[4]

In the following statistical analyses I apply the voting functions that I presented above:

$$V_{it} = \beta_i X_{it} + \delta_{it} G_{it} + \gamma \lambda_{it} + u_{it} \tag{5.6}$$

$$Z_{it} = \alpha_i W_{it} + e_{it} \tag{5.7}$$

$$Z_{it} = \begin{cases} 1 \text{ if } z_{it} \text{ is coalition government} \\ 0 \text{ otherwise} \end{cases} \tag{5.8}$$

$$\lambda_{it} = \frac{\phi\left(\alpha_i W_{it}\right)}{\Phi\left(\alpha_i W_{it}\right)} \tag{5.9}$$

$$\lambda_i \succeq 0 \tag{5.10}$$

The only change is that in equation 5.8, Z_{it} assumes value 1 when the type of government is multiparty. The remaining functions are equal.

[4] In spite of this problem, I have run statistical models for the whole database of coalition parties, without distinguishing between parties. I have applied the functions 5.6 and 5.7. The interaction between ideology party and public expenditure is the only significant independent variable when I use the electoral payoffs among citizens as a dependent variable.

5.2.1 The role of parties and accountability

When parties form a coalition cabinet, they divide the portfolios. Each portfolio deals with different subjects: education, economy, judiciary and so on. The main aim of this subsection is to check whether there is a relationship between the electoral results of parties that hold those responsibilities and economic indicators.

I start with Prime Minister parties. Table 5.2 shows the regression results. As in the previous section, I have run different models with different assumptions. Firstly, models 1 and 2 use as a dependent variable the electoral results among voters, whereas models 3 and 4 use the electoral payoffs among citizens. Secondly, models 1 and 3 are linear regressions that leave out spatial and time controls, while models 2 and 4 estimate using fixed effects.[5]

The results of Table 5.2 are contrary to scholars' expectations. As I have said previously in this dissertation, it is widely assumed in the literature that if power is divided, citizens will not be able to assign responsibilities. However, Table 5.2 shows that if we split coalition governments into incumbent parties, Prime Minister parties seem to be accountable to voters: their electoral results may be explained by the economic performance. The empirical analysis shows relevant statistical relations. First, in all models, unemployment has the expected sign and is highly statistically significant. Second, models 1 and 3 show that inflation affects significantly the electoral payoffs of parties. Third, in models 1 and 2 GDP per capita increase is statistically significant. In this case, this variable, that is seen as relevant in the literature (Lewis-Beck 1988; Norpoth, Lewis-Beck, and Lafay 1991; Powell and Whitten 1993; Whitten and Palmer 1999), explains the electoral results of Prime

[5] The correlation between residuals and dependent variable is close to 0. It supports the use of fixed effects estimate.

The modified Wald test revealed a heteroskedasticity problem. For that reason, I have estimated the econometric analyses using Feasible Generalized Least Square (FGLS) (Castilla 1998; Hsiao 2003; Baltagi 2005)

Table 5.2: Prime Minister party. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation	-0.015*	-0.015	-0.013*	-0.014
	(0.009)	(0.013)	(0.007)	(0.01)
GDP per capita	0.242*	0.184*	0.143	0.069
	(0.143)	(0.108)	(0.109)	(0.083)
Unemployment	-0.579**	-0.622***	-0.445**	-0.5***
	(0.259)	(0.191)	(0.185)	(0.139)
Left party	-1.044	-0.421	-0.972	-0.258
	(1.352)	(0.877)	(1.11)	(0.805)
Government expenditures	0.124	0.132*	0.084	0.099*
	(0.084)	(0.069)	(0.068)	(0.052)
Left * Expenditures	0.063	0.193**	0.082	0.18**
	(0.146)	(0.095)	(0.113)	(0.078)
λ	1.531	1.227**	0.752	0.781
	(1.026)	(0.573)	(0.838)	(0.519)
Intercept	-6.898**	-6.095***	-4.296	-4.299***
	(3.276)	(1.717)	(2.691)	(1.623)
N	65	65	65	65
n		19		19
R^2	0.132		0.097	
F	1.95*		2.61**	
Wald χ^2		17.72**		22.81***
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Minister parties if we use as a dependent variable the electoral results among voters. Fourth, when I control by country, the interaction between ideology and government expenditures works. Hence, economic variables explain part of the electoral results of Prime Minister parties that participate in coalition governments.

In sum, in spite of multiparty cabinet, we find strong relationships between electoral performance and economic indicators. Or, to put it another way, we cannot reject the idea that Prime Minister's parties seem to be accountable to voters. Moreover, if we compare these results with the outputs of single-party cabinets, we may argue that economic voting works better in Prime Ministers from coalition governments than in single-party governments. This finding contradicts the hypothesis of 'clarity of responsibility' that is widespread in the literature (Lewis-Beck 1986; Lewis-Beck 1988; Powell and Whitten 1993; Mershon 1996; Bosch, Díaz, and Riba 1999; Przeworski, Stokes, and Manin 1999; Whitten and Palmer 1999; Anderson 2000; Powell 2000; Mershon 2002; Nadeu, Niemi, and Yoshinaka 2002; Strom, Bergman, and Muller 2003; Bengtsson 2004).

However, the outcome fits my theoretical arguments. In Chapter 3, one of my hypotheses was that in a world of asymmetric information, voters may simplify messages focusing on Primer Minister parties. The preliminary results confirm my arguments. But, we may wonder if these outcomes are produced in case of other incumbent parties too. If so, my theory would have to be rejected because the other incumbent parties are accountable to electors as well.

Table 5.3 shows the empirical evidence for the Deputy Chairman parties.[6] I have run four different statistical models. As in previous tables, models 1 and 2 take as a dependent variable the

[6]In a multiparty cabinet, the probability that the same party holds simultaneously the Prime Minister and Deputy Chairman portfolio is low. In my sample, it happens in 27.37% of the cases.

electoral payoffs among electors, whereas models 3 and 4 take as a dependent variable the electoral payoffs among citizens. Moreover, models 1 and 3 leave out the spatial and time controls and models 2 and 4 use fixed effects.[7] The results show that there is a weak relationship between the electoral performance and economic indicators. First, the interaction between government expenditure and party ideology is significant in three out of four models. Second, inflation is only significant when I assume that abstention is part of the rewards and penalties, and I control by country. Therefore, the results are not significant enough to conclude that Deputy Chairman parties are accountable to voters because of the state of the economy. The outputs are poorer than the empirical evidence of Prime Minister's parties.

I have undertaken the same analysis for the Ministry of Finance and Economy parties. Table 5.4 shows the empirical evidence. In this table we might see four models. They have the same characteristics as in the previous analyses. These results are quite similar to the previous outputs: I do not find a significant relationship between electoral payoffs and the state of the economy. Only GDP per capita increase is statistically significant and has the correct sign in models 1 and 2. The remaining variables are irrelevant or show the opposite expected outcomes -inflation in models 1, 2 and 3-. Therefore, I may conclude that these parties are not accountable to people because of their economic performance.

Finally, I analyze the electoral results of Ministry of Education and Ministry of Health parties. In these cases, I introduce some changes in the voting equation. Now, I replace government expenditure with relative expenditure increase on education and on health care -depending on the statistical model- as a share of GDP

[7] The correlations between residuals and dependent variables are close to 0. It supports the use of fixed effects estimate.

The modified Wald test revealed a heteroskedasticity problem. For that reason, I have estimates the cross-sectional analyses using Feasible Generalized Least Square (FGLS) (Castilla 1998; Hsiao 2003; Baltagi 2005)

Table 5.3: Deputy Chairman party. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation	-0.174	-0.151	-0.257	-0.18*
	(0.204)	(0.113)	(0.185)	(0.093)
GDP per capita	-0.145	-0.073	-0.128	-0.102
	(0.11)	(0.082)	(0.091)	(0.073)
Unemployment	-0.163	-0.136	-0.242	-0.078
	(0.299)	(0.168)	(0.27)	(0.15)
Left party	-1.326	-1.115	-1.024	-1.389**
	(1.208)	(0.684)	(1.002)	(0.637)
Government expenditures	-0.027	-0.009	0.026	0.002
	(0.096)	(0.043)	(0.079)	(0.045)
Left * Expenditures	0.252**	0.204***	0.136	0.138**
	(0.103)	(0.074)	(0.084)	(0.064)
λ	1.156	1.604**	0.772	0.983
	(1.254)	(0.806)	(1.172)	(0.681)
Intercept	-3.627	-5.109**	-3.012	-3.076
	(3.861)	(2.357)	(3.648)	(2.085)
N	35	35	35	35
n		12		12
R^2	0.208		0.197	
F	1.78		1.41	
Wald χ^2		23.78***		27.96***
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 5.4: Ministry of Finance and Economy party. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation	0.122***	0.099**	0.07*	0.06
	(0.039)	(0.045)	(0.038)	(0.037)
GDP per capita	0.272*	0.236**	0.145	0.119
	(0.142)	(0.099)	(0.116)	(0.079)
Unemployment	-0.309	-0.174	-0.172	-0.159
	(0.276)	(0.182)	(0.204)	(0.147)
Left party	0.302	0.62	0.404	0.539
	(1.032)	(0.602)	(0.905)	(0.571)
Government expenditures	0.079	0.053	0.026	0.046
	(0.103)	(0.064)	(0.076)	(0.052)
Left * Expenditures	0.156	0.13*	0.133	0.082
	(0.117)	(0.074)	(0.096)	(0.06)
λ	2.073**	2.097***	1.411**	1.567***
	(0.832)	(0.353)	(0.69)	(0.351)
Intercept	-9.709***	-9.596***	-7.137***	-7.4***
	(2.67)	(1.102)	(2.243)	(1.098)
N	54	54	54	54
n		15		15
R^2	0.266		0.189	
F	2.97**		2.67**	
Wald χ^2		90.32***		41.26***
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

in two successive elections. The main idea is that voters may be particularly concerned about this part of the budget and take it into account when they assign responsibilities to parties that hold those subjects. The rest of the variables do not change. In the Appendix, Table 5.15 summarizes the statistical results. Models 1, 2, 3 and 4 take as dependent variables the electoral payoffs of Ministry of Education parties and Models 5 and 6 deal with Ministry of Health parties.[8] Of the economic variables, only growth in GDP per capita is significant in model 5. As regards the remaining economic variables, I cannot dismiss that their influence is zero. That is, I do not find a significant relation between those economic indicators and the electoral results. Therefore, it seems to me that these parties are unaccountable too.

Up until this point, I have dealt with coalition parties as if they were independent actors and their electoral results were independent of their coalition partners. However, this is a strong assumption. Generally, the fate of coalition partners is related or, in some cases, develop together. This means that explanatory variables simultaneously affect incumbent parties. To put it mathematically, estimating the equations separately will waste the information that the same set of parameters appears in all functions. Seemingly unrelated regressions (SURE) allow an estimation of this idea (Greene 2003, 339-377). Or, in mathematical language,

$$\begin{aligned} v_1 &= \beta_1 X_1 + \delta_1 G_1 + \gamma_1 \lambda_1 + u_1 \\ v_2 &= \beta_2 X_2 + \delta_2 G_2 + \gamma_2 \lambda_2 + u_2 \\ &\ldots\ldots\ldots \\ v_M &= \beta_M X_M + \delta_M G_M + \gamma_M \lambda_M + u_M \end{aligned} \tag{5.11}$$

[8] Only models 2 and 4 introduce fixed effects. Another relevant difference between models is the dependent variable. Models 1, 3, 5 and 6 use as dependent variable the electoral payoffs among electors, whereas Models 2 and 4 use the electoral payoffs among citizens.

where M is the number of equations. The variables are the same as in previous analyses and each equation deals with one party. Tables 5.5 and 5.6 show the empirical evidence for four parties: Prime Minister -equation 1-, Deputy Chairman -equation 2-, Ministry of Finance and Economy -equation 3- and Ministry of Education -equation 4-.[9] The Breusch-Pagan test of independence reveals that there is a strong correlation between random disturbance. Therefore, these four equations are related.

The results are similar to previous analyses. First, the electoral results of Prime Minister's parties are explained by following economic and political variables: economic growth,[10] unemployment and the increase in government expenditure when a party is on the left. Second, explanatory variables are statistically non-significant for Deputy Chairman, Ministry of Finance and Economy parties and Ministry of Education.

In sum, if I simply consider the role of parties in coalition governments, I shall be able to conclude that Prime Minister parties are the only members of the cabinet that voters hold accountable. In the remaining political formations, I am not able to identify significant relationships between economic indicators and electoral results. Therefore, if we classify coalition parties taking into account their type of portfolio, accountability only takes place in the case of Primer Minister's parties. In the case of Deputy Chairman, Ministry of Finance and Economy, Ministry of Education and Ministry of Health parties, I have not found empirical evidence that supports the idea that voters or citizens assign responsibilities to these parties in relation to economic performance.

These outcomes fit my theoretical model. In Chapter 3, one of my theoretical conclusions was that voters may focus on the most visible party, the Prime Minister party, and blame it because of

[9] Unlike the other equations, this function takes as an independent variable the relative expenditure increase on education.

[10] It is only statistically significant in Table 5.5.

Table 5.5: Analysis on the whole government (by portfolio)

	Electoral payoffs among voters			
Variables	**Equation 1**	**Equation 2**	**Equation 3**	**Equation 4**
Inflation	-0.14	-0.103	0.188	0.172
	(0.243)	(0.219)	(0.23)	(0.227)
GDP per capita	0.272*	-0.165	0.224	-0.099
	(0.166)	(0.151)	(0.172)	(0.149)
Unemployment	-0.821**	-0.132	0.007	-0.17
	(0.335)	(0.274)	(0.279)	(0.284)
Left party	-1.038	-0.102	0.903	-1.84**
	(0.871)	(1.131)	(1.09)	(0.819)
Government expenditure	0.086			0.009
	(0.078)			(0.02)
Left * Expenditure	0.329***	0.114	0.179	-0.001
	(0.095)	(0.122)	(0.112)	(0.029)
λ	2.452**	1.189	1.928*	2.58**
	(1.188)	(1.076)	(1.11)	(1.127)
Intercept	-9.704***	-4.076	-9.742***	-6.752**
	(3.459)	(3.117)	(3.259)	(3.231)
N	34	34	34	34
R^2	0.233	0.155	0.189	0.209
Wald χ^2	30.91***	4.53	9	12*
Method	OLS	OLS	OLS	OLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 5.6: Analysis on the whole government (by portfolio) 2

	Electoral payoffs among citizens			
Variables	**Equation 1**	**Equation 2**	**Equation 3**	**Equation 4**
Inflation	-0.299	-0.183	0.007	-0.07
	(0.193)	(0.185)	(0.184)	(0.17)
GDP per capita	0.134	-0.172	0.101	-0.131
	(0.132)	(0.127)	(0.136)	(0.112)
Unemployment	-0.689***	-0.122	-0.076	-0.232
	(0.263)	(0.231)	(0.224)	(0.213)
Left party	-0.833	0.006	0.551	-1.714***
	(0.643)	(0.91)	(0.781)	(0.626)
Government expenditure	0.057			0.009
	(0.058)			(0.015)
Left * Expenditure	0.251***	0.054	0.101	-0.001
	(0.07)	(0.099)	(0.083)	(0.022)
λ	1.816*	0.764	1.512*	2.001**
	(0.944)	(0.909)	(0.892)	(0.846)
Intercept	-7.842***	-3.122	-7.827***	-5.681**
	(2.745)	(2.631)	(2.608)	(2.425)
N	34	34	34	34
R^2	0.255	0.131	0.139	0.244
Wald χ^2	31.14***	4.3	5.66	14.61**
Method	OLS	OLS	OLS	OLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

its incumbent performance. The empirical evidence confirms that statement. It may also be suggested that in coalition cabinets, accountability has been channeled through to Prime Ministers.

Moreover, these findings suggest that the literature has not been completely right. It seems that the process of assigning responsibilities to coalition governments is not so simple. However, we may wonder: what happens if we change the criterion of party classification? In this subsection I have split parties according to their portfolios, but parties may also be classified according to their size. Will the results be the same? I shall answer this question in the next subsection.

5.2.2 The size of parties and accountability

Another way to classify parties is to consider their weight in the government. Now, the criterion of classification is their size. In the following sub-samples, I have divided parties in relation to their number of seats. Thus, for instance, the bigger parties are those that have more seats in parliament among incumbent parties. I apply the same economic voting functions.

I start with the biggest coalition parties.[11] As above, I have run four different models. First, models 1 and 2 take as dependent variables the electoral payoffs among voters whereas models 3 and 4 take the electoral payoffs among citizens. Second, models 1 and 3 use as statistical method Ordinary Least Squares (OLS) that leaves out spatial and time controls while models 2 and 4 introduce controls by country.[12] The modified Wald test revealed

[11] One of the possible statistical problems could be that the biggest parties are Primer Minister parties too. Thus, the following results would be redundant because they would have been presented above. However, as we can see in Table 5.16 in the Methodological Appendix, among the Primer Minister's parties, 81.01% of them were the biggest. Therefore, I'm not measuring exactly the same indicator.

[12] I have used fixed effects models because it is the correct analysis when "we

a heteroskedasticity problem. For that reason, I have estimated the last functions using Feasible Generalized Least Square (FGLS) (Castilla 1998; Hsiao 2003; Baltagi 2005). In sum, the vote functions are the same as in table 5.2. Thus, I may compare both outputs.

Table 5.7 shows the statistical results. Out of the explanatory variables, I only observe a relevant relationship between unemployment and electoral results -in model 3, it is not statistically significant-. GDP per capita increase is just significant in model 2. Thus, economic performance has a weak influence on the electoral payoffs of these parties. The outputs are poorer than the results of single-party cabinets and Prime Minister parties. It seems that accountability does not work effectively with the biggest coalition parties.

How does accountability work for the second biggest parties of coalition cabinets? Table 5.8 shows the empirical evidence. In all models, I can only identify a weak relationship between the economy and electoral payoffs. The interaction between left parties and government expenditures is the only single variable that explains the electoral results of the second biggest parties.[13] Thus, if the party is on the left and it increases government expenditures, its electoral results will increase too. The remaining variables do not have any influence on the electoral payoffs. In conclusion, accountability does not work properly on the second biggest parties of multiparty cabinets. In other words, I cannot infer from a unique independent variable that those parties are accountable to voters.

We may wonder about the third and fourth biggest parties of coalition governments. In the Appendix, Table 5.17 shows the statistical results. Models 1 and 2 deal with the electoral payoffs

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are focusing on a specific set of N" (Baltagi 2005, 12). Moreover, the F test suggest that this is the appropriate specification.

[13] In models 2 and 3, the party ideology variable is statistically relevant too. However, I do not have an interpretation of that influence.

Table 5.7: The biggest party in the coalition. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation	-0.001	-0.007	-0.003	-0.009
	(0.017)	(0.015)	(0.016)	(0.011)
GDP per capita	0.232	0.213*	0.117	0.095
	(0.195)	(0.111)	(0.158)	(0.078)
Unemployment	-0.543*	-0.535**	-0.332	-0.351**
	(0.286)	(0.21)	(0.236)	(0.146)
Left party	-0.259	0.812	-0.161	0.75
	(1.45)	(0.898)	(1.224)	(0.727)
Government expenditures	0.162	0.146**	0.097	0.106**
	(0.132)	(0.07)	(0.114)	(0.05)
Left * Expenditures	-0.065	0.032	-0.019	0.06
	(0.117)	(0.095)	(0.093)	(0.075)
λ	1.712	2.021***	1.08	1.281***
	(1.191)	(0.494)	(1.125)	(0.424)
Intercept	-7.961**	-8.841***	-5.785*	-6.394***
	(3.616)	(1.576)	(3.424)	(1.369)
N	70	70	70	70
n		19		19
R^2	0.103		0.049	
F	2.31**		1.92*	
Wald χ^2		32.73***		24.4***
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 5.8: Second biggest party in the coalition. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation	0.003	0.003	-0.002	-0.0004
	(0.007)	(0.008)	(0.006)	(0.007)
GDP per capita	0.145	0.051	0.1	0.0004
	(0.122)	(0.076)	(0.113)	(0.06)
Unemployment	0.222	0.203	0.169	0.169
	(0.216)	(0.133)	(0.195)	(0.112)
Left party	-2.274**	-1.796***	-1.699*	-1.767***
	(1.1)	(0.545)	(0.962)	(0.456)
Government expenditures	-0.036	-0.051	-0.006	-0.036
	(0.07)	(0.038)	(0.058)	(0.034)
Left * Expenditures	0.267***	0.26***	0.178**	0.144***
	(0.087)	(0.056)	(0.075)	(0.043)
λ	1.86**	1.928***	1.256	1.425***
	(0.923)	(0.388)	(0.831)	(0.292)
Intercept	-6.447**	-6.489***	-4.776*	-4.742***
	(2.731)	(1.208)	(2.498)	(0.879)
N	66	66	66	66
n		19		19
R^2	0.188		0.144	
F	3.38***		2.62**	
Wald χ^2		62.22***		51.15***
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

of the third biggest parties whereas models 3 and 4 analyze fourth biggest parties. I use Ordinary Least Squares in all models. Now, I leave out the spatial and time dimensions. The Breusch and Pagan test and the F test reveal that those dimensions are statistically unnecessary. The findings are the same as in the previous analyses, I cannot identify any relevant statistical relationships between electoral results and economic indicators. Only inflation is statistically significant for the third biggest parties. Therefore, economic performance does not explain the electoral results of these parties.

Finally, as above, we may assume that the electoral results of these parties are related. To this point, I have analyzed coalition parties as if they were individual actors. However, this is an strong assumption. For that reason, I have applied seemingly unrelated regressions -5.11-. Tables 5.9 and 5.10 show the results. Only equation 2 -second biggest parties- reflects a relation between part of the economic performance -economic growth and government expenditure when the party is on the left- and electoral payoffs. However, the Breusch-Pagan test of independence reveals that to estimate using SURE is not correct: residuals between equation are not correlated. For that reason, these results may be biased.

In sum, accountability does not work if we classify parties taking into account their weight in the government. If accountability is a question of economic outputs and electoral results, people may not assign responsibilities to those coalitions parties. Thus, the empirical evidence presented in this subsection confirms what the literature says. Moreover, these outcomes fit my theoretical arguments. In Chapter 3 I argue that accountability is a question about tasks and not about size. The empirical evidence presented to date in this thesis confirms that statement.

Table 5.9: Analysis on the whole government (by size) 1

	Electoral payoffs among voters		
Variables	**Equation 1**	**Equation 2**	**Equation 3**
Inflation	-0.017	0.002	-0.002
	(0.015)	(0.006)	(0.006)
GDP per capita	0.33	0.315***	0.092
	(0.207)	(0.121)	(0.124)
Unemployment	-0.553	0.108	0.01
	(0.36)	(0.166)	(0.169)
Left party	0.49	-3.138***	0.574
	(1.762)	(1.016)	(1.056)
Government expenditure	0.219		
	(0.134)		
Left * Expenditure	0.038	0.37***	0.078
	(0.141)	(0.088)	(0.101)
λ	0.375	2.615**	-1.15
	(2.071)	(1.142)	(1.101)
Intercept	-4.586	-9.028***	2.479
	(6.433)	(3.452)	(3.347)
N	39	39	39
R^2	0.124	0.39	0.046
Wald χ^2	6.98	26.08***	2.33
Method	OLS	OLS	OLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 5.10: Analysis the whole government (by size) 2

	Electoral payoffs among citizens		
Variables	**Equation 1**	**Equation 2**	**Equation 3**
Inflation	-0.015	-0.0002	-0.002
	(0.013)	(0.005)	(0.005)
GDP per capita	0.265	0.246**	0.083
	(0.179)	(0.102)	(0.099)
Unemployment	-0.414	0.092	-0.021
	(0.312)	(0.14)	(0.135)
Left party	1.091	-2.426***	0.045
	(1.528)	(0.861)	(0.855)
Government expenditure	0.186		
	(0.117)		
Left * Expenditure	0.036	0.28***	0.068
	(0.122)	(0.075)	(0.082)
λ	-0.128	1.566	-0.979
	(1.795)	(0.968)	(0.879)
Intercept	-3.058	-5.969**	2.038
	(5.577)	(2.926)	(2.671)
N	39	39	39
R^2	0.114	0.349	0.055
Wald χ^2	7	20.46***	2.6
Method	OLS	OLS	OLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

5.3 Ideology and accountability

However, this is not the end of the story. In the literature, the composition of multiparty cabinets has been explained using two key variables: size and ideology. The combination of both factors has created the hypothesis of *minimal connected winning*. The main idea is that "participants will create coalitions as large as they believe will ensure winning and no larger" (Riker 1962, 47) and simultaneously, "coalitions that form will be ideologically "connected" in the sense that all members of the coalition will be adjacent to each other on this dimension" (Laver and Schofield 1990, 97). Thus, ideology matters because it decides the government formation. But, we may wonder: does ideology play any role in the process of assigning responsibilities to coalition cabinets?

In chapter 3, I have pointed out that in multiparty cabinets, accountability may depend on the ideological distances between parties. Thus, if a coalition government is formed by parties that are far away from each other in ideological terms, voters will be able to assign responsibilities. In this case, accountability would work as in single-party governments. Why? My argument is summarized below.

In accountability models, the main problem is asymmetric information. This means that agents have more information than the principal. Thus, incumbent parties may send messages to voters, but a problem of credibility appears. How may we resolve that in the case of multiparty cabinets? Let's assume a party system with four parties and a coalition government with two incumbent parties. During the term of office, parties supply information and voters face the problem of asymmetric information. We may wonder: will they listen to the siren song of parties? The features of parties are part of the solution. In Austen-Smith's relevant work, one of his findings is that information will be credible whether voters and candidates share "some degree of common interests"

(Austen-Smith 1992, 54). Thus, voters believe signals that come from their ideologically closer parties.[14] But, how does this fit our story?

If both incumbent parties are ideologically close, the mechanisms of accountability will not work properly. First, ideologically close voters would believe both and then, they would be confused because they receive credible signals from different sources. Second, voters will not have credible opposition parties as an alternative if they do not like the incumbent's performance. Therefore, accountability will be difficult.

However, if coalition parties are ideologically distant, accountability may work. In this situation, voters have incumbent and opposition parties in their ideological space. Voters would receive credible information from only one incumbent party: their favourite. Furthermore, if they do not like incumbent performance, they will have a credible opposition. In sum, the existence of a credible opposition will permit accountability to function and that serious opposition will exist with more probability if coalition parties are ideologically distant. Are these arguments true?

To answer that question I have changed previous voting functions. I now want to measure the effect of explanatory variables when ideological distance increases. Thus, I have created new independent variables. That is,

[14] I assume that electors vote ideologically. This means that voters support parties that are close to their ideological position and, as we know from the empirical evidence, they use it to evaluate the economic performance (Maravall and Przeworski 1999). Thus, performance matters, but ideology matters as well.

Moreover, there is no contradiction between ideology and incumbent's performance. Thus, "if policies are not consistent with the ideological stance of the party" (Sánchez-Cuenca 2003, 2), voters will punish. Furthermore, there is strong empirical evidence that supports that hypothesis (Sánchez-Cuenca 2003)

$$X'_{it} = X_{it} \times (\frac{-1}{I_{it}}) \tag{5.12}$$

where X_{it} is is the matrix of the economic variables[15] and I_{it} is the mean of Euclidean distances within a coalition government.[16] The value of I_{it} goes from 0 to 1.5, in which 0 means proximity and 1.5 is the highest remoteness. I use the negative inverse of I_{it} because I consider that this transformation fits better for the relation between accountability and ideology. I hope that if I_{it} increases, accountability will increase and the effects of explanatory variables will remain. Graph 5.1 shows the relation between accountability and ideology when we use the negative inverse of I_{it}. It has a logistic form. After that transformation, I hope that the coefficients of X'_{it} should have the same signs as before. As I did earlier, I divide the sample into groups. The following two criteria remain unchanged: the portfolio and the size. Bellow, I only present the statistical models where I have found a relevant relation.

[15] As above, the following variables are measured as the difference between the rates in two successive elections: inflation, unemployment and government expenditure. However, GDP per capita is measured as the growth in the previous two years before elections.

[16] I have calculated the ideological distance within a government as the mean of Euclidean distances (Hinich and Munger 2003, 103). That is,

$$ED(i) = \sqrt{\sum_{j=1}^{n}(i_j - \bar{i})^2}$$

where i_j is the ideological location of party j, $\bar{i}$ is the mean of ideology within the government and n is the number of parties that form the cabinet. I use the six-point ideological scale that Duane Swank presents in his database -*comparative political parties data set*- in which 1 corresponds to the extreme left and 6 to the extreme right.

5.3.1 The role of parties, ideology and accountability

Tables 5.11 and 5.12 show the outputs[17] for Primer Minister and Minister of Finance and Economy parties. In the other portfolios that I studied above,[18] I have not found any significant relations. Moreover, I have run seemingly unrelated regressions, combining different portfolios, but I have not obtained any relevant results.

The results that I present now are quite important and add more complexity to the process of assigning responsibilities. First, once we introduce the ideological distance within government, the effects of all explanatory variables are quite significant. This means that economic performance significantly affects the electoral results of some coalition parties: namely Prime Minister and Minister of Finance and Economy parties. Second, all the interaction between party ideology and economic variables follow the expected sign. The only exception is government expenditure. In this case, if the incumbent party is on the left, government expenditure increases and the ideological distance within the cabinet increases, support for those parties will decrease. However, if the party is on the right, electoral support will increase if government expenditure increases and the coalition parties are ideologically remote. But in the remaining economic variables, the signs fit what I expected: if the ideological distance within a coalition government increases and the economy improves -inflation and unemployment decreases and economic growth increases-, the voters will support incumbent parties. Before developing theoretical explanations, I shall present the empirical evidence when parties are classified according to their size.

[17] The coefficients are close to 0 because of mathematical transformation. Ideological distance within governments goes from 0 to 1.5. If we calculated the inverse of that, the quotient will be really big. Then, after multiplying for economic variables, these indicators increase. It leads to a function with high independent values that affect low dependent values.

[18] Deputy Chairman, Minister of Education and Minister of Health.

5.3.2 The size of parties, ideology and accountability

Tables 5.13 and 5.14 show the statistical analyses for the biggest and second biggest parties in a coalition cabinet. In the case of the other parties, I have not found relevant findings. The results are the same as with the Prime Minister and Minister of Finance and Economy parties. That is, accountability works for some coalition parties. How does it work? First, if parties are on the left and government expenditures increase, the electoral support will decrease when ideological distance within cabinet increases. Quite the opposite is in the case if the parties are on the right; the electoral support will increase. Second, if the economy improves -unemployment and inflation decreases or economic growth increases-, the support of incumbent parties will increase when the ideological distance between coalition parties increases.

These results fit my expected theory. At the beginning of this section, I recalled the theoretical arguments of Chapter 3. The main idea was that credible information may come from incumbent and opposition parties. How does it work? When coalition parties are ideologically close, the opposition parties will be in the opposite ideological space. In this context, if we assume that electors vote ideologically, we may wonder: will they listen to the siren songs of opposition? No, they will not. To put it another way, voters will have less credible information if opposition parties are far from their ideological position. However, if coalition parties have opposition parties in the same ideological space,[19] there will be one actor giving credible information to ideological voters. This may explain why accountability works when coalition parties are distant in terms of ideological space. At this moment, ideological voters have more options and information because opposition is seen as a possible alternative. In sum, the combination of ideology

[19] If there are three or four parties in the political systems, it means that incumbent parties are far away from each other on the ideological scale.

and opposition may play a very important role in the process of assigning responsibilities to multiparty cabinets.

But the most intriguing result is public spending. Why do we observe these results? I believe that in this interaction between budget and ideology, several contradictory effects are at work and they produce opposite outcomes. The point of departure is a strong assumption that I have emphasized previously in this dissertation: electors vote ideologically. This means that voters support parties that are close to their ideological position and, as we know from the empirical evidence, they use it to evaluate economic performance (Maravall and Przeworski 1999). Unlike other economic variables, the budget is a very ideological economic variable;[20] rightist and leftist parties -and voters- have different preferences for its composition (Mulas 2002). This may explain why when the party is on the left and increases public spending, its electoral successes increases. Statistically, it means that the coefficent ought to be positive. However, that interaction introduces another effect: ideological distance between incumbent parties. If coalition parties are ideologically close, they are able to implement their favoured fiscal policies with less problems than if the parties are more distant.[21] Therefore, this ideological closeness may clarify the information that comes from government because coalition parties have the same fiscal goal. Or, in other words, voters know clearly what politicians pursue when coalition parties share the same ideology.

[20] In the case of inflation, unemployment and economic growth, the ideological weight is less. Whatever their ideological preferences, voters want the state of the economy to improve. However, if we think about public spending, voters and politicians have different preferences depending on their ideology.

[21] One of the economic effects of multiparty cabinets is: "the larger the number of actors with a voice in the fiscal decision-making process, the stronger the pressure for more expenditures" (Mulas 2002, 16). Therefore, reaching decisions about budgets may be quite difficult in coalition governments. However, we may suppose that this problem will be bigger if parties are ideologically remote.

If we take these different effects together, we may understand why the final coefficient has a negative sign.

5.4 Conclusion

In this chapter, I have analyzed the electoral support of incumbent parties. I started with single-party governments and concluded that the electoral results of these cabinets may be explained by their economic performance. Next, I wondered if the same findings might be observed in coalition parties. Because of potential statistical problems, I divided my sample using two criteria: portfolio and the size of parties. The first conclusion was that accountability only has an affect on Primer Minister's parties. In the remaining the cases, I did not observe a strong relationship between explanatory variables and electoral payoffs. However, once I introduced the variable of ideological distance within cabinets, this conclusion changed. The new empirical evidence showed that the process of assigning responsibilities to coalition cabinets is affected by ideology. In the case of government expenditure, coalition parties will benefit if they are on the left and the ideological distance within government decreases. However, inflation, unemployment and economic growth will affect the electoral results of incumbent parties if the ideological distance within cabinet increase. These results fit my theoretical model. I expected that opposition parties would play an important role. If we assume that voters vote ideologically, accountability is only effective if there are opposition parties in the same ideological space. In sum, I argue that ideology matters.

5.5 Methodological Appendix

Figure 5.1: Function $\frac{-1}{I_{it}}$

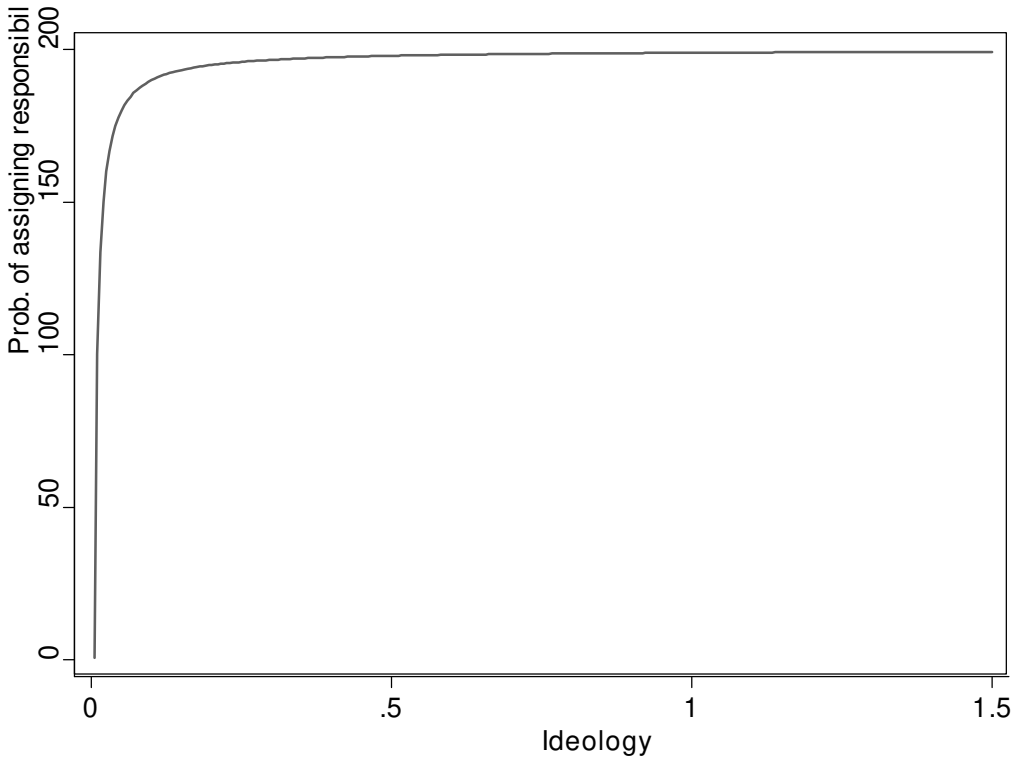


Table 5.11: Prime Ministers, ideology and accountability. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation * Ideology	-0.003***	-0.002***	-0.003***	-0.002***
	(0.0009)	(0.0008)	(0.0005)	(0.0004)
GDP per capita * Ideology	0.0003***	0.0004	0.0006***	-0.0006***
	(0.00009)	(0.0003)	(0.00007)	(0.0001)
Unemployment * Ideology	-0.003***	-0.003***	-0.003***	-0.003***
	(0.0009)	(0.0008)	(0.0005)	(0.0005)
Left party	0.193	1.332	-0.228	0.574
	(1.608)	(1.067)	(1.282)	(0.725)
Gov. expenditures * Ideology	0.001***	0.001***	0.002***	0.002***
	(0.0004)	(0.0003)	(0.0002)	(0.0002)
Left * Expenditures * Ideology	-0.005**	-0.004**	-0.006***	-0.006***
	(0.002)	(0.002)	(0.001)	(0.0009)
λ	2.539**	1.926***	1.936**	1.625***
	(1.237)	(0.748)	(0.856)	(0.556)
Intercept	-8.727**	-7.007***	-6.988***	-6.108***
	(3.789)	(2.259)	(2.597)	(1.699)
N	60	60	60	60
n		18		18
R^2	0.106		0.137	
F	23.02***		32.58***	
Wald χ^2		28.32***		90.53***
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 5.12: Minister of Finance and Economy, ideology and accountability. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation * Ideology	-0.005***	-0.005***	-0.004***	-0.003***
	(0.001)	(0.0005)	(0.0006)	(0.0003)
GDP per capita * Ideology	0.0002	0.0002	0.0005***	0.0004***
	(0.0001)	(0.0002)	(0.00009)	(0.00008)
Unemployment * Ideology	-0.005**	-0.004***	-0.004***	-0.003***
	(0.002)	(0.001)	(0.001)	(0.0005)
Left party	1.539	1.063	1.036	0.833
	(1.081)	(0.708)	(0.87)	(0.577)
Gov. expenditures * Ideology	0.002***	0.002***	0.002***	0.001***
	(0.0008)	(0.0005)	(0.0004)	(0.0002)
Left * Expenditures * Ideology	-0.011***	-0.01***	-0.009***	-0.008***
	(0.002)	(0.001)	(0.001)	(0.0007)
λ	2.711**	1.561**	2.251***	1.373***
	(1.105)	(0.696)	(0.737)	(0.504)
Intercept	-10.86***	-7.318***	-9.118***	-6.544***
	(3.43)	(2.066)	(2.28)	(1.568)
N	54	54	54	54
n		15		15
R^2	0.217		0.235	
F	45.67***		116.05***	
Wald χ^2		358.05***		754.44***
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 5.13: The biggest party, ideology and accountability. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation * Ideology	-0.002**	-0.002**	-0.003***	-0.002***
	(0.001)	(0.0009)	(0.0006)	(0.0005)
GDP per capita * Ideology	0.0002*	0.0004	0.0005***	0.0005***
	(0.0001)	(0.0004)	(0.0001)	(0.0001)
Unemployment * Ideology	-0.003***	-0.003***	-0.003***	-0.003***
	(0.0009)	(0.0009)	(0.0006)	(0.0005)
Left party	0.179	1.084*	-0.179	0.881
	(1.524)	(0.581)	(1.195)	(0.572)
Gov. expenditures * Ideology	0.001***	0.001***	0.002***	0.002***
	(0.0004)	(0.0003)	(0.0003)	(0.0002)
Left * Expenditures * Ideology	-0.005**	-0.004**	-0.006***	-0.006***
	(0.002)	(0.002)	(0.001)	(0.001)
λ	2.115	2.057***	1.687	1.575***
	(1.469)	(0.712)	(1.146)	(0.548)
Intercept	-7.806*	-7.875***	-6.647**	-6.658***
	(4.139)	(2.307)	(3.099)	(1.727)
N	64	64	64	64
n		18		18
R^2	0.057		0.079	
F	15.57***		28.4***	
Wald χ^2		29.65***		89.9***
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 5.14: Second biggest party, ideology and accountability. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**
Inflation * Ideology	-0.003**	-0.003***	-0.002***	-0.002***
	(0.0004)	(0.0003)	(0.0003)	(0.00007)
GDP per capita * Ideology	0.0005**	0.0005***	0.0007***	0.0007***
	(0.0001)	(0.0001)	(0.0001)	(0.00004)
Unemployment * Ideology	0.003***	0.003***	0.002***	0.002**
	(0.001)	(0.0007)	(0.0008)	(0.0003)
Left party	-1.993*	-2.111***	-1.618	-1.729***
	(1.158)	(0.612)	(0.987)	(0.423)
Gov. expenditures * Ideology	0.001***	0.001***	0.001***	0.001***
	(0.0002)	(0.0001)	(0.0001)	(0.00008)
Left * Expenditures * Ideology	-0.009***	-0.009***	-0.007***	-0.007***
	(0.001)	(0.0009)	(0.0006)	(0.0004)
λ	1.77	1.521**	1.328	1.333***
	(1.16)	(0.639)	(1.057)	(0.409)
Intercept	-5.385	-4.917***	-4.377	-4.453***
	(3.456)	(1.788)	(3.204)	(1.199)
N	61	61	61	61
n		18		18
R^2	0.213		0.17	
F	144.64***		140.68***	
Wald χ^2		222.83***		4190.17***
Method	OLS	FGLS	OLS	FGLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 5.15: Ministry of Education and Ministry of Health parties. Analysis on electoral payoffs

Variables	**1**	**2**	**3**	**4**	**5**	**6**
Inflation	0.09	0.068	0.042	0.018	0.78	0.669
	(0.074)	(0.057)	(0.068)	(0.048)	(1.633)	(1.488)
GDP per capita	0.091	-0.028	0.028	-0.091	1.032*	0.781
	(0.156)	(0.07)	(0.128)	(0.057)	(0.563)	(0.516)
Unemployment	-0.028	-0.138	0.014	-0.108	1.13	0.889
	(0.212)	(0.127)	(0.173)	(0.113)	(1.448)	(1.285)
Left party	-1.013	-1.664**	-1.008	-1.216*	1.055	0.69
	(1.302)	(0.79)	(1.069)	(0.707)	(3.48)	(3.25)
Expenditures on education	-0.034	-0.02	-0.022	-0.012		
	(0.029)	(0.013)	(0.026)	(0.009)		
Expenditures on health					-0.091	0.034
					(0.359)	(0.342)
Left * Exp. on education	0.024	0.002	0.022	0.002		
	(0.037)	(0.021)	(0.033)	(0.02)		
Left * Exp. on health					-0.364	-0.483
					(0.283)	(0.274)
λ	1.615	2.048***	0.864	1.255**	-3.86	-3.114
	(1.263)	(0.704)	(1.071)	(0.638)	(2.63)	(2.561)
Intercept	-5.859	-6.01***	-3.753	-3.912**	2.518	2.115
	(3.292)	(2.113)	(2.713)	(1.915)	(9.772)	(9.475)
N	56	56	56	56	19	19
n		15		15		
R^2	0.096		0.048		0.453	0.36
F	1.58		0.75		8***	2.83*
Wald χ^2		19.37***		14.32**		
Method	OLS	FGLS	OLS	FGLS	OLS	OLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Table 5.16: Distribution of coalition governments: weight and portfolio

Weight	**Primer Minister**	**Deputy Chairman**	**M. of Economy**
Party 1	192 (81.01%)	18 (17.65%)	102 (56.98%)
Party 2	28 (11.81%)	63 (61.76%)	48 (26.81%)
Party 3	13 (5.48%)	17 (16.66%)	18 (10.05%)
Party 4	4 (1.69%)	3 (2.94%)	9 (5.03%)
Party 5	0	1 (0.98%)	2 (1.12%)
Party 6	0	0	0
Party 7	0	0	0
Total	237 (100%)	102 (100%)	179 (100%)

Percentage of parties that hold those responsibilities in brackets

Table 5.17: Third and fourth biggest party in coalition. Analysis on electoral payoffs

	Third biggest party		Fourth biggest party	
Variables	**1**	**2**	**3**	**4**
Inflation	-0.009*	-0.008*	0.004	0.005
	(0.005)	(0.004)	(0.012)	(0.009)
GDP per capita	0.133	0.118	0.102	-0.001
	(0.101)	(0.081)	(0.197)	(0.138)
Unemployment	-0.124	-0.14	-0.336	-0.158
	(0.126)	(0.108)	(0.401)	(0.258)
Left party	0.359	-0.098	0.048	0.873
	(0.875)	(0.676)	(1.882)	(1.203)
Expenditures	0.068	0.064	-0.031	-0.052
	(0.046)	(0.038)	(0.112)	(0.089)
Left * Exp.	0.048	0.035	0.172	0.124
	(0.068)	(0.052)	(0.162)	(0.103)
λ	-0.978	-0.824	-0.39	-1.666
	(1.484)	(0.827)	(2.422)	(1.509)
Intercept	1.827	1.435	1.425	4.902
	(3.048)	(2.561)	(6.855)	(4.311)
N	41	41	27	27
R^2	0.079	0.103	0.069	0.109
F	1.93*	1.45	0.23	0.56
Method	OLS	OLS	OLS	OLS

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Chapter 6

To Survive After a Government

The second political consequence that I analyze in this dissertation is survival. I define survival as the probability of remaining in power after elections, given that the incumbent party has been in office during the previous legislature. As I argued in chapter 3, some scholars have confused accountability with survival (Przeworski, Stokes, and Manin 1999, 225). However, I have argued that it is important to distinguish these two concepts. Accountability is a question of rewards and punishments, whereas to survive involves several relationships of accountability. Survival is the result of two or three -depending on the type of government- agency relations. On the one hand, single-party governments are accountable to voters and their party members. On the other, coalition governments are controlled by voters, grassroots members and coalition partners. That is, multiparty cabinets are accountable to more principals and their survival depends on more actors than those of single-party governments. In sume, the outcomes of these relations of accountability determine the probability of remaining in power.

The main aim of this chapter is to identify the circumstances

in which incumbent parties survive after elections. Taking into account previous ideas and using the database that I have described above, I shall analyze why some parties continue holding the cabinet, while others do not survive. Furthermore, I shall compare single-party governments to multiparty cabinets: are there relevant differences?

The chapter is divided into the following sections. First, I shall present the data, taking into account the different politicians' strategies of surviving. Second, I shall analyze survival in single-party government. And third, I shall deal with survival in coalition cabinets.

6.1 Strategies of surviving

In chapter 4, I argued that in order to study survival, we need to create two different dependent variables, and that they depend on politicians' strategies. The main idea is that parties may follow two different strategies to remain in power. On the one hand, parties may decide to surrender the government before the elections and then, in the following legislature, join the new government. This means that to oust the cabinet can be considered to be part of a survival strategy. If we check the data, we see that to give up the government is not exceptional. I showed that, on average, there are 1.95 governments per legislature and 15.95% of total parties leave the government early. Moreover, there is a strong relationship between the type of government and the probability of leaving it. If the government is a coalition, 19.08% of total parties give it up before elections, whereas if the cabinet is single-party, this percentage falls to 4.38%.[1] On the other hand, politicians may believe

[1] They are 6 cases above 137 governments. The reasons for termination were: dissension within government (Denmark 1982), intervention by the Head of State (Australia 1975) voluntary resignation of the Prime Minister (Norway 1972), lack of parliamentary support (Denmark 1950, Japan 1954) and

Table 6.1: Size of parties that oust the government before elections

Percentage of seats	Percentage of cases
Lower than 10%	47.14%
11%-20%	23.57%
21%-30%	14.29%
More than 30%	15%

that the best strategy of surviving is to face elections. Therefore, most parties would until the end of the legislature.

Let's focus now on parties that oust the government. What are their main features? Table 6.1 shows their size. We can see that most of them are small parties: 47.14% of total cases have less than 10% of total seats in the parliament. Thus, it seems that the probability of leaving a cabinet increases if the size of the party decreases.

Why do they give up the government? Checking the data, we can see that around 35.07% of total cases oust the cabinet because of dissension within the government. Thus, internal dispute is the most relevant reason for termination. The next most common causes are the voluntary resignation of the Prime Minister -26.74% of total cases- and lack of parliamentary support -19.44% of total cases-. The fourth explanation is resignation of Prime Minister due to health reasons -7.99%-. And finally, the broadening of the coalition -6.94%- and intervention by the Head of State -3.82%- are the final reasons for termination. But, are they the real motives? We may wonder whether parties act strategically: that they may give these reasons but that their real motives are elsewhere. Perhaps, for example, the state of the economy is really bad and they decide to abandon the ship and leave it to its fate. They decide that their electoral future will be bleak if they continue holding office.

broadening of the members of the cabinet (Japan 1955)

Table 6.2: State of the economy and termination of governments

	Econ. growth	Unemp.	Inflation
Total governments	10.42%	0.44%	7.21%
Dissension within the govern.	11.44%	1.12%	37.26%
Voluntary resignation of PM	11.88%	0.99%	9.24%
Lack of parliamentary support	12.57%	0.4%	10.84%

To check that idea, I have compiled Table 6.2. It shows the averages of economic growth, unemployment and inflation,[2] taking into account the reasons for termination. We can see that the only significant difference is in the case of inflation: governments leave power due to the fact that there is dissension with in, and because inflation is higher than in other cases. However, we do not find significant differences in the remaining economic variables. Therefore, I cannot state that parties leave government because of economic motives.

In terms of office-seeking, we may wonder whether it is a good strategy. Only 37.86% of total parties that give up the government before elections participate in the cabinet in the new legislature. Therefore, the percentage of success is not high. Moreover, 79.25% of these parties form coalitions later with the same partners. This means that if a party leaves the government before an election, its probability of remaining in power will increase if it comes to an agreement with previous coalition partners.

After studying these parties in depth, we may conclude that, perhaps, they do not leave the government voluntarily. First, the state of the economy is not worse than average. Therefore, they do not act strategically, by seeking to avoid a possible electoral punishment. Second, their rate of success -as measured by the probability of staying in office during the next legislature- is mod-

[2] They are measured as the relative difference between two consecutive elections.

est. Therefore, they may be forced to give up the government. But, does this have any consequences for the other coalition partners? Can we identigy different explanations for the survival of parties, considering that fact? The following sections will shed light on these questions.

6.2 To survive after a single-party government

In chapter 3, I explained the theoretical puzzle of survival. Before starting with the empirical analysis, I would like to review and summarize the main ideas. The reason that incumbent parties survive after a single-party government is explained by a triangular agency relationship (Maravall 2007b). In that relationship, we find one agent and two principals: the agent is the incumbent party and the principals are the voters and the party members. How does it work?

First, the main idea is that parties are accountable to voters because of their performance. Thus, the electorate punishes or rewards incumbent parties depending on the state of the economy and the policies. As we have seen in the previous chapter, there is strong empirical evidence that supports these ideas for single-party governments and Prime Ministers of multiparty governments. Moreover, in coalition cabinets, accountability may work depending on the ideological distance within the government. The output of this agency relation is the electoral results. How does this fit with remaining in power? If to survive depends on voters' judgment, those electoral results will influence the possibility of holding on to government after the elections. This would mean that politicians are sensitive to the electoral results. That relation between voters and politicians is relevant for the theories of democracy and representation. One of the key features of democracy is that citizens may influence the will of politicians. If the probability of

holding government does not depend on the votes, citizens will be 'irrelevant' and politicians will not have incentives for being representative. In view of these arguments, I have decided to use as an independent variable the electoral payoffs.[3] If this variable explains the probability of surviving, citizens matter.

The second agency relationship is between politicians and party members. This means that grass roots and middle-level elites want to control their ruling posts. In this relationship, party organization is the key feature. As we have seen above, parties have developed different ways of organizing. Some of them have opted for central control and obscure processes, whereas others prefer openness and decentralization of decision-making processes. Depending on these features, their probabilities of surviving vary.

In this dissertation, I am focusing on two internal decision-making processes: candidate and leader selections. How they affect the likelihood of surviving depends on two factors: publicity and the risk of dissent. Both are related, although their effects depend on the type of selection process.

First, candidate selection means choosing the people who will run for election in each constituency. In general, citizens are unaware of this selection process. However, in spite of that lack of interest, candidate selection has political consequences for parties. If the party is highly fragmented and the candidate selection is fairly 'democratic',[4] the potential for internal conflict is great. The media take particular interest in these internal disputes, and that "noise" comes to the attention of citizens. As we know from the literature, voters penalize divided parties (Maravall 2007b). Thus, I forecast that as internal democracy[5] increases, the probability of

[3] I use the dependent variables of the previous chapter: the electoral payoffs among voters.

[4] I use 'democratic' as synonym for widening the electoral base. As I said above, the most 'democratic' version of this selection process is dominated by middle-level elites.

[5] Idem

surviving decreases.

Second, leader selection is about how the general secretary or party president are chosen. Parties follow three different strategies: small committees, national congress and membership ballot. How they work has been explained in detail in chapter 3. How do they affect on the likelihood of remaining in power? National Congress may be the best option: it combines high visibility with low risk of dissent.[6] However, primaries and *nomenklatura* lead to ambivalent outcomes. On the one hand, primaries produce too much "noise", while small committees do not transmit any information.[7] These two results lead to electoral costs. On the other hand, citizens can positively assess internal democracy, whereas small committees permit the party to present a unified front. These outputs will produce electoral benefits. Which results prevail? Perhaps, one output neutralizes the other.

6.2.1 Empirical evidence

In order to test these triangular agency relationships, I have developed the following functions:

$$S_{it} = f(\beta_i X_{it} + \gamma\lambda_{it} + u_{it}) \tag{6.1}$$

$$Z_{it} = \alpha_i W_{it} + e_{it} \tag{6.2}$$

$$Z_{it} = \begin{cases} 1 \text{ if } z_{it} \text{ is single-party government} \\ 0 \text{ otherwise} \end{cases} \tag{6.3}$$

[6] In chapter 3, I argue that national congress permits the elite to control this process. Given the small number of congress delegates, to build winning coalitions depends on how many political positions they offer.

[7] In both directions: from rank and file of the party to the elite and, vice versa, from the elite to the grass roots.

$$\lambda_{it} = \frac{\phi\left(\alpha_i W_{it}\right)}{\Phi\left(\alpha_i W_{it}\right)} \tag{6.4}$$

This system of equations is a Heckman model with an outcome equation -6.1- and a selection equation -6.2-. As in the previous chapter, I have decided to apply this statistical model because a problem of selection bias may exist. The existence of different types of government is not random. Therefore, I ought to correct that self-selection bias (Przeworski 2007). $F(\cdot)$ indicates a probit functional form where X_{it} is the matrix of the following independent variables: electoral payoffs,[8] types of candidate selection,[9] types of leader selection[10] and majority government.[11] The Mills' ratio, or hazard rate, is calculated in equation 6.4, using the information from functions 6.2 and 6.3. In few words, the hazard rate is the probability of an event occurring at time t given that it has not occurred prior to this time. In maths, it's the quotient between the probability distribution function -$\phi\left(\alpha_i w_{it}\right)$- and the survival function -$\Phi\left(\alpha_i w_{it}\right)$-. The hazard rate corrects the possible self-selection bias. Finally, u_{it} and e_{it} are the random disturbances. In the Appendix of the previous chapter, table 4.17 presents the results of the selection equation 6.2.

[8] I use the electoral loses and benefits.

[9] This variable measures how parties select their candidates who run for election in each constituency. The variable goes from 1 to 6 in which 1 means that national organs completely control the process; value 2 indicates that subnational organs propose and national organs decide; value 3 means that national organs provides the list and subnational organs decide; value 4 indicates that subnational organs decide subject to national organs approval; value 5 means that subnational organs control completely; and value 6 indicates that membership ballot applied (Bille 2001; Katz and Mair 1992). The main idea is that if the values of the variable increase, the power of subnational organs increases.

[10] I introduce two dummy variables: congress and primaries.

[11] I introduce that variable because I want to control for the significant differences that I found between minority and majority governments in the probability of surviving.

Table 6.3 shows the empirical evidence. I have run six different models. Models 1, 2 and 3 analyze all parties that have participated in a cabinet during the legislature, whereas models 4, 5 and 6 only use parties that face elections while in government[12]. Model 1 and 4 leave out spatial and time controls. However, models 2 and 5 introduce time control[13] and models 3 and 6 add country controls[14] as well.

The statistical analysis fits as I expected. First, the probability of surviving is sensitive to the electoral payoffs. If incumbent parties increase their electoral results, their probability of holding the government increases. Second, the party variables are strongly significant once I introduce the time and spatial controls -models 2, 3, 5 and 6- and their effects agree with my hypotheses. On the one hand, if candidate selections became decentralized, the probability of staying in office decreases. On the other, national congress increases the probability of surviving. The only unexpected outcome is the strong positive effect of primaries when I forecasted ambivalent outcomes. The empirical analysis shed that they increase the likelihood of remaining in power. After checking the database, I have noted that there are just 6 cases where primaries are used as a method of candidate selection. They are all in either Canada or the United Kingdom. Perhaps this is because in the Anglo-saxon countries there is a long tradition of primaries, politicians know how to manage them, and they generate as little 'noise' as possible.

Another relevant finding is that to distinguish between two different strategies of surviving[15] is not trivial. If we compare the

[12] This differentiation is motivated by the two different strategies of remaining in power that I described above.

[13] I introduce the logarithm of the days that party holds the government.

[14] I introduce a dummy variable for each country -*n*-.

[15] In models 1, 2 and 3, I use all parties that stay in office during the legislature, whereas model 4, 5 and 6 just consider incumbent parties that face elections.

Table 6.3: Single-party governments and survival

Variables	**1**	**2**	**3**	**4**	**5**	**6**
Electoral payoffs	0.084**	0.094***	0.152***	0.091**	0.099**	0.202***
	(0.033)	(0.035)	(0.042)	(0.038)	(0.039)	(0.046)
Candidates selection	-0.169	-0.213*	-1.551***	-0.213*	-0.232*	-2.077***
	(0.109)	(0.119)	(0.569)	(0.117)	(0.125)	(0.669)
National congress	0.61	0.939*	2.458**	0.781	0.961*	2.953***
	(0.496)	(0.523)	(1.1)	(0.51)	(0.535)	(1.116)
Primaries	1.185	1.612**	3.338**	1.366*	1.641**	3.853***
	(0.818)	(0.822)	(1.374)	(0.826)	(0.837)	(1.419)
Majority government	0.371	-0.036	0.581	0.397	0.121	0.939*
	(0.327)	(0.394)	(0.446)	(0.335)	(0.432)	(0.503)
Log duration		0.655**	0.586*		0.496	0.623
		(0.28)	(0.319)		(0.388)	(0.456)
λ	-0.332	-0.235	-0.66	-0.445	-0.31	-1.385
	(0.367)	(0.369)	(0.992)	(0.384)	(0.408)	(1.07)
Intercept	1.139	-3.504*	-1.627	1.435*	-2.259	0.568
	(0.785)	(2.119)	(3.535)	(0.82)	(2.973)	(4.407)
N	104	103	98	100	99	94
n			9			9
R^2	0.132	0.172	0.291	0.161	0.174	0.345
Wald χ^2	10.74*	13.99*	30.25**	11.35*	11.89	32.68***
Method	Probit	Probit	Country Dummies	Probit	Probit	Country Dummies

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

coefficients of electoral results, we shall see that there are significant differences between them. When I simply consider incumbent parties that face elections, they look more sensitive to the electoral payoffs -the coefficients are bigger-. Moreover, I have applied the t test, comparing similar models,[16] and the differences are statistically significant.

In sum, to survive after a single-party government can be explained by a triangular agency relation where voters and party members are the principals. Both influence survival. Moreover, a second relevant conclusion is that parties that face elections are more sensitive to voters than incumbent parties that were obliged to leave the cabinet. The next questions that arise are: who controls coalition parties? How do we explain the probability of surviving after a multiparty cabinet? Do coalition governments follow similar patterns to single-party cabinets? The next subsection throws light on these questions.

6.3 To survive after a coalition government

As I said above, in coalition cabinets survival is explained by a quadrangular agency relation. Now, we have to add a new actor: coalition partners. Thus, multiparty governments are submitted to three principals: voters, party members and coalition partners. Therefore, a new agent appears. How does he affect the likelihood of surviving? In chapter 3 I developed most of the theoretical arguments. In the following lines I briefly review the main ideas.

6.3.1 Politicians and their partners

When politicians decide to build a coalition government, they look for a stable relationship. What does this mean? To coexist in a

[16] This means that I have compare model 1 to model 4, model 2 to model 5 and model 3 to model 6.

coalition cabinet is not easy. Politicians have to agree policies and hope that their partners carry out the agreements. It implies that the possible partner ought to be flexible[17] and keep their word. For that reason, parties prefer to reach an agreement with trustworthy and flexible politicians. How do politicians get that information? They observe the past and analyze their possible partners' behavior. It is difficult to identify a variable that measures that idea. Therefore, I have created a proxy that captures it. I have measured the percentage of governments that incumbent parties participated in during the past legislature. If politicians took part in several cabinets, it may be a sign of flexibility and reliability. That sign may mean that these parties are a good choice. Hence, if politicians participate in most previous governments, their future probability of holding the cabinet will increase.

The second variable that may explain survival is ideological distance within the cabinet. What are the causal mechanisms? On the one hand, if the ideological distance between incumbent parties is high, coexistence may be unstable. To reach an agreement will be difficult because parties have to agree a program starting from remote preferences. Therefore, the government will have a high probability of transmitting instability and voters will penalize that. On the other hand, ideological distance between coalition parties concerns party members. Rank-and-file members have strong preferences over policies. They have "interest in their candidate remaining in power. There is however a threshold to this interest if activists were to believe that the government is not carrying out their policy preferences and is therefore shirking as their agent. When the threshold is reached, the party will be indifferent about its agent surviving in power" (Maravall 2007b, 7). If politicians agree with parties that are ideologically remote, party members may consider that the threshold is reached. Thus, the probability of surviving will decrease. In sum, in both theoretical

[17] This means that politicians have to relinquish some electoral promises.

arguments, high levels of ideological distance reduces the probability of surviving in the government.

6.3.2 Empirical evidence

For testing these quadrangular agency relation, I apply the functions 6.1, 6.2, 6.3 and 6.4. Now, I add two new independent variables: percentage of governments that parties take part during the past legislature and ideological distance between coalition partners.[18] These two variables measure previous theoretical arguments.

Table 6.4 shows the results. As above, I have run six different models. Models 1, 2 and 3 analyze all parties that have participated in a cabinet during the legislature, whereas models 4, 5 and 6 only use parties that face elections while in government. Models 1 and 4 leave out spatial and time controls. However, models 2 and 5 introduce time control[19] and models 3 and 6 add country controls[20] as well.

The empirical evidence fits what I expected. First, coalition parties are sensitive to voters. The electoral payoffs have a strong influence on the probability of holding the cabinet after elections.

[18] I have calculated the ideological distance within a government as the mean of Euclidean distances (Hinich and Munger 2003, 103). That is,

$$ED(i) = \sqrt{\sum_{j=1}^{n}(i_j - \bar{i})^2}$$

where i_j is the ideological location of party j, $\bar{i}$ is the mean of ideology within the government and n is the number of parties that form the cabinet. I use the six-point ideological scale that Duane Swank presents in his database -*comparative political parties data set*- in which 1 corresponds to the extreme left and 6 to the extreme right.

[19] I introduce the logarithm of the days that party holds the government.

[20] I introduce a dummy variable for each country -*n*-.

Table 6.4: Coalition governments and survival

Variables	**1**	**2**	**3**	**4**	**5**	**6**
Electoral payoffs	0.057***	0.057***	0.054**	0.068***	0.069***	0.064***
	(0.02)	(0.02)	(0.021)	(0.022)	(0.022)	(0.023)
Candidates selection	0.009	0.01	-0.078	-0.04	-0.041	-0.199
	(0.064)	(0.064)	(0.124)	(0.076)	(0.077)	(0.16)
National congress	0.612***	0.604***	0.206	0.639***	0.641***	0.162
	(0.165)	(0.166)	(0.24)	(0.186)	(0.187)	(0.284)
Primaries	0.112	0.139	-0.011	0.172	0.163	0.086
	(0.586)	(0.59)	(0.684)	(0.624)	(0.626)	(0.758)
Percentage of gov.	0.903***	1.04***	1.072**	0.711	0.674	0.899
	(0.291)	(0.372)	(0.423)	(0.443)	(0.527)	(0.605)
Ideological distance	-0.628***	-0.631***	-0.762**	-0.792***	-0.794**	-0.924**
	(0.198)	(0.199)	(0.321)	(0.22)	(0.221)	(0.364)
Majority government	0.359*	0.386*	0.123	0.455*	0.448*	0.142
	(0.2)	(0.206)	(0.282)	(0.237)	(0.243)	(0.362)
Log duration		-0.072	-0.056		0.023	0.031
		(0.123)	(0.126)		(0.179)	(0.198)
λ	-0.066	-0.064	-0.378	0.006	0.007	-0.404
	(0.151)	(0.153)	(0.246)	(0.172)	(0.171)	(0.297)
Intercept	-0.34	0.019	1.387	-0.073	-0.196	1.534
	(0.504)	(0.76)	(0.989)	(0.642)	(1.085)	(1.363)
N	372	372	367	308	308	303
n			12			12
R^2	0.104	0.105	0.166	0.122	0.122	0.206
Wald χ^2	46.72***	46.87***	64.16***	42.6***	42.92***	69.22***
Method	Probit	Probit	Country Dummies	Probit	Probit	Country Dummies

Significance levels *** 1% ** 5% * 10%; Robust Standard Error in brackets

Second, ideological distance between partners is statistically significant as well. If the Euclidean distance increases, the probability of surviving decreases. Third, party organization has a weak effect on survival. Only national congress is relevant in four out of six models. But the other party variables do not have have any statistical effect. It seems to me that in coalition cabinets, party members lose the influence that I observed in single-party governments. Fourth, participation in previous governments is significant in models 1, 2 and 3. Therefore, that signal does not seem to be relevant when I analyze incumbent parties that face elections. However, if I consider all incumbent parties that have participated in a government during the legislature, the variable is statistically significant.

Perhaps, the interpretation of the coefficients will be clearer if I use predicted probabilities and depict them. Graph 6.1 shows how the likelihood of surviving changes when ideological distance goes from its minimum to its maximum. I have used the statistical results of models 2 and 5.[21] We may observe that the two curves follow similar trends and decrease when ideological distance within the cabinet increases. Therefore, it fits whith my expected results.

Finally, as before, I want to check whether incumbent parties that face elections are more sensitive to voters' judgment than total incumbent parties during the past legislature. To do that, I have to compare the coefficients of electoral results. The t test showed that output and the differences are statistically significant at 99%. Therefore, the incumbent parties that face elections seem to be more sensitive to electoral results than total coalition parties.

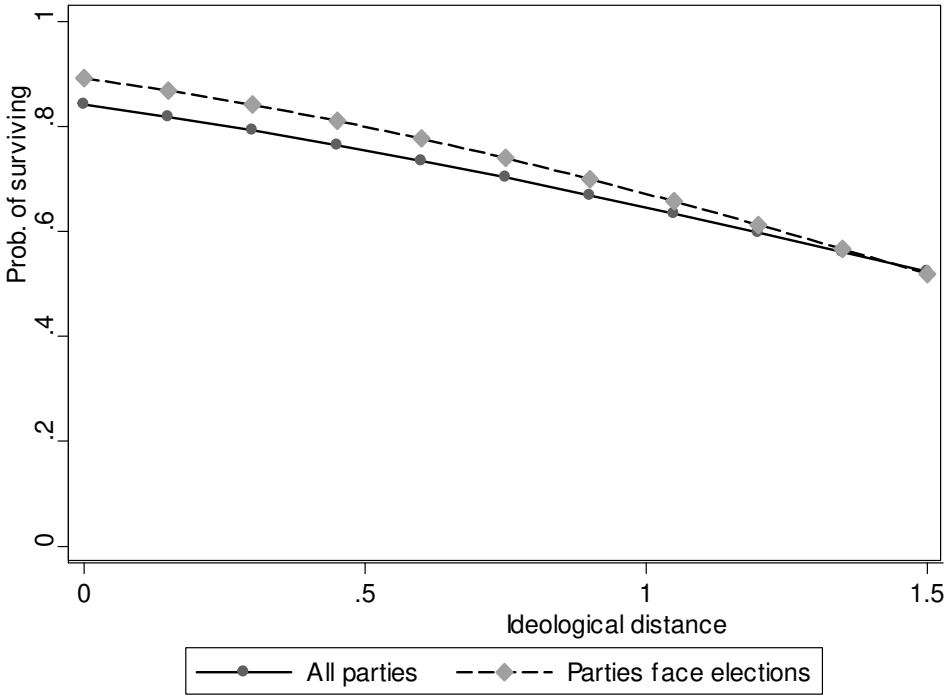
6.4 Conclusions

In this chapter, I have dealt with the survival of incumbent parties. The main conclusion is that single-party governments are accoun-

[21] Both models introduce time controls and explain more than models 3 and 6, that use spatial controls too.

table to two principals -voters and party members-, whereas coalition parties are accountable to three actors -voters, party members and coalition partners-. The results of these agency relations explain why some parties survive after elections. Thus, politicians are sensitive to the electoral results, party organization may undermine their probability of surviving and politicians ought to look for reliable and flexible partners.

Figure 6.1: Ideological distance and survival



Chapter 7

Conclusions

7.1 Divided power, accountability and survival

This dissertation originated from a simple question: how do elections work when people face divided power? For a long time, philosophers and social scientists have concluded that this situation is a challenge for democracy. They argued that this institutional framework does not permit clarity of responsibility and, therefore, citizens may not be able to control politicians. Thus, if accountability is a key feature of democracy, divided power would not allow politicians to be responsible for their policies and performance. I argued that this hypothesis, termed by scholars as a 'clarity of responsibility' (Lewis-Beck 1986; Lewis-Beck 1988; Powell and Whitten 1993; Mershon 1996; Bosch, Díaz, and Riba 1999; Przeworski, Stokes, and Manin 1999; Whitten and Palmer 1999; Anderson 2000; Powell 2000; Mershon 2002; Nadeu, Niemi, and Yoshinaka 2002; Strom, Bergman, and Muller 2003; Bengtsson 2004), was not developed theoretically and the empirical evidence was poor. Therefore, this dissertation aimed to fill these academic gaps, focusing on coalition governments as an example of divided

power.

The point of departure was that elections have two relevant political consequences. First, elections may be used for assigning responsibilities. They entail accountability. I argued that in order to define accountability correctly it is very important to consider parties as the key actor. "Accountability is individual rather than collective"said Elster (Przeworski, Stokes, and Manin 1999, 255). To put it another way, responsibility is a question about parties, not about governments. This assumption contrasts with studies to date. Scholars have dealt with the question of 'clarity of responsibilities' by treating governments as single actors (Lewis-Beck 1986; Lewis-Beck 1988; Norpoth, Lewis-Beck, and Lafay 1991; Powell and Whitten 1993; Whitten and Palmer 1999; Powell 2000; Nadeu, Niemi, and Yoshinaka 2002; Barreiro 2007; Bengtsson 2004). But making this theoretical mistake, they do not do any the intragovernmental analysis. The second political consequence is that elections may decide who forms the future government. Hence, elections are a question of achieving power too.

Scholars have confused these two concepts: accountability and survival (Przeworski, Stokes, and Manin 1999, 222-250). They have stressed the idea of accountability as a measure designed to act as a deterrent and, therefore, concluded that accountability and survival entail similar consequences. But on many occasions, accountability and survival do not develop together. We may find accountability without survival and, vice versa, survival without accountability. Perhaps, an example may clarify this idea. Let's imagine a situation where the state of the economy is really bad -inflation increased significantly, unemployment rose too and economic growth was poor-, incumbent parties did not manage the economy properly and voters penalized them. In this case, citizens assign responsibilities to the coalition government. However, if none of the parties obtains a majority, nothing will prevent some of the incumbent parties holding the cabinet after the elections

again. They may agree and survive.

The next question that emerged was: if parties are the key actor in the process of assigning responsibilities, what role does the party system play? Considering the number of parties, party systems may be classified as bipartisan or multiparty systems. This distinction is relevant because it determines how the political consequences of elections develop. In the case of a bipartisan system, because there are only two possibilities -an incumbent party and an opposition party- accountability and survival always develops together. However, in multiparty systems, these two processes are not necessarily related. Or, in other words, the resulting government after elections may not be exactly what the voters would have chosen. Politicians have to agree with other politicians and at this point, citizens have lost part of their instruments of control.

In these debates, how do coalition governments fit in? First, the hypothesis of 'clarity of responsibility' directly affects multiparty cabinets. Voters may not know who is in charge of incumbent performance and, therefore, they cannot assign responsibilities. Second, coalition governments are common in multiparty systems. For this reason, they were a perfect case for studying the distinction between survival and accountability.

Once I resolved that theoretical puzzle, I dealt with the causal mechanisms of accountability and survival. In both processes, the type of government is a key feature. Accountability has been studied by contract theory, using principal-agent models. The main idea is that a contract requires that an agent carries out a task that benefits a principal. In politics, citizens are the principal and politicians are the agent. Therefore, voters delegates the management of institutions to politicians. This relationship presents three important problems. First, politicians ought to want to participate in elections -participation constraint-. Second, politicians do not strive and, therefore, they do not carry out their task. Third, asymmetric information is quite common. Politicians have more

information than voters and they can conceal whether or not they strive. The theoretical model that I presented resolved these problems. The main finding is that incumbent performance is the only verifiable variable that voters observe. Thus, well-being provides information about the effort of politicians and citizens use it for controlling them.

That model works in the case of single party governments. But, does it work for multiparty cabinets? Now, the problem of asymmetric information widens: citizens may not know who is in charge of incumbent performance. The solution to this problem is in the sending of credible signals. But, who emits these signals? A third agent: coalition partners and opposition parties. I presented two different scenarios. First, I described a simple scenario where the features of government and opposition are not relevant. Voters receive information from different agents and this over-production of information will produce confusion. They have two options: they may avoid assigning responsibilities or they may simplify the messages. Scholars have focused on the first possibility and did not consider the later one. However, I have opted for simplification. This means that voters may focus on the most visible party and blame it because of its performance. This party is the Prime Minister party.

The second scenario considered the possibility of different politicians' features: ideology. The main finding is that ideological distance between coalition parties increases accountability. Why? I assume that ideology is relevant for parties and voters. As we know from the literature, ideology affects the credibility of information: messages will be more credible if voters and candidates share "some degree of common interests" (Austen-Smith 1992, 54). In this scenario, opposition parties play a key role. Only when voters have a credible opposition, will they be able to reward or punish incumbent parties. Accountability implies the possibility to punish and, if parties that share the same ideological space hold the go-

vernment, voters will lose the possibility of threat and punishment. If voters perceive however that opposition parties are ideologically distant they are provided with alternatives. In this scenario, ideological distance between incumbent parties will increase accountability.

The second relevant political consequence of elections is survival. As I did for accountability, I have developed the causal mechanisms as well. Why incumbent parties survive after a single party government is explained by a triangular agency relationship (Maravall 2007a). In that relationship, we find one agent, politicians, and two principals, voters and party members. Both principals want the agent to give priority to their interests. Therefore, voters punish or reward incumbent parties because of their performance. However, party members have strong preferences over policies. They hope that their representatives follow the guiding principles of the party. The type of party organization will influence on the probability of holding government. In the case of coalition government, that triangular agency relationship becomes quadrangular. Now, a new agent appears: coalition partners. Hence, coalition parties are submitted to three principals: voters, party members and coalition partners. The main idea is that when politicians form a new cabinet, they look for partners and focus on their features: ideology, flexibility, reliability.... Hence, these issues will affect the probability of holding the government or having to give it up.

In sum, these theoretical arguments have framed this dissertation. The next step was to check the validity of this theory.

7.2 Empirical findings

The main aim of the empirical analysis was to cover as many countries as possible, using a comparative perspective. However, following Przeworski and Teune (1982), I decided to substitute names for variables. Or, in other words, to be France, Spain or Sweden is

not an explanation. I expected to observe features that countries have in common, and how they explain the dependent variables -electoral results and survival-.

The first part of the empirical research focused on the electoral outcomes of incumbent parties. I analyzed single party and coalition governments separately. The main goal was to compare both types of cabinets and to study whether the same factors explain their electoral payoffs. Only one problem arose. In coalition governments, incumbent parties face the same problems and share the performance. However, their electoral outcomes differ. In order to overcome that, I divided my sample by taking into account two criteria: size and portfolio. I ran the same statistical analyses for all Prime Minister parties, Minister of Economy parties or the bisggest parties in the coalition.

As the theory predicted, coalition governments are as accountable as single party governments. Hence, we cannot argue that multiparty cabinets are unaccountable. Firstly, we observed that the state of the economy significantly affected the electoral outcomes of Prime Minister parties. Thus, these parties assume the responsibility for the incumbent performance. Nevertheless, I did not observe the same results for the biggest parties of the coalition. This confirms my previous statement that accountability is a question of task, not one of size.

Secondly, once I introduced ideological distance within the cabinet, I observed what I expected: accountability improves if ideological distance increases. That outcome was produced in Prime Ministers, Ministers of Finance and Economy, the biggest parties and the second biggest parties. Moreover, the results were stronger than previous analyses.

In sum, the literature was mistaken. The empiricial evidence provided by this dissertation corrects the hypothesis of 'clarity of responsibility' and concludes that multiparty cabinets are accountable and that voters may control them.

The second part of the empirical research dealt with survival after elections. The results confirmed my hypotheses. Hence, the survival of single-party governments depends on voters and party members' judgments, whereas coalition governments are controlled by one agent more: coalition partners. In all analyses, we saw that politicians are sensitive to electoral results. Thus, as electoral payoffs increase, the probability of holding the government increases. However, the results show that party organization is more relevant for single party governments than coalition cabinets. This result is intriguing. We might expect that in coalition governments, the control of rank-and-files members would be higher. Why? Because when politicians seek agreement with other parties, they tend to renounce some of their preferences. This could encourage the control of party members. However, the results show that this control is lower than in single party governments.

7.3 Further research

I hope that this dissertation opens new research lines because I consider that new questions emerge. First, future research has to check whether these outcomes are produced when we develop micro-analyses. In my research, I have used aggregate data. However, it may be wondered if, using surveys, we would obtain similar findings. Thus, I consider that the analyses presented in this dissertation have to broaden by case studies.

The second question that arises is the effect of an increase of GDP. Scholars have stressed its importance for economic voting (Lewis-Beck 1988; Norpoth, Lewis-Beck, and Lafay 1991; Powell and Whitten 1993; Whitten and Palmer 1999; Barreiro 2007). However, in my empirical research I showed that this variable has less explanatory value than other economic variables. For instance, inflation and unemployment are more statistically significant. Therefore, we may wonder: why does a GDP increase have

to be the key factor? Why do scholars focus on this variable?

The third academic gap that I have found is in the role of opposition. We have seen that this agent is a key actor in my theory. However, I believe that it is under-studied in the literature. Therefore, future studies could pay more attention to opposition parties: what their role is in the process of assigning responsibilities?, why they gain or lose votes? and so on.

Finally, we have seen that around 15.95% of incumbent parties leave the government before elections. Moreover, this number increases in the case of coalition governments (19.08%). I believe that future research should analyze that behavior. I have assumed that it is part of a survival strategy. However, this question is far from being resolved and scholars may be able to shed more light on why politicians decide to give up cabinets before elections. For instance, we may wonder whether it is a successful strategy. Do they get better electoral results?

In sum, this dissertation sought to fill a gap in literature of political science. However, new questions have arisen while I was resolving the problem that I first presented. But, this is the main goal of science: to accumulate knowlegde and to falsify it.

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