The rules of pork?

The impact of electoral systems on legislators' behaviour in Honduras

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Abstract

Carey and Shugart (1995) suggest that under closed-list proportional representation (CLPR) legislators are more likely to seek votes based on their personal attributes as the number of seats per constituency (known as district magnitude or simply as M) decreases. By contrast, in open-list proportional representation (OLPR) the incentives for legislators to seek votes based on their personal reputation should increase as M increases. I test these scholars' predictions and argue that regardless of the electoral system, legislators will focus on the provision of local public goods, known as pork-barrel politics, the smaller the M, because then it is easier to claim personal credit for projects for their constituencies. In OLPR the importance of pork-barrelling increases compared to CLPR; however, because the necessity to differentiate themselves from co-partisans increases as M grows, depending on their personal attributes legislators will choose to provide non-targetable goods or private goods instead.

I study the case of Honduras to test this theory. This country used a CLPR system between 1989 and 2001. In 2004 the system changed to OLPR, keeping M fixed. The outcomes of the research are as follows. First, the results do not support the claims posed by Carey and Shugart (1995). Second, using different proxies of legislators' behaviour, I found confirmation that pork-barrelling is more important the smaller the M. Third, the evidence regarding the provision of private goods does not support the claims on its own. However, when private goods and local goods were combined, some evidence was found that might indicate that, as expected, the change from CLPR to OLPR increases the likelihood that legislators will provide targetable goods the larger the M. By contrast, in CLPR the effect is the opposite. Finally, the results suggest that electoral systems interact with the personal attributes of legislators in ways that can be anticipated.

Contents

List of tables and figures

List of acronyms

ALBA	Bolivarian Alternative for the Americas (Spanish acronym)
BANASUPRO	National Food Marketing Agency (Spanish acronym)
CI	Confidence intervals
CLPR	Closed-list proportional representation
COHEP	Honduran Council of Private Enterprise (Spanish acronym)
CONACON	National Convergence Commission of Honduras (Spanish acronym)
COPECO	Permanent Contingency Commission of Honduras (Spanish acronym)
CSJ	Supreme Court of Justice of Honduras (Spanish acronym)
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
ENEE	National Electrical Energy Board (Spanish acronym)
ENP	Effective number of parties
ERP	Poverty Reduction Strategy (Spanish acronym)
FHIS	Honduran Social Investment Fund (Spanish acronym)
FONCODES	Peruvian Social Investment Fund (Spanish acronym)
GDP	Gross domestic product
GOH	Government of Honduras
HDI	Human development index
IADB	Inter-American Development Bank
IHNFA	Honduran Institute of Childhood and Family (Spanish acronym)
INAM	National Institute for Women (Spanish acronym)
IUPA	Increasing use of the legislators' personal attributes
M	District magnitude
MDC	Civic Movement for Democracy (Spanish acronym)
MEP	Member of the European Parliament
MP	Member of parliament
NGO	Non-governmental organization
OLPR	Open-list proportional representation
PDCH	Christian Democrat Party of Honduras (Spanish acronym)
PELA	Latin American Parliamentarian Elite Project (Spanish acronym)
PINU-SD	Social Democrat Innovation and Unity Party (Spanish acronym)
PLH	Liberal Party of Honduras (Spanish acronym)
PNH	National Party of Honduras (Spanish acronym)
PR	Proportional representation
PRONASOL	National Solidarity Programme (Spanish acronym)
PR-STV	Proportional representation-single transferable vote
SIF	Social investment fund
SMD	Single-member districts
SNTV	Single non-transferable vote
SOPTRAVI	Ministry of Public Works, Transport and Housing of Honduras (Spanish acronym)
TD	Member of Dáil Éireann, the Irish Lower House of Parliament
TNE	National Electoral Tribunal of Honduras (Spanish acronym)
TSCS	Time-series cross-section
TSE	Supreme Electoral Court of Honduras (Spanish acronym)
UD	Democratic Unification Party (Spanish acronym)
UNDP	United Nations Development Programme

Chapter 1

Introduction

In the early morning of Sunday 28th of June 2009, a group of soldiers from the Honduran Army raided the house of Manuel Zelaya-Rosales, who was serving his fourth year as President of Honduras. The President's detention was ordered by the Supreme Court of Honduras in the aftermath of a conflict between the Executive, Legislative, and Judicial branches of government that also involved a number of civil organizations. That same morning he was put on a plane to Costa Rica, still wearing his pyjamas. In the afternoon, the President of the National Congress, the Liberal Party leader and Zelaya-Rosales' former campaign manager, Roberto Micheletti, was sworn in as interim President of Honduras after the deputies present voted unanimously for the removal of Zelaya-Rosales from office. Several of the parliamentarians who supported the President's impeachment had formed part of the faction that four years earlier had won the presidential nomination to represent the Liberal Party under the leadership of Zelaya-Rosales.

The justifications that were initially given for this coup related to the president's non-compliance with a Supreme Court decree that prevented the Executive from carrying out a plebiscite asking the citizenry whether they would agree on calling a constituent assembly (Rodríguez, 2011). However, another factor that might help explain the conflict between the three branches of power, and in particular between the Executive and the Legislative branches, could be the structural changes that came about in particular as a result of the approval of a new Electoral Law in 2004. Among other things, this law changed the electoral system from closed-list proportional representation (CLPR) to open-list proportional representation (OLPR). One could argue that the change to OLPR may have disrupted the unity of the political parties within the National Congress of Honduras, leading to internal conflicts between parliamentarians from the same party and with the presidential office. This seems to be the reason why, in February 2010, a bill was put before the Honduran Congress that aimed to once again reform the Electoral Law and convert the PR system into a mixed member electoral system which would combine members elected under

majority elections with other members elected by proportional representation. According to one of the proponents of that bill:

> The system used here at the moment is a system where the candidate who receive the most votes in the primary election (within the parties) advances to the general election, where again the person who receives the most votes wins, though an element of proportionality is involved. However, this system has generated a good deal of conflict among congressional candidates from the same party. That's why we want to change to a system of election by districts, so that national interests and policies proposed by the president and the parties are also considered in Congress. […] The problem is that [OLPR] breaks party unity, because each candidate has to compete with the other candidates from her own party.[1]

It can be inferred from this quote that in Honduras OLPR has produced conflicts within the parties that can be attributed to increased intraparty competition. It can also be surmised that legislators will attend to the interests of their constituencies—or as that legislator said, districts—but neglect the party authority and their legislative work in parliament. In an interview conducted with one member of the Central Committee of the Liberal Party of Honduras, he was asked to describe the effects of the change to OLPR. According to this party leader, the level of conflict within his party has increased as a consequence of the change to OLPR:

> The problem that has arisen lately is that [the candidates] are fighting amongst themselves. Before 2004, they were selected [by the leadership] and did not necessarily have to fight for positions within the party but instead competed with the opposition. The advantage of this was that there was no internal friction within the Liberal Party. Now, however, there is friction, because they try to politically destroy, belittle, and insult one another or a presidential candidate as well as the opposition parties.[2]

A recent article establishes a connection between the electoral system type in Honduras and the 2009 coup. According to Taylor-Robinson and Ura (2013), the electoral system that resulted from the 2004 reform strengthened the Legislative's independence from the Executive branch of government. They also argue that another set of institutional reforms gave the Judicial branch more autonomy.[3] For the

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[1] Deputy of the National Party of Honduras, personal interview, 12th February 2010, own translation.
[2] Secretary of the Central Committee of the Liberal Party of Honduras, personal interview, 19th January 2010, own translation.
[3] In 2001 the Constitution was reformed to extend the Supreme Court Judges period of service from four to seven years. The nomination process also changed to make it less partisan. An Appointments Board comprised of different actors such as the Supreme Court itself, political parties, civil society,

authors, these two institutional changes provided increased incentive for the autonomy of the Legislative and the Judiciary, together with uncertainty about which side public opinion would fall on in the high-stakes issue of the plebiscite. In their words, "[t]hese changes limited the president's ability to influence other politicians' careers, creating the potential for real Congress and Court independence so that when a high-stakes policy conflict arose one branch of government might assert itself to obstruct another branch" (Taylor-Robinson and Ura, 2013, p. 114).

It is not the aim of this dissertation to demonstrate a cause-and-effect connection between the overthrow of the President of Honduras in June 2009, supported by deputies of his own party, and a deterioration in party unity which could be associated with the electoral system change of April 2004.[4] Instead, this anecdote serves to illustrate just one of the many aspects of Honduran politics that could have been affected by this institutional change, and to highlight the fact that, to my knowledge, no research has yet been conducted to evaluate the effects of the electoral system change in that country.

Ever since the birth of modern democracies, and even before, politicians and scholars of politics around the world have debated the impact different institutional designs might have on the way legislators behave. For example, in the *Federalist No. 10,* one of the founding fathers of the United States, James Madison, wrote: "[a]mong the numerous advantages promised by a well-constructed Union, none deserves to be more accurately developed than its tendency to break and control the violence of faction" (Madison, 2003[1788], p. 71), adding that "[b]y a faction I understand a number of citizens, whether amounting to a majority or minority of the whole, who are united and actuated by some common impulse or passion, or of interest, adverse to the rights of other citizens, or to the permanent and aggregate interest of the community" (p. 72).

A more contemporary student of politics, Sartori (1997, pp. 200–201) compares political institutions to engines that can be strategically designed to elicit particular types of behaviour among politicians and voters. However, some researchers believe that the effects of "electoral engineering" cannot be predicted in any context,

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and the National Autonomous University of Honduras propose the nominations of the new magistrates to the Honduran Congress.

[4] In Appendix 3.1 to Chapter 3 I provide more detailed information about the 2009 coup and the previous conflicts within the Liberal Party of Honduras.

especially where democracy has been the result of abrupt transitions rather than a natural evolution of institutions, like in most old capitalist democracies (Elster, 1988; Inglehart, 1997; 2005; Norris, 2004). The present work focuses on the effects of electoral institutions on the behaviour of legislators, a topic that has received little attention to date (Colomer, 2011; Shugart, 2005). More specifically, the research question of this dissertation is: *Do electoral systems affect the way legislators behave? And if so, how can these effects be explained?* In an attempt to provide an answer to this question, I investigate the case of Honduras, which changed its electoral system from a CLPR system to OLPR, two models that, as I will show throughout this dissertation, differ greatly in many ways. This rare occurrence provides quasi-experimental conditions which I can use to test my argument.

1.1 Puzzle

One of the most common assumptions that political scientists make in order to formulate their theories is that in democracies where it is permitted, re-election is the primary goal motivating elected representatives such as legislators (Cox & McCubbins, 2007; Downs, 1957; Fenno, 1978; Mayhew, 1974). In Honduras legislators can (and often do) stand for re-election an indefinite number of times. In the sardonic words of one academic in reference to deputies who have died while in office, "there are people who have had to be taken out of Congress in a coffin!"[5] The Ibero-American Institute at the University of Salamanca established a project called the Latin American Parliamentarian Elite Project (PELA), for which researchers have conducted four rounds of surveys. In the 2006 PELA survey, a sample of 91 out of 128 Honduran parliamentarians were given a number of possible answers to the question, "what do deputies from your party do after they have completed their term in office?" Each answer had to be ranked in order of likelihood, with one being the least likely outcome and five the most likely. For the answer "get re-elected as a deputy", 37 per cent chose four and 46 per cent chose five (Alcántara, 1994-2010). In other words, 90 per cent of the deputies surveyed declared that, when one term in office has been completed, re-election is the most common goal of Honduran legislators.

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[5] Professor of Politics and International Relations at the National Autonomous University of Honduras, personal interview, 19th November 2009, own translation.

If re-election is so important for legislators, then we might ask how they go about achieving that objective. Some academics believe that the answer to this question depends on the electoral system and the manner in which the parties select their candidates (Carey, 2009; Crisp et al., 2004; Golden & Picci, 2008; Hirano, 2006; Sieberer, 2010; Stratmann & Baur, 2002). In a very influential paper, Carey & Shugart (1995) proposed a ranking of electoral systems according to the incentives they would in theory produce for candidates to look for personal votes—i.e. votes that are based on their personal attributes. One of the most controversial aspects of their theory is the interactive relationship they establish between what they call *ballot control* and the number of seats in a constituency, which has come to be known as *district magnitude* and is abbreviated simply as *M*. They predict that in systems where the party leadership controls access to the ballot, candidates will have greater incentives to seek a personal vote the smaller M is. Conversely, when the party leadership has little or no control over who is entered on the ballot, voters have more influence on the electoral prospects of a candidate, including an incumbent's chances of re-election. Under these circumstances, the incentives to look for personal votes will increase as M gets larger.

Carey & Shugart's (1995) theory has attracted considerable attention in recent years. A growing number of researchers have subjected their arguments to empirical testing in both large-N and small-N investigations (André & Depauw, 2012; Hallerberg & Marier, 2004; Hicken & Simmons, 2008). Other scholars, however, look upon this theory with scepticism, and maintain that electoral systems are not the only potential explanatory factors that should be considered. There are other political institutions, such as the form of government, the structure of parliaments and factors related to political party organization, as well as political psychology, that could explain legislators' behaviour (Crisp, Jensen & Shomer, 2007; Desposato, 2006; Martin, 2012; Samuels, 1999; Siavelis & Morgenstern, 2008a). It is, however, generally acknowledged that too little is known about the effects of electoral systems on legislator's behaviour (Colomer, 2011; Shugart, 2005).

In the early 1990s Honduras had one of the most party-centred electoral systems, a fused system of elections (Cox, 1997, p. 42), in which voters cast a single vote for a presidential candidate and the list of deputy candidates. One scholar of Honduran politics has stated that if it were not for the factionalization of the two main political parties in Honduras, the use of the fused electoral system could have

produced what the political scientist Gary W. Cox (1987) termed an *efficient secret*, i.e. the near fusion of the executive and legislative branches in their regular work (Taylor, 1996, p. 328).[6]

Preliminary evidence suggests that there have been changes in the way legislators behave since the adoption of the new system which could be related to increased importance being attached to constituency service. During an interview conducted with one of the secretaries of the Liberal Party of Honduras's Central Committee, he was asked about the role of pork-barrel politics under the OLPR system, and declared: "it's part of the competition. If three or four deputies from a department want to run again they have to find resources for social development in their community; this is without a doubt the case. There are some who devote themselves only to legislative work [pauses], but the clever ones know that they have to do constituency service."[7] [8] Another deputy compares the before and after of the 2004 electoral reform. According to him, the presidential candidate previously had a significant influence on the way people voted for the party list of legislative candidates. Under OLPR, however, legislators have to rely on their public image and constituency service record to gain votes.

> Previously, deputies were elected alongside the presidential candidate, which meant that deputies would be stuck like glue to the figure of the president during the presidential campaign. As it is now, we still have to work for the president, but the deputies also have their own work and obligations. We work together as a party, but each of us also has to work individually in order to get a seat in Congress… This means putting in twice as much effort, visiting one house after the other, supporting communities with projects. That is the only way you can actually win people's votes.[9]

Another issue that legislators must consider is the financing of their electoral campaigns. According to one legislator interviewed, campaigning is particularly important in large district magnitude constituencies, but it is also very expensive:

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[6] The term *efficient secret* was originally coined by Walter Bagehot in his classic work of 1867, *The English Constitution*. As quoted in Cox's (1987) study of the development of the English political parties, Bagehot states that "[t]he efficient secret of the English Constitution may be described as the close union, the nearly complete fusion, of the executive and the legislative powers… The connecting link is *the cabinet*" (p. vi, italics in original).

[7] Secretary of the Central Committee of the Liberal Party of Honduras, personal interview, 19th January 2010, own translation.

[8] In Honduras the electoral constituencies are the same as the provinces, which are called departments (see Chapter 3).

[9] Deputy of the National Party of Honduras, personal interview, 12th February 2010, own translation.

… [t]he process is onerous and costly. For example, look at the department of Francisco Morazán, which has 23 deputies, and the department of Cortés, which has 20 deputies. The country's capital is located in Francisco Morazán, and [the city of] San Pedro Sula is in Cortés. The problem is that a congressional candidate is like a presidential candidate in the department. Francisco Morazán has 23 seats and has 28 municipalities, but as it happens 79 per cent of the electorate is concentrated in the capital and the other 21 per cent is spread out across the rest of the municipalities. So what happens then? I am a candidate in Francisco Morazán, which means I have to promote myself in the municipality where the 79 per cent is because that's where most of the voters live in its neighbourhoods and suburbs, in the homes of migrants from the villages… But I can't neglect the other 21 per cent either because every vote counts in politics. So what is the result? My campaign becomes very, very expensive because I have to visit all the people, and you realize that people expect you to be everywhere at once and you are asked for help everywhere you go.

The following quote from a scholar of Honduran politics provides a description of the immediate consequences of the electoral system change and the incentives it created for legislators there to seek personal votes:

Until 2005, aspiring politicians knew that the key to gaining nomination and election was to appeal to party leaders. A deputy from the president's party could obtain government resources by being loyal to the president. Party leaders controlled whether a deputy would have a safe slot on the party's list. Thus, deputies had a strong career incentive to demonstrate their loyalty to their party and its leaders. With both primaries and general elections being 'open list', party leaders can no longer guarantee re-election for loyal backbenchers. The president still controls access to executive branch resources, however, which are important assets for deputies planning a long-term political career. With the new electoral rules, a different set of incentives has been created, which may undermine the president's traditional domination of the Congress (Taylor-Robinson, 2007, p. 524).

These statements indicate that the electoral system change from CLPR to OLPR has had an effect on legislators' behaviour which seems to be related to intraparty competition. Constituency service, and especially legislators' provision of resources for their constituencies—an activity known as pork-barrel politics—appears to predominate in Honduran politics under the OLPR system. However, it is obvious that a test of a theory cannot rely solely upon a few semi-structured interviews. Moreover, while constituency service seems to be important for legislators to improve their individual reputations and thereby win personal votes, to equate the personal vote to constituency service or pork-barrelling alone could be misleading (Martin, 2011). There are different factors that could help to improve a

legislators' personal reputation, and win personal votes as a result; they could even use party votes—i.e. votes for the party—to secure re-election (Strøm, 1997). However, the literature on the influence of electoral systems on legislators' behaviour remains quite theoretical and the evidence collected relies mainly on small-N comparisons and large-N statistical studies, which as I will explain in detail have significant shortcomings. The fact that Honduras changed from a CLPR system to OLPR while keeping the same district magnitude allows for quasi-experimental testing of the effects of two different electoral systems on legislators' behaviour, while other factors can be kept relatively constant. In the next section I will explain what we can expect from the interaction between ballot type and district magnitude.

1.2 Argument

The theoretical basis of the present work comes from Carey & Shugart's (1995) theory on the interaction between ballot type and district magnitude. Adopting their point of view, and assuming that legislators will seek re-election, we can expect that under CLPR the incentives to cultivate personal votes are greater the smaller the M, since legislators will be more likely to be recognized by their constituents and can thus use their personal reputations to attract votes. By contrast, under OLPR the incentives to seek personal votes are greater the larger M, because intraparty competition will probably be more pronounced in these districts. However, it is important to bear in mind Carey & Shugart's caveat that their model "identifies the degree to which electoral systems reward politicians' personal reputations, but does not distinguish as to how that reputation is most effectively developed" (1995, p. 419). In other words, their model does not explain what specific outcomes in the behaviour of legislators can be expected, or the ways in which legislators will seek to attract personal votes.

For Cox & McCubbins (2001), when electoral systems create conditions conducive to seeking personal votes, the most efficient way to get them is by providing local public goods to constituencies and private goods to interest groups, rather than providing non-targetable public goods. Based on this argument and Carey & Shugart's (1995) theory, Crisp et al. (2004) argue that under closed-list electoral systems legislators will be more likely to provide targetable local goods to their constituencies and targetable private goods to interest groups as M gets smaller. Conversely, when the party list is open, legislators will have greater incentives to provide targetable goods the larger M is.

As in Carey & Shugart's (1995) work, the argument of this thesis is that, assuming that legislators are driven by a desire for re-election, under CLPR the incentives to seek personal votes should be greater the smaller the district magnitude, whereas under OLPR the incentives should increase as district magnitude gets larger. This effect is expected to occur because it is easier for voters to identify legislators in small-M districts than in large ones. Thus, in CLPR legislators will use their personal reputations to attract votes for their parties. Conversely, in OLPR they will compete within their parties to attract votes for themselves. Moreover, as M gets larger the number of competitors from the same party increases.

In line with Cox & McCubbins (2001) and Crisp et al. (2004), I use the targetable/non-targetable goods framework. However, contrary to Crisp et al. (2004), I believe that putting local and private targetable goods together prevents us from identifying the causal mechanisms behind the decisions of legislators under the two different types of electoral system. In this regard, I argue that while we can expect that constituency service will be more important in smaller district magnitude constituencies in closed-list systems, the same cannot be expected for private goods. If private goods are understood as goods provided to interest groups, as Denzau & Munger (1986) and Bawn & Thies (Bawn & Thies, 2003) suggest, there should be less engagement between legislators and interest groups in small district magnitude constituencies, where pork-barrel politics tends to have more importance. I therefore expect that under CLPR legislators will tend to provide private goods to interest groups in larger district magnitude constituencies. Furthermore, it has been argued that even when the electoral system generates incentives to look for personal votes in large M constituencies it is probably more difficult to claim personal credit for pork-barrel projects because different legislators could have been involved in providing the goods (Ashworth & Bueno de Mesquita, 2006; Carey & Shugart, 1995; Lancaster, 1986). It is possible that this could discourage legislators from providing local public goods. Therefore, we cannot necessarily expect increased provision of local public goods as a function of increasing M.

In Figure 1.1 bellow I schematize my argument. Specifically, I argue that under CLPR incumbent legislators and parties will focus more on the provision of local goods as M gets smaller, and on providing more private and non-targetable goods as M increases. In small-M constituencies legislators with a local background are more likely to provide local goods; whereas, as M increases those who are more likely to

provide private and non-targetable goods are legislators who have leadership attributes within their parties. Under OLPR, legislators will be more likely focus on pork-barrelling; however, as M increases some deputies will seek to differentiate themselves from their co-partisans by providing public goods. In addition, because in an OLPR system legislators need to reach broader publics in larger district magnitude constituencies, they will probably appeal to interest groups in order to finance their political campaigns. Once in office, they will be more likely to produce private goods than they would under CLPR. Finally, under OLPR, what determines whether legislators will focus on the provision of local public goods or non-targetable public goods in large-M constituencies is their own personal attributes. Legislators who are recognizable by broad sections of the public will be more likely to provide non-targetable public goods, whereas those who have a more local background will focus on their constituency service work.

Ballot	M	Type of goods		
		Local	Private	Non-targetable
CLPR	Decreasing	Very likely IUPA	Less likely	Less likely
	Increasing	Less likely	More likely IUPA	More likely IUPA
OLPR	Decreasing	Very likely IUPA	Less likely	Less likely
	Increasing	More likely IUPA	More likely than in CLPR IUPA	Less likely than in CLPR IUPA

Figure 1.1. Theorized choice of strategy of legislators by type of ballot and district magnitude. The acronym IUPA stands for 'increasing use of the legislators' personal attributes'. IUPA indicates that it is expected that the legislator will be more likely to use her personal reputation as M increases or decreases, depending on the type of good she is delivering. Notice that, independently from the ballot used, I would expect that as M decreases legislators will be less likely to provide either private or non-targetable goods.

1.3 Findings

To measure the personal vote-seeking behaviour of legislators I use three proxies of legislators' behaviour. First, I analyse the patterns of bill introduction in the Honduran Congress for each of the elected legislators between 1990 and 2010. Second, I use data from surveys conducted with Honduran legislators in the legislatures of 1998, 2002, 2006, and 2010. The third type of data I employ relates to geographically-allocated spending at the Honduran Social Investment Fund, an institution created in 1990 to tackle poverty as a result of structural adjustment policies. In this case, the dataset is disaggregated at the sub-constituency level—i.e. by municipality—and runs from January 1990 to December 2009.

One of the main objectives of this dissertation was to test Carey and Shugart's (1995) hypotheses that under CLPR the incentives to seek personal votes increase the smaller the district magnitude and that the opposite will happen in OLPR. From the results of the quantitative analyses we cannot confidently conclude that the change to OLPR in Honduras generated the incentives for legislators to seek personal votes in the way suggested by Carey and Shugart (1995) and later examined by Crisp et al. (2004) in a cross-country comparison. It was found that under CLPR legislators are more likely to provide targetable local and private goods the smaller the district magnitude. By contrast, under OLPR legislators in constituencies of all sizes tend to give more importance to pork-barrel politics and to the provision of private goods. However, while larger magnitude constituencies seem to have been more sensitive to the ballot type change, a significant cross-sectional variation was not found that could lead to the conclusion that OLPR increased intraparty competition in larger magnitude districts. It is clear, though, that under OLPR the provision of private and local public goods grew with increases in the number of seats per constituency.

The same analysis revealed evidence in line with my expectation that the change to OLPR would cause legislators to attach lower levels of importance to the provision of non-targetable public goods. Finally, legislators whose personal attributes increase their recognizability are more likely to provide non-targetable public goods in OLPR than in CLPR.

1.4 Thesis structure

This dissertation comprises seven chapters. Chapter 2 has two main parts: the first part is dedicated a review of the literature on the relationship between electoral systems and the personal vote-seeking behaviour of legislators, as well as to providing alternative explanations for this behaviour. In the second part I develop my argument. In Chapter 3 I explain the research design. Considering the amount of empirical information collected for the present work, it was decided to dedicate Chapter 4 to the description of the dependent variables that are used to measure the legislators' personal vote-seeking behaviour. Chapter 5 presents the analysis of bill initiation in the Honduran Congress, while Chapter 6 is dedicated to the analysis of parliamentarian elite survey data. Chapter 7 is the last of the empirical analysis chapters. There I use the data provided by the Honduran Social Investment Fund to

test hypotheses especially related to pork-barrel politics. In Chapter 8 I present the conclusions.

Chapter 2

Electoral systems and the incentives to seek personal votes

Since the pioneering work of Duverger (1954), an extensive body of research has significantly improved our understanding of the effects of electoral formulas on the formation of party systems. However, and as has been noted by Colomer (2011) and Shugart (2005), it was not until very recently that social scientists began to pay particular attention to the implications of electoral systems on the intraparty dimension. I am particularly interested in the effects of electoral systems on the personal vote-seeking behaviour of legislators. The *personal vote* is understood as the "portion of a candidate's electoral support which originates in his or her personal qualities, qualifications, activities, and record" (Cain et al., 1987, p. 9). In contrast, the *party vote* is defined by Cain et al. (1987) as those votes motivated by non-candidate attributes, such as reactions to contemporary national economic and social issues and conditions.

Significant theoretical and empirical contributions have been made in an effort to understand the effects of electoral systems on legislators' behaviour. However, competing theories and a lack of sound empirical evidence have restricted their explanatory potential. In this chapter I aim to provide a model of the interaction between electoral systems and legislators' behaviour. As I will further explain, what is known as pork-barrel (or simply pork) is one of the manifestations of legislators' personal vote-seeking behaviour. But it is not the only one, even though more often than not in the specialized literature personal vote-seeking behaviour is equated with the provision of goods to constituencies (Martin, 2011).

I contend that in the literature there has been a tendency to compartmentalize the potential effects that electoral systems can have on legislators' work, leading to reductionist viewpoints; for example, by equating personal vote-seeking behaviour with pork-barrel politics. I argue that legislators choose among different behavioural strategies in order to seek personal votes, and that while pork-barrelling is one of the

most important of these strategies, it is not the only one. Some legislators will focus on non-targetable public goods, while others will favour interest groups. What determines the choice of strategy is a combination of the interaction between type of ballot and district magnitude, as well as the personal background of the legislator. My research focuses on two electoral systems: closed-list proportional representation (CLPR) and open-list proportional representation (OLPR). I expect that pork-barrel politics—which, as I will explain later, can be subsumed under the label *constituency service*—will increase as district magnitude (M) gets smaller. That effect will be stronger under CLPR than under OLPR. By contrast, the importance legislators give to providing non-targetable public goods increases with district magnitude, particularly under CLPR. I also expect that the provision of private goods to interest groups will be more important under OLPR than CLPR, especially as district magnitude increases. Finally, the personal background of legislators is a factor in the behavioural strategies they choose, especially in contexts of high intraparty competition, i.e. in medium and larger district magnitudes under OLPR.

This chapter is divided into four major sections. In the first section, I set out the puzzle of the relationship between electoral systems and the personal vote, which is based on whether institutions can explain the behaviour of human beings, in this case in particular, politicians. In the second section, I describe the different strategies legislators can choose from when seeking the personal vote. I also review the relevant literature and show that the scholarly debate has focused on whether the interaction of district magnitude and ballot structure has a particular impact on legislators' personal vote-seeking behaviour. In this literature review I present alternative explanations to the personal vote-seeking behaviour of legislators. The last part of this chapter is devoted to developing the main argument of this dissertation.

2.1 A puzzle: rational choice, electoral systems, and the personal vote

Within a rational choice new-institutionalist tradition, the effect of electoral systems on the actual behaviour of elected politicians towards their parties and towards those who voted for them has been much debated.[10] Electoral systems can be understood

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[10] *New Institutionalism* is a term that encompasses several theories that stress the influence of formal and informal institutions on individuals' behaviour. One of the trends within neo-institutionalism is

as formal institutions whose role is to "determine the means by which votes are translated into seats in the process of electing politicians into office" (Farrell, 2011, p. 4).[11] Shugart (2005) suggests the term *intraparty effects* to differentiate the possible consequences of electoral systems on the behaviour of legislators and candidates from the *interparty effects*, which describes how electoral systems affect party systems.[12] Following this path of analysis, the way voters cast their votes for parties or for candidates might be a determining factor.

Key theoretical contributions in the field of electoral systems and the personal vote make the assumption that legislators are primarily driven by a desire for re-election. It is usually assumed that once in office, legislators will adapt their behaviour to favour strategies that maximize their chances of achieving that goal. Since electoral systems are the formal rules under which candidates compete for the votes that secure them seats, different electoral system types will lead to disparate strategies for obtaining votes (Carey & Shugart, 1995; Cox, 1987; Katz, 1980). Party-centred electoral systems, i.e. where leaders control access to the list, encourage

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rational choice institutionalism, which is inspired by theories developed in economics. As in institutional economics, rational choice political scientists make the assumption that, in politics, individuals pursue their self-interest and opt for those strategies that will most benefit them. In this regard, from a new-institutionalist perspective, formal and informal institutions set the rules of human interaction. Institutions provide individuals with information cues that enable them to make strategic decisions that minimize their losses and maximize their benefits to achieve their goals (Hall & Taylor, 1996; North, 1990).

[11] This definition is shared by others (Cox, 1997; Gallagher & Mitchell, 2005b; Norris, 2004; Taagepera & Shugart, 1989).

[12] In terms of *interparty* effects, as Shugart (2005) explains, since Duverger's (1954—originally published in French in 1952) canonical contribution an ever-growing literature on the topic has been produced. That literature has in part revolved around the discussion of what later came to be known as Duverger's laws, which state that "the simple-majority single-ballot system (i.e. simple majority rule) favors the two-party system" and that "the simple-majority system with second ballot and proportional representation favors multipartyism" (quoted in Cox, 1997, p.14). This so-called *mechanical effect* seems to be confirmed by the actual observation of cases that use plurality and have two-party systems, notably the United States and Great Britain. However, these propositions have been disputed several times. One of the major debates comes from the identification of psychological effects that could be caused by electoral systems, or in Cox's (1997, pp. 30–32) terms, the effects of *strategic voting*. This term describe a tendency among voters to cast their votes for candidates or parties that they believe have a potential to win even when their actual preference is for a different candidate or party. In other words, voters do not want to waste their vote on options that do not have the chance to win. Strategic voting is associated mainly with plurality rule systems; we can therefore surmise that this tendency towards strategic voting, and not the plurality rule, would explain the pattern that associates plurality with two-party systems. However, as Cox (1997) himself notes, on the basis of previous works by Leys (1959) and Sartori (1968), strategic voting also exists in PR systems. Another discussion has focused on PR systems, specifically on ways to predict and measure the proportionality of seat allocation among political parties using different electoral formulas (e.g. Gallagher, 1991; Lijphart, 1990). In addition, Taagepera and Shugart (1989) and Taagepera (2007) have theorized on the potential effects electoral systems have on the effective number of parties, which is a measure that "indicates the number of hypothetical equal-sized parties that would have the same effect on fractionalization of the party system as have the actual parties of varying sizes" (Taagepera & Shugart, 1989, p. 79).

party vote-seeking, while candidate-centred electoral systems—where some form of preferential vote is used—encourage personal vote-seeking behaviour in legislators (Hicken & Simmons, 2008).

If the re-election seeking assumption is valid, electoral systems would be an important explanatory factor for the majority of legislators' important daily decisions, with significant consequences for governments' policies. For Cox & McCubbins (2001, p. 38), the degree to which electoral systems generate incentives to seek personal votes can determine major policy outcomes. According to these scholars, legislators' personal vote-seeking behaviour is cultivated to a greater extent than any other strategy by: (1) providing private or local public goods and services to their constituents, and (2) providing particularistic favours to specific interest groups. It has been acknowledged in the literature that electoral systems where votes are cast for the candidate instead of the party encourage legislators to cultivate personal reputations. Thus, the provision of goods and services as described in (1) and (2) is more likely to occur in such systems than in situations where the electoral rules privilege party reputations, typically CLPR (Crisp et al., 2004; Shugart, 2005; Taagepera & Shugart, 1989).

2.2 Forms of behavioural strategies

As we noted in the previous section, for many scholars in the rational choice tradition, legislators' desire to be re-elected is the key factor in explaining their personal vote-seeking behaviour. Strøm (1997), however, argues that legislators assume different roles in parliament and can be motivated by other institutional incentives, not just re-election. He uses the term *behavioural strategies* to describe the different roles parliamentarians can take on in pursuit of a specific goal (Strøm, 1997, p. 157). As previously explained, according to Cox & McCubbins' (2001) theory, in candidate-centred systems the provision of local public and private goods and services to constituents and interest groups are the strategies with the most potential to bring in the votes that rational incumbent legislators need to win their re-election. However, what constitutes these activities and in relation to what they are preferable is not clear in their model.

Crisp et al. (2004) provide a classification of targetable and non-targetable parliamentarian behavioural outcomes.[13] Targetable benefit is taken to mean *private goods* and *local public goods*, while non-targetable benefits refer to *public goods* (Crisp et al., 2004, p. 836; see also Persson & Tabellini, 2000, pp. 215-218). As I will explain in the following sections, the connection between legislators' behaviour and targetable benefits is easier to understand, and the related literature, while it is diverse, has tended to focus on two major outcomes: the representation of interest groups and constituency service. In contrast, identifying the association between legislators' behaviour and non-targetable benefits can be rather difficult. In the next two sections I will expand the discussion on these two issues.

2.2.1 Targetable benefit strategies

I classify targetable or particularistic benefit strategies into *constituency service* and the *representation of interest groups*.

Constituency service

Pork-barrel politics, brokerage, clientelism, and patronage can be subsumed into the comprehensive concept of *constituency service*. Based on an analysis of the behaviour of members of the United States Congress, Fenno (1978) puts forward the following definition of this concept: "[m]any activities can be incorporated under the rubric of 'district service', or 'constituent service,' but the core activity is providing help to individuals, groups, and localities in coping with the federal government" (p. 101).

While it is assumed that pork-barrelling, clientelism, and patronage are used to pursue a similar objective, which is to attract votes within an electoral district for a candidate or a party, I contend that these are different activities whose concepts should not be confused, and that researchers must be careful in considering their definitions. Pork-barrel can be understood as a form of particularism where legislators try to secure spending from a common-pool resource to invest in projects in their constituencies (Carey, 1996; Hallerberg & Marier, 2004; Persson & Tabellini, 2000).[14]

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[13] They specifically analyse bills presented by legislators. In Chapter 4 I discuss Crisp et al.'s (2004) contribution because I employ a similar methodology to test the empirical implications of the theory developed in the present chapter.

[14] The term *pork-barrel*, according to Patrick, Pious and Ritchie (2001), originated during the pre-Civil War period in the United States (first half of the 1800s), when slaves working in plantations in the

Thus, pork-barrelling normally refers to the use of national funds to benefit a set of recipients in a given area or constituency. The set of recipients is usually constituted by diffuse groups within a constituency's population. This means that, very often, some of them indirectly receive benefits without the existence of a previous agreement with the politician. For example, in a constituency voters can be divided between those who support the Red Party and those who support the Blue Party. A legislator from the Red Party who manages to secure funds for the construction of a school in that constituency is indirectly creating benefits for the Blue Party's sympathizers. Another particularistic characteristic of pork-barrelling which distinguishes it from clientelism and patronage is that the goods and services for which the legislator seeks to provide funds are public goods and services. In this regard, when a legislator secures spending from the central government for the construction or maintenance of bridges, roads, schools, or clinics in her constituency, these remain public and do not belong to private individuals.

In contrast, in clientelism and patronage politics, there is a relationship between patron and client, where the patron (i.e. a legislator) demands votes in exchange for favours. In the case of patronage the exchange is simpler to identify: politicians offer their supporters and voters public sector jobs if they vote for them or help them during their electoral campaigns (Calvo & Murillo, 2004; Golden, 2003; Gordin, 2002). Clientelism often involves agreements between politicians and individual potential voters. Kitshelt & Wilkinson (2007) suggest that a clientelistic relationship usually involves a "direct exchange of a citizen's vote in return for direct payments" (p. 2). Those payments can be in cash. For example, in Honduras, the President of the National Congress manages a discretionary budget that he distributes among legislators; those funds are called *subsidios*. Honduran deputies often give the money from subsidios to poor citizens, who use it for purposes such as buying medicines and even to pay the costs of transportation from their hometowns to the capital.[15] The exchange between patron and client can also be in

South would dip their hands into barrels of salted pork for food. The term has become normal usage in American English to describe when members of Congress, senators, and members of the House of Representatives try to secure federal funds to bring projects to their constituencies for re-election purposes.

[15] Since 2010, some Honduran deputies have begun posting their expense reports on their personal pages on the National Congress website. National Party legislator Donaldo Reyes-Avelar, for instance, provides a list of individuals to whom he directly conceded money from his 2010 subsidios fund, as well as the amount given in each case and what the funds were used for. Among other things, according to this expense report, individuals who asked for money from this deputy used it to pay for

kind; for example, a letter from a deputy may facilitate a constituency member getting an earlier appointment at a public clinic.

A fourth term connected with constituency service is *brokerage*. This concept is rather elusive and easy to confuse with clientelism or pork-barrel politics. For Gallagher & Komito (2009), however, the terms have different meanings. According to these scholars, and in reference to the constituency service experience of TDs (members of Dáil Éireann, the Irish lower house of parliament), one of the parliamentarian roles of TDs is to represent their constituencies and, in order to perform this task, they sometimes have to use their influence to intercede on behalf of their constituents in government. However, this does not imply that the legislator has any power in the decision to use public goods to benefit specific recipients:

> [T]he word 'clientelism' is simply not appropriate to describe what TDs do in their role as constituency representatives. It is more realistic to see TDs as being engaged in 'brokerage', a distinct concept. A broker deals in access to those who control resources rather than directly in the resources themselves; there might be situations in which a person wants something but is unable or unwilling to obtain it from the actor who has it, in which case the services of a broker may be useful. Once the service has been provided, the brokerage relationship ends. The main difference between brokerage and clientelism is that clientelism implies a more intense, more permanent relationship. It involves 'clients', people who are in some way tied in to the person who does things for them, whereas 'brokerage' implies a relationship that is not institutionalised (Gallagher & Komito, 2009, p. 243).

With regard to pork-barrel politics, sometimes legislators might manage public funds that they can then redistribute in their constituencies (Carey, 1996; Keefer & Khemani, 2009). In this case, following the definition above, there is obviously not a brokerage relationship, since there is no mediation between the constituents and the deputy who controls the resources. It can also happen that during negotiation of the annual budget, legislators might try to secure funds for projects for their constituencies (Ferejohn, 1974; Lyne, 2008; Stratmann & Baur, 2002). During the budget negotiation process legislators can ask the authorities to earmark funds for specific projects in their constituencies. Finally, occasionally legislators intermediate between the governmental institutions that manage public funds and their constituents (Suiter & O'Malley, 2012). These last two situations are examples of

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medicines, food, school books, and "humanitarian assistance for an unemployed person" (Reyes-Avelar, 2010).

brokerage relationships, but in the realm of pork-barrel politics. Therefore, I make a theoretical distinction in this chapter between pork-barrel politics and brokerage. Nonetheless, the empirical disentanglement of the brokerage work of legislators from pork-barrelling or even clientelism and patronage might be hampered by data limitations.[16]

Representation of interests groups

In terms of the representation of interest groups, the literature tends to associate legislators' strategic behaviour with campaign finance (Bawn & Thies, 2003; Chang et al., 2011; Denzau & Munger, 1986). Denzau & Munger (1986) summarize that relationship in the sense that "interest groups offer contributions to legislators in exchange for legislators' efforts on each interest group's behalf" (1986, pp. 90-91).

One could also add, following Strøm (1997), that some parliamentarians have a role representing their political parties. According to Strøm, a deputy can have several motivations in representing her political party's interests, e.g. securing renomination, gaining a party leadership or party whip position, or in order to join steering committees. Whether the representation of parties implies non-targeted strategies rather than targeted ones can be contended. One can argue that by representing their parties, legislators are representing the parties' policy positions in parliament and, certainly, that means adhering to the party's point of view regarding the distribution of public goods. Furthermore, sometimes legislators specifically represent the interests of the party, for example, by commemorating special dates for the party or by advocating for the national recognition of their party leaders. This could be related to the strategic behaviour of a legislator to seek votes for the party that in turn could bring her benefits as well.

To summarize, Figure 2.1 outlines a classification of the targetable behavioural strategies of legislators—what I also label *particularism*. This can be divided into two types of strategy: representation of interest groups and constituency service. In terms of the representation of interest groups, the private benefits can be either for the interest groups or for the party. When we talk about constituency service, we might be referring to pork-barrel politics, brokerage, clientelism, or patronage.

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[16] I will go back to this empirical issue in the description of the dependent variables used in this work in Chapter 4.
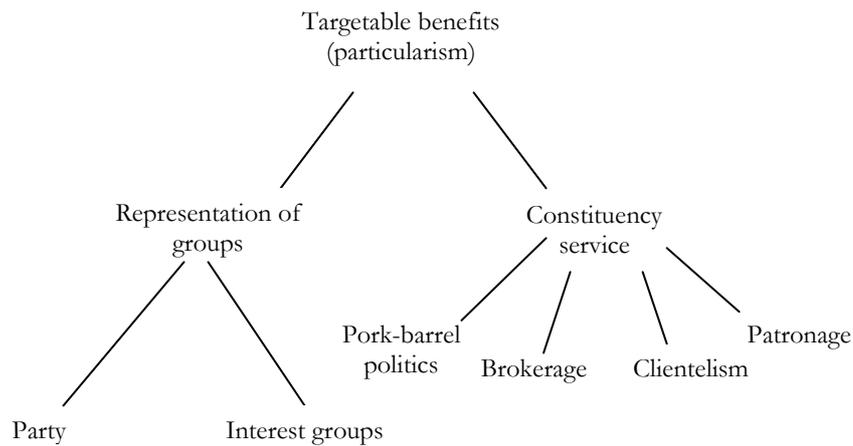
Figure 2.1 Legislators' targetable benefits strategies

2.2.2 Non-targetable strategies

While other activities can have direct and indirect consequences on the creation of public goods, by formulating broad bills, discussing them and converting them into laws, legislators are engaging in different sub-sets of related activities, which *ceteris paribus* can help them pursue their re-election. For example, through participation in general legislative committees legislators can seek to influence the distribution of targetable public goods. As the American congressional experience exemplifies, the importance of committees rests upon the possibility that if they are modelled "as having substantial (and exogenous) institutional powers—ex post vetoes and the right to bring bills to the floor under closed rules, for example—then they end up exerting considerable influence over policy" (Cox & McCubbins, 2007, p. 150). Legislators can also use their plenary time to add topics of their interest to the public opinion agenda or to delay voting on bills (Cox, 2006).

Like Cox and McCubbins (2001) and Crisp et al. (2004), in the remainder of this dissertation, and especially in chapters 5 and 6, I will make continued reference to two types of targetable benefits: private goods delivered to interest groups and local public goods, which are constituency services such as those described in Figure 2.1 above, in particular pork-barrel politics. By contrast, I will refer to general public goods as those which are intended to generate benefits across an entire country as opposed to goods which are targered at a population within a constituency or at a specific group. Is this particular case, I study legislation formulated by legislators as a form of general public good.

2.3 Explanatory factors of personal vote-seeking strategies

There are different factors that can help explain the behaviour of legislators. These can be classified into institutional and non-institutional explanations. The former can be further divided into explanations based on electoral systems and those that take into account other formal institutions. Non-institutional explanations are usually associated with sociological factors. The present section is divided into three parts. Firstly, I discuss the institutional explanations, paying particular attention to the aspects of electoral systems associated with personal vote-seeking incentives. In this regard, according to Carey & Shugart (1995), ballot structure, the ways in which votes are pooled, and the types of vote, along with district magnitude, are the key elements in electoral systems that have the potential to impact on legislators' personal vote-seeking behaviour. Secondly, I address the expected interaction between ballot type and district magnitude. In the third part, I study alternative, non-institutional explanations of personal vote-seeking behaviour.

2.3.1 Ballot structure, vote pooling and types of votes

In addition to district magnitude, Carey & Shugart (1995) identify three elements of electoral systems that can have an effect on the personal vote-seeking behaviour of legislators: ballot control, vote pooling, and type of vote. *Ballot control* is the power party leaders have over the nomination of candidates in the party list. In closed-list PR systems where there are no primary elections, party leaders exercise total control over the candidate nomination process. However, in PR systems that use preferential voting—i.e. where voters have the possibility to cast a vote for the candidate instead of the party—the power to decide which candidates have a chance to win the elections is, all other factors being constant, given to the voter.

Vote pooling means whether a vote for a candidate also contributes to the total number of seats the party wins in a district. This can be done in three ways. First, that even when preferential voting exists votes are pooled first at the party level and then redistributed to the candidates. Second, that pooling is done at the sub-party level, i.e. across factions. And, third, that there is no pooling at all; in other words, votes count directly to the candidate's pool of votes. Finally, *types of votes* classifies electoral systems according to whether they allow voters to cast a single vote for a party, multiple votes, or to cast a single vote for a candidate. Systems with the possibility to cast multiple votes include those that use primary elections and then

general elections, the PR-single transferable vote (PR-STV), and the open-ballot with panachage, which allows voting for candidates from multiple party lists (Gallagher & Mitchell, 2005a, p. 590).[17]

Electoral systems are usually classified into plurality and PR (Cox, 1997; Farrell, 2011; Sartori, 1997; Taagepera & Shugart, 1989). That classification is useful in comparative analyses—typically of different countries—where the researcher can study the variation in the interparty effects of the formulas used to convert votes into seats. Plurality rule, also known as *first-past-the-post*, uses single-member districts (SMD), and the formula employed to convert votes is very simple: the candidate who gets 50 per cent plus 1 of the votes wins a seat. By contrast, PR systems use different mathematical formulas to allocate seats in multi-member electoral districts in proportion with the votes each party obtains (Farrell, 2011; Gallagher & Mitchell, 2005a). However, in terms of the intraparty effects they produce, the classification of electoral rules usually distinguishes between systems where votes are cast for parties and systems where votes are given to candidates. The first refers to closed-list systems while the second includes a broader variety of electoral rules, from plurality to different varieties of list systems under PR (Shugart, 2005).

The present study focuses primarily on the closed-list PR (CLPR) and the open-list PR (OLPR) systems.[18] Because of their design, these systems represent extreme opposites in terms of the incentives they produce for legislators to adopt personal vote-seeking strategies. In CLPR systems, voters "have absolutely no input" (Gallagher & Mitchell, 2005a, p. 589); the integration and the order of party lists are determined during the candidate selection process before the election takes place. In OLPR, voters can indicate their preference for candidates within lists, determining candidates' access to the ballot. In contrast to what happens in CLPR, in OLPR the order of candidates in the party list is not ranked, giving to virtually all candidates the same probability of being elected. In OLPR contexts, votes for candidates are pooled at the party level and seats are allocated depending on the relative number of votes that each candidate obtains.

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[17] As explained by Gallagher and Mitchell (2005a), "[u]nder the PR-STV the voter has, as the name suggests, just one vote, but when casting is given the opportunity to rank the candidates in order of choice" (p. 593).

[18] One of the main differences of PR systems compared to the plurality rule system is that district magnitude is larger than 1; that is, they allow for multi-member constituencies. Polities that use the plurality rule imply single-member constituencies.

In the literature there seems to exist a consensus that CLPR increases party reputations, and that systems where votes are cast for candidates can be correlated with higher personal reputation activity among legislators (e.g. Carey, 1996; 2009; Carey & Shugart, 1995; Katz, 1980; Shugart, 2005). A large amount of the research is based on analyses of the American legislature and its electoral system, the plurality rule, where candidates compete in single member constituencies and the winner is the one who gets the majority of votes (Bowler, Donovan & van Heerde, 2005). For example, the works by Mayhew (1974) and Fenno (1978) have become classics of parliamentary and electoral systems studies. Both scholars agree that the incentive of re-election combined with the nature of the plurality rule system in the United States generates constituency-oriented legislators, with consequences for party strength.[19]

OLPR can be considered a system that generates strong incentives to look for personal votes instead of party votes. Regarding the Brazilian experience using open-list PR, in the early 1990s Mainwaring wrote: "the effects of the electoral system begin with the campaign but go far beyond it. Once elected, representatives can act independently of party programs with almost no chance of sanctions" (1991, pp. 27-28). Finland is another country that uses OLPR, exhibiting similar consequences to the case of Brazil in terms of the effects of the personal vote-seeking behaviour of legislators, which can be maintained even to the detriment of party reputations (Raunio, 2005).

Nevertheless, other evidence contradicts the potential of analyses of electoral systems to predict the behaviour of legislators. The United Kingdom uses a plurality rule system for the election of members of parliament (MPs) of the House of Commons similar to the US electoral system. However, British MPs are more inclined to follow the party line and are less constituency-oriented than their American counterparts (Cain et al., 1987; Cox, 1987). India is another country that uses the plurality rule. There is evidence that in this country legislators, even when they have the chance to build their personal reputations and compete for personal votes, emphasize the reputations of their parties when seeking re-election (Keefer & Khemani, 2009). Contradicting evidence is also found in PR systems. Brazil itself in

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[19] A more fragmented party representation within Congress and lower levels of support for the executive's decisions when these imply costs for their constituencies are among the consequences for which the plurality rule system is criticized in the United States (Cain, Ferejohn & Fiorina, 1987; Cox & McCubbins, 2007; McGillivray, 2004).

recent years shows that, in spite of the adoption of the OLPR system, legislators sometimes choose to attach greater weight to their parties' reputations than to their personal reputations (Hagopian, Gervasoni & Moraes, 2009; Lyne, 2008; Samuels, 1999). Costa Rica is a country that uses CLPR and its constitution does not allow for the immediate re-election of deputies. Theoretically, under these circumstances, legislators should find little incentive to build personal reputations, in particular by bringing particularistic benefits to their constituencies. However, Carey (1996) has found that in fact legislators in Costa Rica seek, through particularistic means, to gain votes for their parties. Thus, they use personal-vote seeking attributes to attract votes for their parties.

Despite the contradictory evidence, a number of scholars have put forward alternative explanations to the puzzle of the personal/party vote-seeking behaviour of legislators. Carey (1996), based on his analysis of Costa Rican deputies, believes that legislators have incentives for pork-barrel politics other than simply staying in office for another term. For instance, the possibility of attaining a top hierarchical position in the public sector, for example as a minister or ambassador, motivates legislators to seek votes for their parties. In a similar vein, the internal party organization can be determining in creating different career incentives for legislators, who weigh up which strategies will provide them with the most revenue, taking into consideration their own political and economic resources and those controlled by the party leaders (Carey, 1996; Samuels, 1999).

Similarly, Strøm (1997) argues that there are several types of institutional incentives which help to orientate the legislator's work, be it in a direction that privileges her constituency, interest groups she is connected with, or her party. He suggests that in addition to access to the ballot and re-election, other institutions constrain legislators' behaviour, especially their parties' rules and structures and the parliament's rules and structures. From this point of view, studies analysing the behaviour of legislators tend to neglect these other variables, which sometimes have a stronger explanatory potential than electoral systems in and of themselves. Strøm (1997) also questions the assumption that re-election is the most important factor influencing legislators' work in parliament. According to him, parliamentarians have career advancement incentives within their own parties, parliaments, and in the government's institutions.

Strøm's (1997) theory departs from the observation highlighted by others (he cites the work by Searing, 1994) that deputies assume several roles in their parliamentary work, but some specialize in certain areas, e.g. as constituency servers, party leaders and parliamentary leaders. This pattern is observable in most political systems, in spite of their differing electoral rules. This can be seen in the case of the United Kingdom (studied by Searing, 1994) and in Honduras. In this, Taylor-Robinson (2010) classifies Honduran parliamentarians according to three roles: congress advocates, party deputies, and constituency servers. The congress advocate role is "based on a preference to build the Congress as an institution, increasing both congressional independence from the executive and backbenchers' independence from party leaders" (p. 132). From her point of view, party deputies are those who "construct their role around two elements: their party's goal to win the presidency so it will control the state's patronage resources, and the Congress's oversight duty" (p. 135). Finally, constituency servers work as parliamentarians securing goods for their constituencies and helping individuals.

Additionally, party and parliamentary institutions other than the electoral systems and sometimes in combination with them seem to affect the behaviour of legislators. For example, party regulation in Brazil facilitates party switching. Desposato (2006) finds evidence that suggests that for Brazilian legislators, the characteristics of their constituencies and differences in the incentives provided by political parties is a key factor that legislators take into consideration when deciding which party they will switch to. Other studies focus on the incentives provided within the parliamentary structure; for instance, committee assignments and pork-resources within parliament (Cox & McCubbins, 2007; Martin, 2012). Furthermore, other political institutions, such as the constitutional structure, i.e. parliamentary or presidential, and federalism, can also impact the behaviour of legislators (Carey, 2007; 2009).

In addition to these institutional incentives, other scholars stress the influence of the individual characteristics of legislators. Factors such as experience, education, and seniority within parliament can be predictors of the personal vote-seeking behaviour of legislators. For example, more influential legislators, such as senior politicians with past experience as legislators or party leaders, might have easier access to pork-barrel resources (Golden & Picci, 2008). The capability of legislative candidates to finance their campaigns is another variable that could explain the

personal or party vote-seeking behaviour of legislators. Incumbent legislators who do not have enough personal financial resources to pay for their campaigns might feel obliged to align their re-election strategies with those of their parties (Samuels, 1999).

2.3.2 District magnitude

Much of the discussion regarding the potential intraparty effects electoral systems create has focused on the incentives for intraparty competition resulting from the interaction between type of ballot and district magnitude (M) as theorized by Carey and Shugart (1995). Systems where party leaders do not control candidate selection, such as in OLPR, will motivate candidates to differentiate their electoral pledges from those of their co-partisans. On this basis, candidates would have greater incentive to attract personal votes instead of party votes. The incentives to seek personal votes are higher as M increases, because there are more candidates to compete against; the effect is the opposite when party leaders control the candidate nominations, namely under CLPR. In this case, Carey and Shugart (1995) argue that candidates have more chances to be individually identified by voters in small constituencies, which means they have more incentives to look for a personal vote. Incumbent legislators can use the resources available to them to compete for votes under different electoral systems frameworks, for example, through pork-barrel strategies. This interaction between M and type of ballot is depicted in Figure 2.2 below.
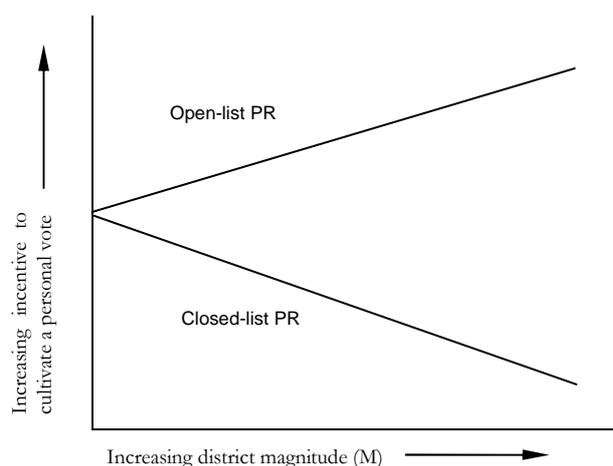
Figure 2.2. The differential effect of district magnitude on the intraparty dimension
Source: Shugart (2005, p. 47).

Empirically, there is some evidence that supports the arguments put forward by Carey and Shugart (1995). Shugart, Valdini and Suominen (2005), doing a cross-sectional comparison of six European countries, find that electoral systems affect

voters' behaviour in their demand for information about candidates' attributes.[20] According to the authors, where voters' demand for information cues is high, legislators will be more likely to exhibit their local personal attributes. The demand for information is related to the type of electoral system in place. Under open-ballot systems as district magnitude increases, the voters' demand for information cues will increase and candidates will tend to appeal to their personal attributes, such as their community work or birthplace backgrounds. The same is expected to occur when district magnitude is low under closed-list systems.

Similarly, Crisp et al. (2004), doing a cross-national study of six Latin American presidential democracies,[21] find a statistically significant relationship in the interaction effect between the type of ballot and district magnitude and the type of bills legislators introduce. Basically, in countries where the electoral system encourages legislators to seek personal votes bills with local characteristics are presented more often than national-scope bills. Their findings are sensitive to the interaction of types of ballot and different district magnitudes.

Chang and Golden (2007) use cross-sectional data on the perception of corruption and sub-national data on infrastructure contracts in Italy (e.g. construction of airports and roads) during the period OLPR was used as proxies of personal vote-seeking behaviour. They find that countries that use CLPR show lower levels of perception of corruption in expert/elite surveys as M decreases. Conversely, OLPR is correlated with higher perceptions of corruption as M tends to increase.

André and Depauw (2012) collected data from parliamentarian surveys across 15 European democracies. Focusing their attention on members of national and regional parliaments, they conducted a cross-sectional analysis using as a dependent variable the number of hours MPs spent in their constituencies doing constituency service activities. They classified the countries in their sample according to whether they used a closed list or some form of preferential list, such as OLPR in Austria and PR-STV in Ireland. They found evidence that indicates, as hypothesized by Carey and Shugart (1995), that the number of hours MPs dedicate to their constituencies can be related to the interaction between the type of ballot and the district

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[20] Their sample of countries is: Finland, Luxemburg, Norway, Portugal, Spain, and Switzerland.
[21] The countries included in their study are: Argentina, Chile, Colombia, Costa Rica, Honduras, and Venezuela.

magnitude. In other words, their evidence suggests that in CLPR countries, the larger the district magnitude the smaller the amount of time MPs give to constituency service, and that in countries that use preferential voting systems, as M grows so too does the number of hours legislators dedicate to this activity.

These previous studies represent significant attempts to quantitatively assess the empirical implications of Carey and Shugart's (1995) theory. Nevertheless, they all have in common their use of cross-sectional analysis as research design to test that theory. This methodology generates divisions within the scholarly community. As Grofman and Fraenkel (2008) claim, much of the scepticism comes from the potential explanation of different factors that challenge the electoral systems' explanations and the bias introduced in cross-national studies. Positive correlations between certain types of electoral systems with different proxies of legislators' behaviour can sometimes be interpreted as a form of "selection bias connected to variations in cultural patterns and economic development that cannot be fully addressed with only cross-sectional data" (Grofman & Fraenkel, 2008. pp. 75-76).

Furthermore, Carey and Shugart's (1995) proposal has been challenged on theoretical grounds. Crisp, Jensen and Shomer (2007) contend that in Carey and Shugart's model, M compounds both the competition between candidates from different parties for a seat and the intraparty competition. Thus, for Crisp, Jensen and Shomer (2007) the incentives to build a personal reputation and look for a personal vote are lost when using M as an indicator of intraparty competition. In this regard, they argue that challengers and incumbent candidates from the same party do not necessarily take into consideration the number of seats available when deciding whether they should choose a personal vote or a party vote strategy. Instead, they might consider other factors such as the number of seats their party is likely to win based on each party's past electoral experience.

Siavelis and Morgenstern (2008b) agree with Carey and Shugart (1995) that the value of personal reputation in CLPR systems is higher when M is very low. And as M increases, the personal attributes of legislators lose importance. However, they differ in two regards from Carey and Shugart's (1995) model. First, they criticize Carey and Shugart's emphasis on the personal vote-seeking incentive, which should become higher as the election approaches. In this regard, Siavelis and Morgenstern (2008b) try to focus on how legislators behave between electoral terms, which is how

they create constituent loyalty. Secondly, they claim that in OLPR systems the value of personal vote-seeking behaviour increases as M grows:

> With open-list systems, however, we diverge from Carey and Shugart's logic and argue that as magnitude increases, the value of personal reputation in the election may increase as they contend, but the incentive to cultivate the loyalty of constituents for the long term actually decreases. Parties become almost irrelevant in large magnitude open-list systems, because of low thresholds to victory and the decreased importance of a party label (p. 13).

Ashworth and Bueno de Mesquita (2006) state that in single-member districts legislators are easily identified as the providers of projects for their constituencies. However, in multi-member districts each legislator can receive a share of credit for the local goods provided in the constituency through the facilitation of projects by other co-partisans, "creating an incentive to free-ride" (p. 176). In addition, it has been noted in the literature that the variation in M is correlated with population. Furthermore, in most PR systems there is an endogenous relationship between district magnitude and the level of urbanization. Large M districts tend to have denser urban populations. Monroe and Rose (2002) believe that that variation district magnitude has an enormous impact on the representation of urban and rural interests in congress. According to their theory, given the covariance effect between M and urban and rural interests, the effect of M on representation within parliament will depend on the extent of the urban-rural differences in a given country, the institutional environment and how much these two co-vary. In other words, rural populations will tend to be over-represented by what Monroe and Rose (2002) call rural parties. This effect has been to a certain extent corroborated by Calvo and Murillo (2004) in their analysis of the impact of the electoral system and the patronage behaviour of Argentine deputies.

Carey and Hix (2011) point out in a similar vein that the expected outcomes of electoral systems are only substantiated when district magnitude tends to be low (around six seats, they claim). This conjecture applies not only to the interparty effects of district magnitude that have caught much of the attention of electoral systems scholars (for a discussion see Cox, 1997), but also to the so-called intraparty effects. Electoral systems are sometimes designed to stress accountability, and other times they are tailored to generate more representativeness. Carey and Hix (2011) argue that the way in which a system accentuates one aspect or point on that continuum to the detriment of another is through district magnitude, provided that it

is low. Systems that reach a threshold of around six seats tend to reinforce the representativeness of the party as a whole, whereas lower district magnitudes tend to enforce the accountability of legislators to voters.

Drawing from Latin American case studies and a deductive analysis of electoral and other formal political rules, Siavelis and Morgenstern (2008b) build a typology of different types of legislator behaviour. Once again, district magnitude and the type of ballot are placed at the epicentre of the range of potential behaviour of legislators. According to their theory, the electoral system type (with other institutional variables) can produce four different types of legislators: (1) constituent servant, (2) party loyalist, (3) entrepreneur, and (4) group delegate. For them, from a rough analysis, *constituent servants* are more likely to be found in districts that range from one to three seats. *Party loyalists* will be concentrated in constituencies where there are four or more legislators, particularly when closed-list ballot structures are being used. *Entrepreneur* legislators are to be found in constituencies where M is equal to or greater than seven. *Group delegate* legislators are those who are accountable mainly to interest groups. For Siavelis and Morgenstern (2008b), the influence of M is indeterminate in the formation of this type of legislator.

2.3.3 Alternative explanations of personal vote-seeking behaviour

There is scepticism about rational choice explanations of legislators' behaviour, particularly in regard to the explanatory extent of electoral systems theories. In general, rational choice institutionalism is often criticized for ignoring other aspects of social interaction related to human psychology (Smith, 1991), culture, history, and geographic differences (Inglehart & Carballo, 1997; Weyland, 2002).

Moreover, the study of electoral systems is sometimes plagued with methodological problems. For example, as discussed in section 2.3.2, in some PR systems district magnitude is very likely to be correlated with factors such as the size of the population, patterns of socioeconomic development, and urbanization. In the electoral studies literature, scholars have long argued about whether electoral systems shape societies or instead the former are the result of factors inherent to each society (Benoit, 2004; Colomer, 2004). For instance, the PR-STV electoral system used in Ireland is often accused of creating parliamentarians inclined toward particularism, sometimes to the detriment of national policies. However, some argue that localism

is an aspect rooted in Irish political culture, something that is not necessarily related to the electoral system (Gallagher, 1980; 2005b).

For Keefer and Vlaicu (2008), the difference between pork-barrel politics and clientelism lies in the amount of work legislators dedicate to pork and other related activities, such as casework. They consider that in clientelistic countries, which are typically developing countries, legislators tend to devote most of their time to activities such as pork. The allegedly clientelistic behaviour of parliamentarians in these contexts could be related to personal vote seeking or to an adaptation process in which legislators and parties adopt strategies to attract the average voter in their respective constituencies.

2.3.4 Concluding remarks on the literature on personal vote-seeking behaviour

In this chapter I have reviewed some of the most cited contributions on electoral systems and the personal vote-seeking behaviour of legislators. Despite the close relationship between these two variables, highlighted by Carey and Shugart's (1995) seminal paper, very often researchers focus on one or the other but do not study that relationship. This is probably because some of the most important theories on the personal vote have been developed based on the experiences of US Congress representatives, who are elected using the first-past-the-post system. For example, while there is abundant work on pork-barrel politics in the US, very little is known about what happens in other systems, particularly proportional representation systems (Denmark, 2000; Golden & Picci, 2008).

Moreover, many important debates remain open, like the discussion initiated by Cox and McCubbins (1986), and furthered by Lindbeck and Weibull (1987) and others (e.g. Dixit & Londregan, 1996; McGillivray, 2004), on who gets pork benefits, core supporters or swing voters. In particular, we know very little about the causal chain in PR systems between legislators, parties, and particularistic outcomes. On the one hand, Cox and McCubbins (2001) argue that in candidate-centred electoral systems, particularism will predominate. On the other hand, others expect that, even in candidate-centred systems, activities such as pork-barrel politics will decrease in importance as district magnitude increases, given the difficulty in claiming credit when there are multiple competitors from the same party (Ashworth & Bueno de Mesquita, 2006; Lancaster, 1986).

Much of the academic discussion about the influence of electoral systems on legislators' behaviour has gravitated around Carey and Shugart's (1995) theory, in particular their predictions about the consequences of the combination of different types of ballots and candidate selection procedures with district magnitude.[22] Their solely theoretical contribution has faced challenges on its empirical testing. As previously explained, cross-national studies cannot account for many idiosyncratic aspects of individual countries, like political culture, and case studies often hold the electoral system constant, leading to incomplete and necessarily biased inferences. In addition, case studies often necessarily hold constant key independent variables. Carey and Shugart's (1995) model provides a rather intuitive and parsimonious explanation of the personal vote-seeking behaviour of candidates. However, given the contended aspects of their theory, highlighted by among others Crisp, Jensen and Shomer (2007), Grofman (1999), and Siavelis and Morgenstern (2008a), I believe that there is an issue that has received very little attention, namely that the behavioural strategies legislators choose vary according to the type of electoral system in use. In the remainder of this chapter, I develop an argument on how electoral systems can interact with legislators' personal attributes in an effort to explain the choice of strategies to seek personal votes.

2.4 Main argument

One of the main goals of the present work is to test Carey and Shugart's (1995) theory, controlling for different aspects that normally are difficult to account for in cross-national large-N, small-N analyses and case studies. However, by measuring the impact of electoral systems on legislators' behaviour, what are being measured more precisely are the outcomes of the legislators' work. In the discussion section of their article, Carey and Shugart (1995) mention some of the potential proxies for gauging legislators' behaviour, such as roll-calls, amendments to bills, and the internal organization of legislatures. In terms of public policy, they expect that "more attention by legislators to personal reputation would generally lead to more 'pork' in a country's budgets (…). Where, on the other hand, party reputation matters more, policymaking should be more 'efficient' (…) in the sense that voters vote on the

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[22] In some countries the ballot structure and candidate selection are combined in a single legal framework, for example, the electoral law. This is the case in Honduras. There are other cases where the norm for selecting candidates is entirely dependent on the party (e.g. Crisp et al., 2004).

basis of broad policy options rather than on the basis of promised particularistic benefits" (p. 433).

I argue that a legislator's choice of targetable or non-targetable personal vote-seeking strategies depends on the district magnitude, the type of ballot, the principals, and the legislator's personal attributes. My argument is similar to the one developed by other scholars who have studied cross-nationally the effects of electoral systems on economic policy outcomes. In this regard, these analyses generally focus on the simple dichotomy between plurality and PR. It is usually argued that the PR system is associated with allocation of public goods whose benefits reach voters across constituency boundaries, while in the plurality system there is a greater tendency towards the provision of targetable goods such as pork within the constituency boundaries. As a consequence, some expect PR systems to be correlated with outcomes such as welfare states, fiscal deficits, and a greater propensity for corruption than in plurality systems—given that there is more incentive for accountability from legislators to voters in the latter system (Austen-Smith, 2000; Gassner, Ugarte & Verardi, 2006; Iversen & Soskice, 2006; Milesi-Ferretti, Perotti & Rostagno, 2002; Persson & Tabellini, 2000; Persson & Tabellini, 2003). For example, in the monographic work by Chang et al. (2011), the authors expect to find that plurality systems create closer legislator-voter bonds that favour voters who demand politicians institute policies that help to keep the market prices of goods and services low. In contrast, for these scholars, PR generates quite indeterminate connections between principals and agents that sometimes favour the business elites as interest groups who finance the campaigns of incumbent legislators:

> plurality systems—or those plurality systems in which leading parties divide the vote not too unequally—will be systematically more pro-consumer in their policies and will have significantly lower prices. Proportional representation (PR) systems, on the other hand, which by design do not greatly distort vote shares when converting them into seat shares, will be systematically more pro-producer in their policies and will have significantly higher prices (Chang et al., 2011, p. 25).

Because there is inner variation in terms of district magnitude in countries that use PR, which is to say that small-M districts are less proportional than large-M districts (Lijphart, 1990, pp. 486−488), one could expect to find that the closer a constituency is to single-member seats, the stronger the legislator-voter bond. This situation generates more incentives for legislators to provide local public goods. In contrast, as M increases, the importance of pork decreases, the strength of interest

groups rises and so too does the possibility of legislators adopting non-targetable strategies. It has already been noted that pork tends to be more important in small-M constituencies in CLPR systems (Ashworth & Bueno de Mesquita, 2006; Lancaster, 1986; Lancaster & Patterson, 1990). However, whether the effect is the same in OLPR systems is subject to debate (Carey & Shugart, 1995, p. 430). I argue that in OLPR systems pork is still most important in small-M constituencies, given the stronger legislator-voter connection. Considering that as M gets larger is more difficult to claim credit for individual projects, legislators probably need to increase their personal reputations by other means. As I will explain in detail in the remainder of this section, some legislators provide favours to interest groups in exchange for campaign finance. This is of particular importance in situations where there are diffused groups of policy-oriented voters. Therefore, interest groups and policy-oriented voters are two sets of principals to which individual legislators might need to be accountable. Under these conditions, the decision of a legislator to favour specific sets of principals varies according to their personal attributes. For instance, a legislator who has been a local leader in the past will probably use that attribute to attract local votes, whereas a legislator whose background is as a widely recognized public figure will probably be more inclined towards broad policy-making.

One could argue that the variation in particularism is not necessarily related to the type of institution, but to endogenous factors in constituencies. In other words, small-M districts are usually associated with low levels of development, which in turn translates into poverty, rural populations, and high illiteracy rates. These populations' demands tend to be focused on pork, clientelism, and patronage (Taylor-Robinson, 2010). In contrast, higher development is associated with more ideological and party-oriented electorates, as well as with business elites. However, if electoral systems matter as in the ways outlined in the paragraph above, one should be able to observe an increase across district magnitudes in different forms of particularism in OLPR systems in comparison with CLPR. Moreover, non-targetable strategies should decrease in OLPR, particularly in constituencies where these activities are more important.

2.4.1 Electoral systems, principal–agent relations, and legislators' behavioural strategies

Carey (2007; 2009) and Hix (2002; 2004) suggest that apart from voters, legislators must also pay heed to those who nominate them and to those who control key

resources. For both scholars, the identification of the main principal varies depending on the electoral system and the method of selection of candidates under which legislators are elected.[23] For example, Carey (2009, p. 17) argues that in presidential democracies, when legislators are elected using electoral systems such as CLPR, legislators are accountable to party leaders, who control their nomination, but because the president controls public resources, they also have incentives to be accountable to that actor. Similarly, Hix (2004) notes that whether members of the European Parliament (MEPs) are accountable to their national parties or to their European Parliament group depends on the method of selection of the candidate and the district magnitude where she was elected. In either case, independently from the form of government and the electoral system, for Carey (2009, p. 16), parties are accountable to voters because voters through their vote can reward or punish the party for its overall performance. Hence one can argue that, depending on the type of voters, party leaders will demand that legislators focus on particularistic goods or public goods. Under proportional representation systems if, as expected, voters in small-M constituencies are more constituency-oriented and the demands become more heterogeneous as district magnitude increases, one could also expect that public goods will be more important the larger the district magnitude.

From a different viewpoint, Denzau and Munger (1986) explain that legislators face two competing principals: (1) the interest group that cannot vote but which is organized and able to financially contribute to the vote-producing campaigns of legislators, and (2) the voters, who are unorganized, assumed not to contribute to the campaigns of legislators but, at the same time, can decide the re-election future of these agents through their votes. For these scholars, in a single-member district (SMD) setting, interest groups have an opportunity to influence the policy choices of legislators when voters in a constituency are indifferent to the policy positions of the interest group. In consequence, unorganized voters who manifest specific preferences about policies will have their interests represented over those of the interest groups.

Bawn and Thies (2003) build on Denzau and Munger's (1986) argument but comparing plurality, CLPR, and mixed-member electoral systems settings. They put

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[23] In some countries the method of selection of candidates is institutionalized as part of its general electoral rules, while in others it is a feature that varies within each political party (Gallagher, 1988b).

forward a set of theoretical expectations of how legislators represent the unorganized interests of voters compared with those of organized interest groups. Regarding plurality (i.e. SMD) and CLPR, they expect that legislators will be more likely to favour interest groups in CLPR than in SMD settings. They believe so first because the efforts of legislators on behalf of constituents will convert into votes only in SMD, and in large constituencies voters tend to be ideologically heterogenous. Second, the efforts of a legislator for an unpopular interest—e.g. advocating for the tobacco industry—will disadvantage her most if she is elected under plurality because the costs of such actions are not shared among co-partisans. Third, parties will reward with nominations those legislators who bring more vote shares to the party. Because legislators are more committed to voters than to interest groups in the SMD, they have an extra incentive to support voters if they believe that by doing so can get endorsement for their party leaders. Fourth, "[t]he constraint of matching candidates to districts is absent under PR, leaving parties free to respond to the preferences of their favoured interest groups as to the ordering of the party list" (p. 15). And, fifth, candidates can more easily increase their reputation for how good they are at getting resources for their constituents in SMD; thus, they have less incentive to drive their strategy based on ideology, for which they would probably need campaign financing.

Therefore, legislators are concerned not only with institutionalized principals—e.g. party leaders, voters, and other actors like presidents or prime ministers. Interest groups are a potential principal, particularly in places where voters are more concerned about policy and ideology than particularism, and under proportional representation rather than plurality rule. This means that interest groups are more likely to be favoured by legislators in larger magnitude districts. In Bawn and Thies' (2003) theory, it is not clear what can be expected from the relationship between legislators and interest groups under OLPR.[24] I maintain that under this electoral system the importance legislators give to interest groups should increase even more with district magnitude, considering that in this case intraparty competition increases and that could cause the costs of electoral campaign to rise. Thus, legislators might seek funding from interest groups to finance the costs of their electoral campaigns.

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[24] Specifically, they say "[w]e believe that our model could be used to understand the incentives that other electoral rules (e.g. open-list PR-STV) generate as well" (Bawn & Thies, 2003, p.25).

Figure 2.3 depicts the expected interaction effects between electoral systems and the personal vote-seeking strategies chosen by legislators. I expect that, independently of the electoral system being used, non-targetable public goods and the representation of interest groups will be more important the larger the district magnitude. Nevertheless, in OLPR the importance legislators give to interest groups increases in comparison to CLPR, while legislators will be less likely to appeal to public goods in OLPR than in CLPR. Similarly, regardless of the electoral system, constituency service should be more important the smaller the district magnitude. Nevertheless, we should observe an increase in the importance attached to constituency service in larger district magnitude constituencies under an OLPR system.
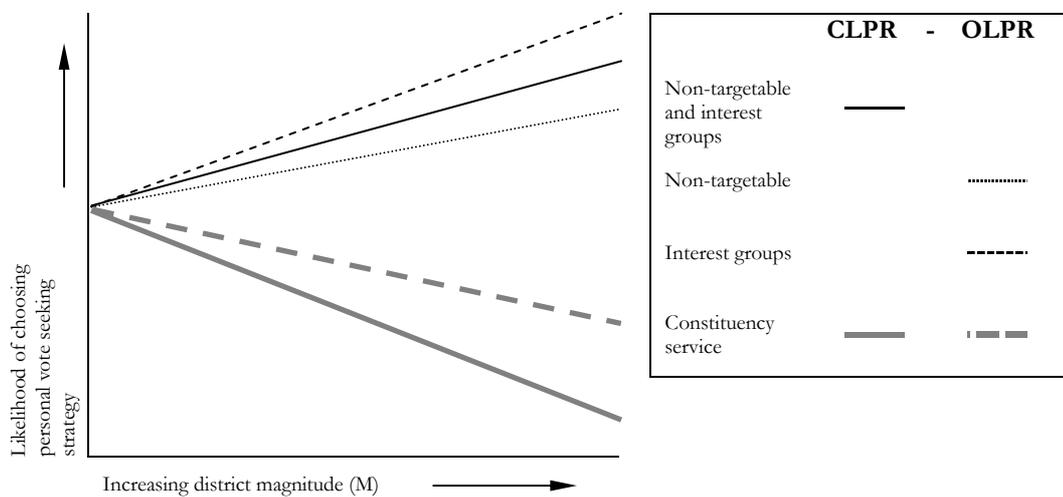
Figure 2.3. Theorized interactions between type of ballot and district magnitude on the choice of personal vote-seeking strategy. The black solid line indicates that under CLPR, non-targetable behavioural strategies and the representation of interest groups are virtually the same; thus, as district magnitude increases, so too does the likelihood that legislators will favour public goods and interest groups. In OLPR, the opposite can be expected, in other words, that non-targetable strategies will decrease at the same time that strategies for the representation of interest groups will increase. Activities under the label of constituency service in CLPR—indicated by the thick solid grey line—will be more important as M gets smaller. In OLPR their importance will increase in all constituencies regardless of the size of M, but constituency service will still be more important the smaller the district magnitude.

2.4.2 Legislators' personal attributes

In Figure 2.3 we observed that public goods should not stop being provided in OLPR even when they are reduced (unlike in CLPR systems), and constituency service should increase in larger-M constituencies, even though it is difficult for several legislators in a constituency to claim credit for the same projects—if pork is the strategy chosen. This raises a number of questions. What makes a legislator

choose a strategy such as pork when the benefits are potentially only marginal in comparison with the alternatives in OLPR? Similarly, which legislators pick public goods rather than constituency service or the representation of interest groups in both types of system? I believe that the answers to those questions depend *ceteris paribus* on the personal attributes of legislators.

In a CLPR context, as argued by Bawn and Thies (2003), party leaders will be concerned with increasing the vote advantage of the party. In this sense, it is more likely that they will privilege legislators with local backgrounds in small magnitude constituencies. In medium and large magnitude districts, legislators who want to secure a safe seat on the list must prove that they can secure a sufficient share of the votes to help the party win as many seats as possible. Some legislators can contribute directly by literally "buying" their seat with contributions for the party. Other legislators with good connections can seek support from interest groups. Some others can contribute by enlisting the participation of functional organizations of activists that help the party identifying potential sets of voters in the constituency. Finally, a different group of legislators is those whose personal reputations can be useful in helping the party get votes, for instance, media celebrities.

Under OLPR it is expected that the importance of the personal attributes of legislators outweighs that of the party and institutional features. In this regard, while I expect district magnitude to be correlated with some legislators' features in closed-list PR systems—for example, their professional background—I do not expect the same in the open-list PR systems, or at least that its influence should be minor. The existing theory is relatively limited in terms of describing what kind of personal and party attributes legislators use in order to look for votes in candidate-centred systems. Ames (1995) considers that when the OLPR is used, the career success of their predecessors is an aspect that affects the behaviour of legislators. Legislative candidates with a local background, such as former mayors and community leaders, will concentrate their efforts on attracting local votes. In the case of non-local candidates, his theory predicts that given the scattered distribution of voters for these candidates, they will need to look for new voters in concentrated districts. He contends that legislators who once occupied high rank positions in the public sector, such as ministers or bureaucrats, have incentives to use their personal reputation as former pork-barrel providers to attract personal votes. Regarding the professional backgrounds of legislators, Ames (1995) also looks at the case of business candidates:

The electoral support of business candidates is more fickle than the support enjoyed by local politicians. Better offers sway bosses loyal to the highest bidder. Thus businessmen face contradictory incentives. While opportunities are clearly better for candidates unconstrained by local careers, businessmen can lose support as quickly as they gain it (Ames, 1995, p. 417).

In addition to professional background, it is important to also take into consideration those personal attributes of legislators that are common among candidates in large magnitude constituencies. For example, Honduras has seen an increase in the number of public figures such as footballers and people related to the media running as candidates since OLPR was adopted.[25] Some of these candidates are placed on the ballot by party factions while others choose to run on their own initiative. However, once in office, these deputies will need to build a reputation based on more than their previous careers if they are to seek re-election. I believe that because of their public figure status, they have more reasons to be deemed accountable to the whole country, and will therefore seek to provide public goods rather than targetable local and private goods.

2.5 Summary of the main argument

To sum up, I argue that under CLPR incumbent legislators and parties will focus more on the provision of local goods as M gets smaller, and on the provision of more private and non-targetable goods as M increases. Legislators will be more likely focus on pork-barrelling when they are elected through OLPR rather than CLPR; however, that does not mean that they stop providing non-targetable public goods. As M increases, some deputies will seek to differentiate themselves from their co-partisans by providing non-targetable public goods. In addition, due to the fact that within an OLPR system, legislators need to reach broader publics in larger district magnitude constituencies, they will probably appeal to interest groups in order to finance their political campaigns. Once in office, they will be more likely to produce private goods for the groups that provided contributions during the electoral

[25] In Appendix 6.1 to Chapter 6 I show statistics that come from the series of elite surveys conducted by the University of Salamanca. There it is observed that during the surveys conducted in 1998 and 2002—i.e. when legislators were elected under CLPR—only one surveyed legislator reported having a profession related to the media. In contrast, in the two rounds of surveys carried out on Honduran legislatures elected using OLPR, 12 legislators reported they had a background related to the media, entertainment or football. More recently, the Honduran press has covered this new phenomenon, especially in advance of the primaries held in November 2009 when factions of both the PLH and the PNH tried to ensure the inclusion of recognized journalists, entertainers and footballers among their legislative candidates (*El Heraldo*, 2012a; 2012b; *La Prensa*, 2012a; *La Tribuna*, 2012).

campaigns. Finally, under OLPR, what determines whether legislators will focus on the provision of local public goods or non-targetable public goods in large-M constituencies is their own personal attributes. Legislators who are recognizable by broad sections of the public will be more likely to provide non-targetable public goods; whereas those who have a more local background will focus on their constituency service work.

2.6 Conclusions

In this chapter I have shown that much of the literature on the relationship between electoral systems and legislators' behaviour has tended to focus on the development of concepts for cross-national comparison. In this regard, some scholars have produced a number of theories aimed at improving our understanding of how countries with plurality rule differ in terms of public policy outcomes from countries that use PR. Another group of academics has focused on parliamentarians' personal vote-seeking behaviour, which they see as equivalent to pork-barrel. Moreover, in this latter group there are different approaches to the analysis of the role of principals on the behaviour of legislators. In this sense, one body of literature has focused on how interest groups shape the preferences of legislators, while other contributions analyse the role of principals from an institutional and party-oriented perspective, e.g. the influence of actors such as presidents, prime ministers, and party factions.

I believe that the arguments developed by most of these scholars have contributed significantly to our understanding of electoral systems on the behaviour of politicians. At the same time, the disconnection between the different approaches has led to confusion about how we should understand and measure the legislators' behaviour. I argue that one can apply the different logics present in the works of comparative political economy scholars, some who have focused on the politics side, and others of whom have an economics focus. While most of the contributions have concentrated on the variation electoral systems produce in a single outcome, e.g. pork-barrel, I focus my attention on how electoral systems can affect legislators' choices of different personal vote-seeking strategies, not only pork but also non-targetable public goods and private goods for interest groups.

Chapter 3

Research design

In Chapter 2, we noted that that there is a lack of understanding in relation to the actual effects, if any, of electoral systems on legislators' behaviour. That vacuum of empirical knowledge is due largely to the limitations inherent in the most common research designs used in the social sciences, which are based on large-N studies, small-N comparisons, and case studies. Because of this, several scholars believe that the best way to conduct an analysis of the impact of electoral rules is through the study of the consequences of electoral reforms (Giannetti & Grofman, 2011; Grofman & Fraenkel, 2008; Norris, 2004; Shugart, 2005). For example, Shugart (2005) argues that:

> In the case of electoral reform, the crucial experiment is that we can see in one country how electoral politics responds to changes in the electoral system. Thus we can hold constant numerous other factors that might confound the relationship being tested for when we are using observations from separate countries with distinct political histories, cultures, and so on. Of course, it is not a perfect control, as other factors—for example, demographic changes, or the rise or decline of issue cleavages—may have been the cause of the change in the electoral system in the first place. Nonetheless, electoral reform offers a more controlled environment than we normally confront (p. 34).

Studies such as the one I develop in the present work are often labelled as *natural experiments* or *quasi-experiments*, mostly because the source of variation in the explanatory variable occurs in the real world, outside of the control of the researcher. Nonetheless, as the number of peer-reviewed publications using so-called natural experiments increases, so too does the criticism of the sometimes significant shortcomings of this approach (Dunning, 2008; Robinson, McNulty & Krasno, 2009; Sekhon & Titiunik, 2012). The popularity of these research design approaches comes from the possibility for drawing causal inferences with more or less the same confidence that randomized experiments provide. However, there are different aspects that clearly differentiate these approaches from randomized experiments. Overall, as suggested by Shugart (2005) above, studying institutional changes in more

or less controlled environments is sometimes the best means by which social scientists can find the necessary counterfactuals to test their theories.

As with other researchers who have studied the impact of electoral reforms, I follow the quasi-experiments approach. In the following section, I will discuss why I have chosen this methodology. I will also explain why I believe the case of Honduras offers many advantages over other case studies and competing large-N methodologies to conduct a test of the theory presented in Chapter 2. However, I acknowledge that it also has its disadvantages, and I will suggest alternative solutions for addressing them.

This chapter includes the following parts. In the first section I discuss the the research design in general. In section two, I describe the explanatory factors considered in the present study. In section three, I address possible endogeneity issues concerning the relationship between electoral systems and legislators' behaviour. In the next part, I suggest possible ways of dealing with the endogeneity problem. Section five discusses potential rival explanations for the legislators' behaviour. I conclude this chapter with a note regarding the methods that I employ in the empirical analysis part of this study.

3.1 Methodological strategy

For Przeworski and Teune (1970, pp. 20-23), causality is a key criterion in evaluating theories. For King, Keohane and Verba (1994, pp. 7-8), descriptive inference and causal inference are the goals of any scientific endeavour. The importance assigned to causality lies in the belief that the social sciences can and should follow the example of the natural sciences: "[s]ince the law of causality has been verified in other domains of nature and has progressively extended its authority from the physical and chemical world to the biological world, and from the latter to the psychological world, one may justifiably grant that it is likewise true for the social world." (Durkheim [1982], quoted in della Porta & Keating, 2008, p. 24).

Nevertheless, in contrast to the work of scientists in other fields, political scientists are often not in a position to conduct experiments, which are the most powerful tool that can be used to establish causal relationships. Considering these limitations, scholars rely on observational data, employing large-N, small-N, and in-depth case study methods (Lijphart, 1971). Each of these methods has its advantages and disadvantages. The large-N, or statistical method, is oriented towards the

derivation of generalizable inferences that transcend individual cases, especially when the datasets consist of observations for very large numbers of countries in different periods of time. The inconvenience of this approach is that by aiming for generality there is a substantial sacrifice in terms of the understanding of the complexities of each of the cases considered in the dataset (della Porta, 2008, p. 210).

In the case of small-N research designs, by comparing two or more cases researchers increase their capacity to make inferences, provided that they compare similar cases that differ in the key factors that are relevant for their theories (Przeworski & Teune, 1970). However, as Brady, Collier and Seawright (2004, pp. 245-247) point out, small-N comparisons can be placed somewhere in between large-N analyses and case studies. In this regard, they restrict the researcher's ability to make robust inferences in comparison with large-N statistical analyses. Moreover, researchers have to make methodological decisions in terms of how deep their analyses of the cases considered in their sample will be. The limitations inherent to conducting experimental designs in the social sciences, where results should have external validity—meaning that they can be observed outside laboratory conditions (Campbell & Stanley, 1966)—make necessary the adoption of observational research designs. However, the most common observational approaches—large-N and small-N comparisons and case studies—also have considerable limitations. Norris (2004) exemplifies those shortcomings. She studies, using a large-N methodological approach, the impact of electoral rules on political behaviour. In the conclusion to her book, she states:

> It should be recognized that in considering the evidence surrounding these issues the research design used in this book, and the comparative framework, remain limited in many important ways. In the best of all possible worlds, one would be able to examine time-series case studies to understand how the process of electoral engineering works in more depth, especially more before and after natural experiments with rule reform (2004, p. 261).

A *natural experiment* can be defined as a type of study where factors exogenous to the control of the researcher can potentially affect some phenomenon of interest. That process generates at the same time a "natural", possibly random selection of observations classifiable, using experiment terminology, into "control" and "treatment" groups or, in terms of longitudinal analyses, "pre-test" and "post-test" groups (Campbell & Stanley, 1966; Dunning, 2008; Robinson et al., 2009; Sekhon & Titiunik, 2012). In experimental designs, the researcher randomly selects a group that

will receive a "treatment" (i.e. a change in the key independent variable) and a control group that will not receive it, ruling out the potential for rival explanations. The researcher then compares how the group that received the treatment behaves in comparison with the group that did not. In contrast, natural experiments are actually observational studies because "analysts observe the values that the independent variables acquire through the unfolding of political and social processes" (Brady, Collier and Seawright, 2004, p. 230). In other words, researchers do not have control over the *ceteris paribus* conditions; all they can do is collect data as it is generated in the outside world. Given the restrictions imposed on researchers in non-controlled experiments, researchers should approach the process of conducting inferences with care because it is not possible to completely exclude the existence of rival hypotheses.

Defining what constitutes a natural experiment might be controversial. Several scholars share the view that policy changes and, in general, institutional reforms produce natural experiments (Ansolabehere, Gerber & Snyder, 2002; Giannetti & Grofman, 2011; Meyer, 1995). However, as I will later explain, these kinds of approaches often face problems of endogeneity—a situation in which the explanatory variable is affected by the dependent variable (King, Keohane & Verba, 1994, p. 185). Not all studies in which the source of variation in the independent variable is exogenous can be classified as natural experiments. A very similar research design is the quasi-experiment approach. Cook and Campbell (1979) define *quasi-experiments* as "experiments that have treatments, outcome measures [dependent variables], and experimental units [observations], but do not use random assignment to create the comparisons from which treatment-caused change is inferred" (p. 6). For Dunning (2012) the fact that quasi-experiments do not use randomization of control and treatment groups clearly differentiates them from natural experiments. In this regard, as he explains, the hallmark of natural experiment is that they generate random or *as-if* random assignments of subjects into control and treatment groups— e.g. by flipping a coin. Nevertheless, as he himself admits, in some circumstances, distinguishing what constitutes *as-if* random assignment is not a straightforward task:

> Without true randomization, however, asserting that assignment is as good as random may be much less plausible—in the absence of compelling quantitative and qualitative evidence to the contrary. Since as-if random assignment is the definitional feature of natural experiments, the onus is therefore on the researcher to make a very compelling case for this assertion… Ultimately, the assertion of as-if

random is only partially verifiable, and this is the bane of some natural experiments relative, for instance, to true experiments (Dunning, 2012, p. 28).

Although I argue that the case study of Honduras fits into the categorisation of a quasi-experimental study, it greatly resembles a natural experiment for two distinct reasons. First, the source of variation in the independent variable—the ballot type change—is motivated to a great extent by the impact of a hurricane that hit the country six years before the electoral reform. Second, because the mechanism of elections limits the possibilities of politicians self-selecting to benefit from the institutional reform. Nevertheless, as with other studies of its nature, the present study faces research design challenges. In the following two sections, I will explain what the change in the independent variable is, how the present study fits into the natural experiment research design category and the challenges imposed to this research design.

3.2 Explanatory variables

In this study I analyse the interaction between district magnitude and type of ballot as key explanatory factors of legislators' behaviour. As we observed in Figure 2.3 in Chapter 2, in order to asses the effect of that interaction, district magnitude must ideally be held constant while the type of ballot should be let vary. The case of Honduras meets those criteria. In terms of district magnitude, during the 1980s there were two changes. The first took place in 1985 when a legal reform increased the number of parliamentary seats from 82 to 134. In 1989, another reform decreased it from 134 to 128 seats. Since then the district magnitude has not been modified (see Table 3.1). Therefore, I picked the year 1990 as the starting point of the timeframe for this study, because in January of that year the first legislature elected under the district magnitude distribution of 1989 was inaugurated.

Table 3.1. District magnitude variation in Honduras in time and across departments

Department	Year of reform/number of seats		
	1981	1985	1989
Islas de la Bahía	1	1	1
Gracias a Dios	1	1	1
Ocotepeque	2	2	2
La Paz	2	**3**	**3**
Intibucá	2	**4**	3
(continued on following page)			

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Table 3.1

(continued from previous page)

Department	Year of reform/number of seats		
	1981	**1985**	**1989**
Colón	2	**4**	4
Valle	3	**4**	4
Olancho	4	**7**	7
Copán	4	**7**	7
Comayagua	4	**7**	7
Atlántida	4	**8**	8
Santa Bárbara	5	**9**	9
Lempira	5	5	5
El Paraíso	5	**7**	**6**
Yoro	6	**9**	9
Choluteca	7	**9**	9
Cortés	11	**22**	**20**
Francisco Morazán	14	**25**	**23**
Total	82	134	128

Note: The numbers in bold represent constituencies within which the number of seats was modified.

3.2.1 The closed-list PR system (elections 1989–2001)

Since Honduras started its transition to democracy in 1977 and until the elections of 2001, the method used to convert votes into legislative seats was closed-list proportional representation. During this period, political parties had to present a list of candidates for deputy positions. As a result, the candidate selection process within the political parties was very vertical and controlled by the party leadership, which was usually ruled by the strongest faction within the political party. The presidential candidate and the leaders of the political party chose the legislative candidates (Taylor, 1996, p. 331). Sometimes, when the leaders were not sure which members to include on the list to fill some of the positions in some constituencies, they would carry out polls in those constituencies to assess the popularity of the potential legislative candidates. The result could become a factor in the ordering of the party list of candidates to compete in the general elections. However, deputies understood that they were included on the list because it was a decision of the leadership, regardless of the popularity of a legislative candidate within a constituency (Taylor-Robinson, 2009a, p. 334).

The Electoral Law required political parties with factions to conduct primaries.[26] In order to neutralize the potential for factionalism, the dominant faction would call a party convention to designate the list of presidential and legislative candidates that would compete in general elections. Losing factions certainly had the opportunity to contest the nomination process as irregular. However, they probably had more to lose than gain by doing so. According to Taylor-Robinson (2009a):

> An affected faction could protest or threaten to leave the party. However, this type of threat lacked credibility because it would be difficult, if not impossible, for the new party to register to participate in the election, especially because the members of the electoral tribunal belonged to parties that were already registered" (p. 334, own translation).

Until the election of 1997, the country's electoral system could be labelled *fused closed-list PR*. Under this system voters had to cast a single vote for one person in a closed list which included not only the candidates to the legislature, but also the presidential candidate and, until the elections of 1989, candidates to the municipal authorities of the electoral circumscription where the voter was registered. In 1992, the municipal ballot was partially separated from the presidential and legislative ballots, which remained fused (see Figure 3.1). In 1996, the parties agreed to completely separate the presidential ballot from the one used for legislative, what resulted in a simple closed-list PR system for legislative elections (Figure 3.2).

During the time frame covered in this study, when the CLPR was used (elections from 1989 to 2001), the mathematical formula employed to convert votes into seats in the multi-member constituencies was the Hare method with largest remainders. Under this method, the total number of votes per constituency obtained in an election is divided by the number of seats available in order to obtain a quota. Every time a party reaches the quota a seat is assigned to that party and those votes are subtracted from the party's total. The candidate who tops the list wins the seat. When no party can reach the quota and if there are still seats available, these are distributed via the *largest remainders method*, which gives the remaining seats to the parties with "most votes left over" (Gallagher & Mitchell, 2005a, p. 586). In the two

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[26] An amendment to this law introduced in 1986 established the requirement for primary elections (art. 19, *Ley Electoral y de Organizaciones Políticas de 1981*). The law did not establish restrictions on participation in these elections.

Honduran single-member constituencies a simple plurality of votes (fifty per cent plus one) was employed to assign the seats.
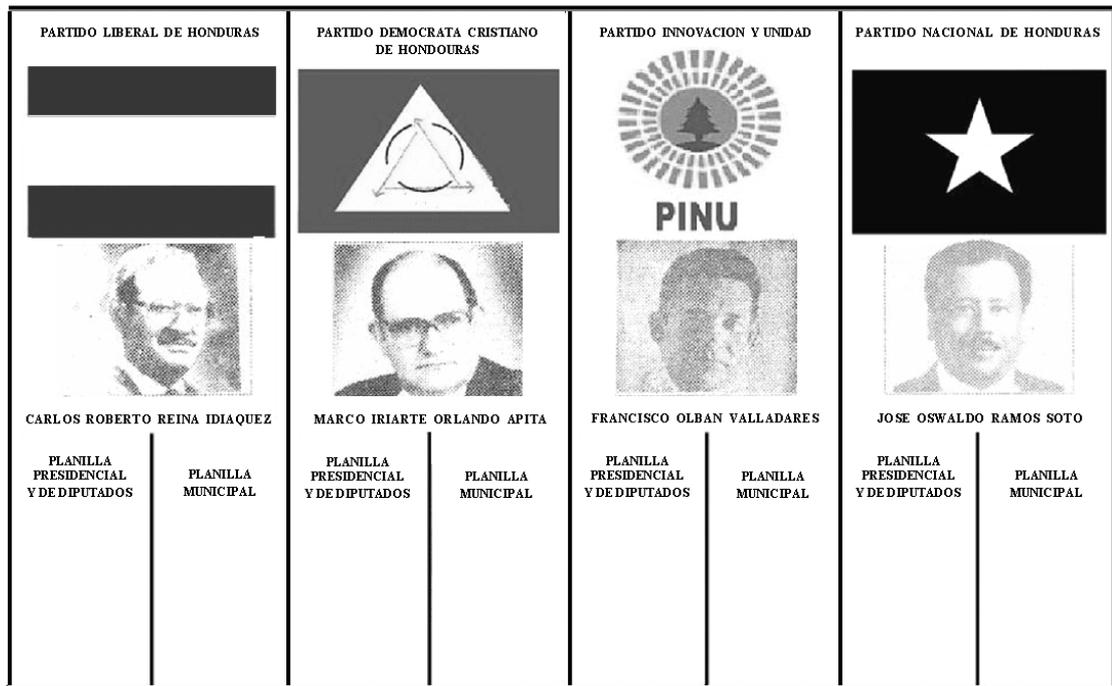
Figure 3.1. Ballot used in the elections of 1993. This was the ballot used in the elections of November 1993. It shows the photographs of the presidential candidate from each political party competing in the elections. Below the photographs each party section is divided by a vertical line. To the left of the line it reads, in Spanish, "Ballot for President and deputies." On the right-hand side of the line it reads, "Municipal ballot." Voters had to cast two votes, one for the presidential and deputies list and another for the municipal list.
Source: *La Tribuna* (1993, p. 1).
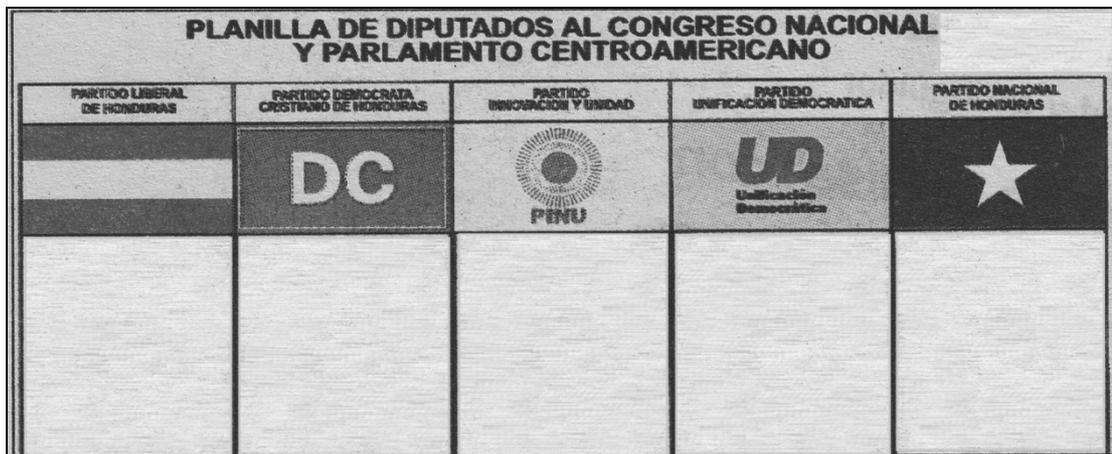
Figure 3.2. Legislative ballot used in the elections of 1997. This was the ballot used to vote for legislative candidates in the 1997 elections. The same format was applied in the elections of 2001. On top of the ballot it reads in Spanish, "Deputies to the National Congress and the Central American Parliament Ballot." Voters had to mark only once the box of the party of their preference.
Source: *La Tribuna* (1997, p. 1).

3.2.2 The open-list PR system (elections 2005–2009)

The open-list PR method (OLPR) was introduced in April 2004 when a new Electoral Law was passed in the National Congress. The method was used for the first time in the 2005 elections and most recently in the general elections of December 2009. The first difference worth noting is that under the new Electoral Law, every party is required to hold primary elections where factions compete to represent the party in national elections.[27] Unlike in the old model, parties cannot
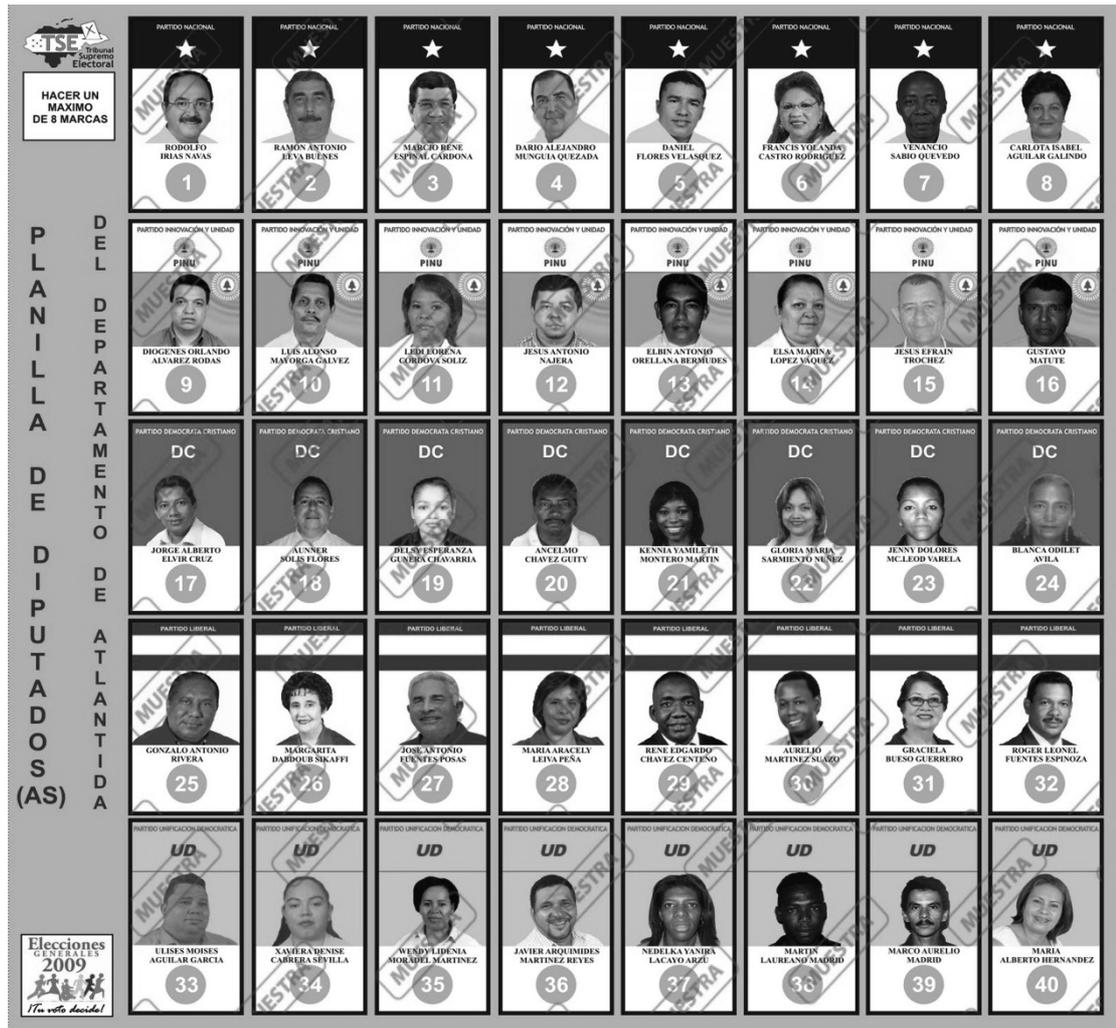
Figure 3.3. Legislative ballot used in the elections of 2009. This ballot was used in the department of Atlántida in the November 2009 elections. The ballot shows not only the names of the legislative candidates but also their photographs. This constituency has a district magnitude of eight seats and the *panachage* mechanism implies that voters can mark up to eight candidates of their choice from across different parties.
Source: National Electoral Tribunal of Honduras (2009).

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[27] Factions present a list of candidates for president and vice-president, legislative seats, and mayor and vice-mayor seats. In the case where there is no more than one faction competing for elections, parties can avoid the primary election requisite. To date under OLPR, the large ruling parties have held primary elections but the smaller parties have not.

alter the resulting list of candidates to the legislature.[28] Both primary and general elections use the open ballot with *panachage* which, as noted in Chapter 2, allows the voter to cast her vote across different party lists. Additionally, the ballot includes the photograph of each legislative candidate. In contrast with Brazil, a famous case that utilises an OLPR system where voters are given the option to vote for a party block or for each individual candidate (Mainwaring, 1991), in the OLPR system used in Honduras, voters are not given the party block option. The formula used to convert votes into seats is still the Hare method with largest remainders and votes for candidates are pooled at the party level. The main difference in comparison with the old electoral system is that because the ranking of candidates is not previously decided by party leaders, when a party wins a seat that seat is given to the candidate who has secured the most votes (see above).

The Electoral Law of 2004 making it necessary for the larger parties to hold primary elections, combined with the use of open ballots with *panachage*, has generated changes to the ways in which candidates are selected within political parties. The most obvious change is that the party leader has much less control over the allocation of candidates to electable polistions within the party list. That power has been transferred to the voter. Moreover, as previously explained, open-lists with *panachage* are now used in primary elections, which further weakens the control of party leaders over the selection of candidates. However, according to interview information, factions usually have coordinators in each constituency. The coordinators recommend to the presidential candidate of the faction which legislative candidates can fill the positions in the faction's list.[29] Under the 2004 regulations there are no restrictions regarding which voters can vote in primaries (art. 48, *Ley Electoral y de las Organizaciones Políticas*, decree 44-2004).

3.3 The endogeneity problem in the electoral system change

Major electoral changes are rare events; once a reform takes place the electoral system usually becomes quite fixed (Benoit, 2004; Boix, 1999; Colomer, 2004; Gallagher, 2005a). This is partially explained by the fact that "party systems and

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[28] This implies that the final list of candidates for the general election is formed by candidates from different factions.
[29] Secretary of the Central Committee of the Liberal Party of Honduras, personal interview, 19th January 2010, and deputy of the National Party of Honduras, personal interview, 15th February 2012.

electoral systems are tied to one another through the self-interest of politicians" (Katz, 1980, p. 123).

While the present work does not aim to explain inferentially the electoral system change in Honduras, it is important to understand how it came about. The nature of the variation in the electoral system has implications for the research design. As noted by Benoit, "if electoral systems are shaped by the party systems they supposedly determine… then this casts serious doubt on conclusions about the independent causal effect that electoral systems exert on party systems" (2007, p. 367). Thus, studies that use electoral systems as an explanatory variable of party systems (in their interparty and intraparty dimensions) usually face the methodological dilemma of determining whether electoral systems cause party systems or vice versa. This endogeneity problem makes it difficult to treat major electoral reforms as natural experiments.

There is not a full theoretical consensus in the literature about the causes of electoral systems change. However, different scholars suggest that the underlying motivation to change is brought about by the rational expectations of the actors who have a real power to modify the institutions (Benoit, 2004; Boix, 1999; Gallagher, 2005a). For example, Colomer (2004, p. 7) argues that electoral systems can be deemed stable if political actors can expect that the potential benefits from a change of system would not surpass the gain provided to them by the current institutions. On the other hand, losers and deputies in a weakened position will perceive the institutional change as a good strategy if they believe that the new institutions will bring them increased advantages. Shvetsova (2003) argues that the assumption that institutions are endogenous can be problematic because it implies that politicians know the expected outcomes of the proposed institutions:

> Relevant players at the institutional stage are usually politicians, but even they may lack information about such characteristics of the game as the number of other players, what actions will be feasible to them and to the others in the future, and what their payoffs would be from different outcomes—about the things which are determined by a variety of societal characteristics themselves yet unknown. This is the source of the ex ante uncertainty for such players with regard to how much they value specific institutional options. The consequence of such uncertainty is that the realized effect of her ex ante preferred institutions is generally sub-optimal and that the actual institutional choice is not correlated with the designer's ex post institutional preferences (Shvetsova, 2003, p. 194).

In the particular case of Honduras there are two points that support the assumption that the major electoral system reform of 2004 took place relatively independently from the party system. As Robinson, McNulty and Krasno (2009) put forward, "*natural experiments* as opposed to *random experiments* imply acts of nature, or more generally, exogenous interventions demarcating observations in theoretically important ways" (p. 346, italics are from the original). In this regard, the intervention of nature limits the possibility that political actors can interfere in the institutional change. The evidence suggests that this was precisely the case in Honduras. A major natural event, Hurricane Mitch, which struck the country in October 1998, is identified as the driving force behind the change in the electoral rule from CLPR to OLPR.

3.3.1 Background

Since the early 1990s, parallel to the transformation of the Honduran economy, a state reform process has been implemented. According to Barahona (2005), the state modernization process was stimulated by multilateral financial institutions, such as the International Monetary Fund and the World Bank, in line with recently adopted market liberalization policies. Throughout that decade reforms to the judiciary system, the accountability rules, and the institutions were adopted. Two important changes also took place in the electoral system. In 1992, the municipal ballot was separated from the presidential and deputies ballot. This reform was achieved as part of a decentralization process that gained momentum after the approval of the Municipalities Law in 1990. The original proposal was to completely separate the municipal elections from the presidential and legislative elections. However, the electoral reform passed in Congress instructed that a vertical line would separate the presidential and legislative ballot from the municipal ballot (see Figure 3.1 above).

Under the administration of President Carlos Roberto Reina (1994–1998), the National Convergence Commission (CONACON) was created. This was a multi-sector committee consisting of representatives from the political parties and Honduran civil society organizations. Through this body, the government aimed to discuss state reform and the governability of the country. In 1996, a year before the general elections, the political parties within this forum agreed the separation of the

deputies' ballot from the presidential ballot. This ballot was used in the general elections of November 1997 and, four years later, in 2001.[30]

3.3.2 The change to OLPR

On the 26th of October 1998, what had started as a tropical storm reached its highest intensity and was upgraded to hurricane status just as it reached the Honduran Caribbean Coast. Hurricane Mitch first made landfall in Honduras at the Islas de la Bahía on the 28th of October. It lost intensity over the following days, weakening to a tropical depression by the time it left Honduran territory on the 1st of November. Nevertheless, Mitch caused great damage across most of Honduras, particularly in the territories of the North Coast, Choluteca, and Tegucigalpa (ECLAC, 1999, p. 8). It was one of the most devastating natural disasters ever to occur in Honduran history (National Hurricane Center, 1999). As a consequence of the destruction, the country was forced to request reconstruction aid and debt relief from the international community. The imposition of conditions by donors regarding political reform, which would make the aid allocation process more transparent, in addition to pressure from civil society groups, accelerated the institutional reform process. The electoral reform of 2004 is a consequence of these changes. In the opinion of one scholar of Honduran politics:

> The persistence even in a democratic regime of election and nomination rules developed by party caudillos in an authoritarian milieu prompts the question of how it was possible to adopt open-list nominations and elections in the 2004 election law. The answer is behind-the-scenes pressure from the international aid organizations that gained much influence in Honduras after Hurricane Mitch in 1998, plus recognition by party leaders that the small parties were increasing their vote share and more voters were becoming disaffected with the traditional parties (Taylor-Robinson, 2010, p. 109).

Five Central American countries received reconstruction aid in the aftermath of Hurricane Mitch.[31] In May 1999, their presidents attended a meeting with the foreign aid donors in Stockholm. They signed a declaration in which they committed, among other things, to "[c]onsolidate democracy and good governance, reinforcing the process of decentralization of governmental functions and powers, with the active participation of civil society" (IADB, 1999, para. 6). The same year, Foro Ciudadano,

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[30] In Appendix 3.1 I describe other reforms that were carried out during the period CLPR was used.
[31] The Central American countries in question are Costa Rica, Guatemala, El Salvador, Honduras, and Nicaragua.

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a group composed of different civil society organizations, launched an electoral reform proposal. Two of the changes they suggested were the constitution of single-member electoral constituencies and the adoption of nominal voting ballots (Comisión Política de los Partidos Políticos, 2005, p. 64). The philosophy behind the adoption of nominal ballots was to increase legislative accountability and to enforce the connection between voters and deputies, which had been eroded by increasing perceptions of corruption and distrust of political parties and politicians (Comisión Política de los Partidos Políticos, 2005, pp. 59-61).

In the context of the primary elections in 2000, the Liberal Party of Honduras' (PLH) leadership asked the National Electoral Tribunal (TNE) to disqualify the National Party of Honduras (PNH) presidential candidate, Ricardo Maduro Joest, who had been born in Panama to a Honduran mother. The PLH claimed that he should not be allowed to participate in the elections since he was not Honduran by birth. The claim was unsuccessful and finally solved via a constitutional interpretation by the National Congress. This case revealed some of the weaknesses of the electoral regulatory framework as well as the inefficacy of the TNE to solve electoral conflicts.[32] After that experience, Maduro Joest, who was leading the opinion polls to win the presidential elections of November 2001, made the comprehensive reform of the Electoral Law one of his central campaign issues. In this context, the political parties and civil society organizations requested the help of the Honduran Office of the United Nations Development Programme (UNDP) in facilitating the electoral reform process.

The UNDP facilitated the formation of a political commission in which each of the five legally constituted political parties had two representatives. This commission formulated a declaration of commitment, which was signed by each of the five presidential candidates on the 4th of September 2001. During the negotiations, the parties could not reach to an agreement regarding the method of electing legislators. However, the presidential candidates committed themselves to ensuring that the

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[32] Furthermore, the presidential candidate of the PLH had been investigated for being, at the same time, the President of Congress, a position that he could have used to his own advantage by distributing the resources he had available to him for pork-barrelling purposes.

electoral reform proposals would be put before the National Congress the following year, regardless of which candidate gained office.[33]

The introduction of the open ballot with *panachage* and the inclusion of photographs to identify the candidates was an initiative of a group called Movimiento Cívico por la Democracia (MCD, which literally translates as Civic Movement for Democracy). MDC was a association of civil society organizations and the governmental National Institute for Women (INAM). Amongst the civil society organizations that formed part of this group were: the Honduran branch of the international NGO CARITAS; a major Honduran business guild, the Honduran Council for the Private Enterprise (COHEP); and several women's movement organizations such the "Visitación Padilla" Pro-Peace Women's Movement and the Centre for Women's Studies (Dole-Duron, 2004, p. 14; MDC, 2003, p. 18). As previously mentioned, the single-member district (SMD) system was also considered; however, this option was rejected by the small parties and women's movements, who believed that the introduction of an SMD system would lead to a reduction in the chances of election for women and candidates from smaller parties. But it was also argued that women would benefit from the inclusion of their photographs since some voters would be inclined to vote along gender lines (Lanza, 2004, p. 10).

In early September 2003 the PNH adopted the MDC proposal and promoted it in Congress through one of its deputies. Shortly thereafter, the PNH Central Committee approved the conduction of its primary elections using OLPR. In one sense the PNH was claiming the initiative for a wider adoption of the OLPR system, but at the same time it was challenging the PLH to do the same, perhaps taking into consideration that the latter party was more fragmented (*El Heraldo*, 2003a; *La Tribuna*, 2003b).[34] In general, the leadership of the PLH was reluctant to adopt separate ballots and the use of photographs for legislative candidates. When asked about its potential consequences for his party, the then leader of the Liberales in Congress, Roberto Micheletti, declared that the true intention of the reforms was to

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[33] In addition to the ballot modality to vote for legislative candidates, the introduction of the plebiscite and referendum institutions, the creation of the Electoral Superior Tribunal (TSE), and the separation of the National Registry of People from the TSE were the main dividing issues that made it difficult for the parties to reach agreement in the National Congress (Comisión Política de los Partidos Políticos, 2005; *El Heraldo*, 2003b).

[34] By the time the reforms were being discussed in Congress, in early 2004, there were 14 registered factions within the PLH, compared to the four contending factions within the PNH (*La Tribuna*, 2004b, p.8).

create "a reason to seek out confrontation" (*La Tribuna*, 2004a, p. 18). That did not prevent the new electoral law being approved by the Honduran National Congress on the 1ˢᵗ of April 2004.

To sum up, pressure from the media and civil society organizations that were constantly appealing to propaganda mechanisms through mass media communications for the adoption of the separate ballot with the candidates' photographs was influential in the reform process. There were also demands for internal democracy from disadvantaged groups within the parties that saw the change as potentially beneficial for them. As previously mentioned, there was a declining public perception of the main political parties, reflected in increasing voter absenteeism and growing support for the smaller parties. These factors taken together contribute to explaining Congress' final decision to pass a new electoral law in April 2004, which among other things incorporated the OLPR mechanism with *panachage* and introduced candidates' photographs to the ballot.

3.3.3 Discussion

In the previous section, we observed that the decision to replace CLPR with OLPR was to a great extent a consequence of the impact of Hurricane Mitch. In this regard, after this natural catastrophe, the main political parties felt obliged to improve their accountability mechanisms towards voters. This was part of an agreement made between the Honduran government and the civil society under the auspices of the international donor community, who made it a condition of their aid that the Honduran government make a commitment to undertaking state reforms. I also showed that the choice Honduras legislators made in the National Congress to change to the OLPR electoral system became a campaign issue for one of the political parties. However, the adoption of the new system came about largely because social organizations, with the technical support of the UNDP, kept it in the public eye for several years. Therefore, it can be surmised that legislators, probably party leaders, carried out the reform as a means of avoiding social and political unrest rather than to ensure outcomes that would bring them benefits such as those theorized in the political science literature (see Chapter 2). As a matter of fact, part of the rationale of adopting OLPR was to improve the representativeness of disadvantaged groups, such as women. Moreover, when the PNH decided to move to OLPR in the second half of 2003, they did so in order to maximize votes for the party and not for their benefit as individual legislators. It is possible that

backbenchers perceived the reform as beneficial; however, an intended or unintended consequence is that they could have been deprived of pork-barrel spending if re-elected. Hence, like Shvetsova (2003), we can conclude that in this particular case the Honduran institutional designers lacked of perfect information about the effects the OLPR could have on legislators' behaviour, particularly in terms of district magnitude, which is a concept more common in the academic jargon rather than in the political spheres. Moreover, the possible consequences resulting between ballot type and district magnitude remain quite unknown, so it is very unlikely that politicians could have foreseen the effect of adopting the OLPR system across different district magnitudes.

Finally, independently of the electoral system type, turnover rates have tended to be very high in Honduras. The legislative elections of November 2005—20 months after the electoral reform—unintentionally became a randomization mechanism to generate a "post-treatment" population of legislators. In the elections of 2005, in most of the constituencies less than half of the legislators were re-elected for the following term. For example, legislators in Francisco Morazán, the largest constituency with a district magnitude of 23 seats, experienced a sharp decline in their re-election rate—17.4 per cent when historically it was around 35 per cent. In constituencies where district magnitude is smaller than three seats the turnover rates are even higher (see Figure 3.4).[35] These figures support the idea that the OLPR system itself becomes a randomization device in which, *ceteris paribus*, every legislator has the same probability of being re-elected. It can be argued that some legislators have information on what the *ceteris paribus* conditions consists of. However, judging by the high turnover rates in the Honduran Congress after the election following the reform of 2004, there are strong reasons to believe that they had not clear idea of the consequences of OLPR for their re-election probability.

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[35] This behaviour is probably explained by high fragmentation in the main political parties.
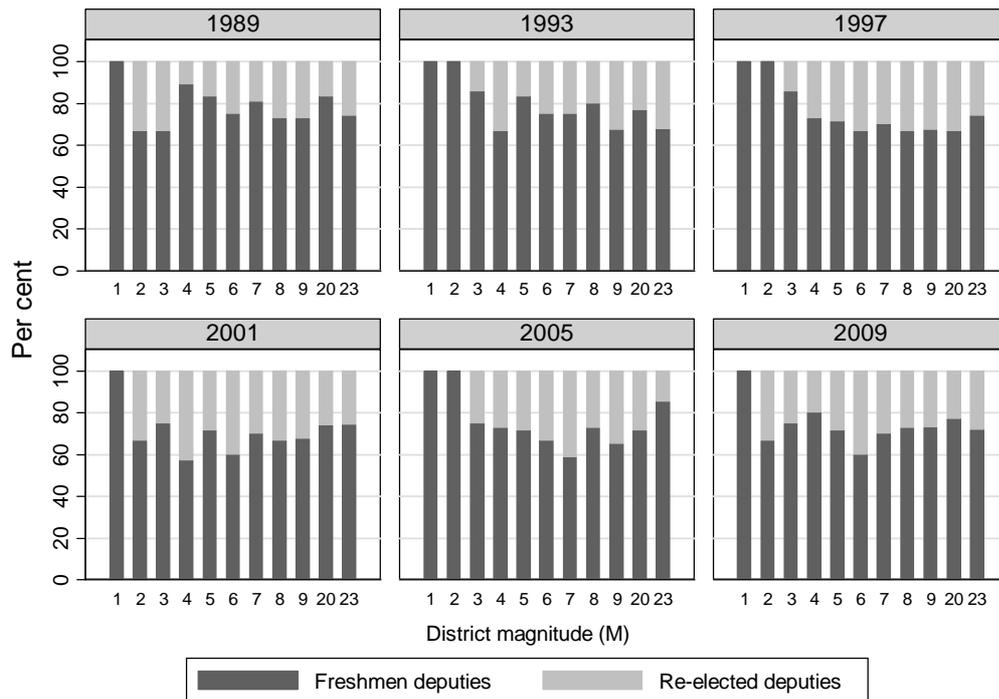
Figure 3.4. Turnover patterns in the Honduran Congress by district magnitude and year of election, in percentages (1989–2009)
Source: own, based on data from the National Electoral Tribunal of Honduras.

Sekhon and Titiunik (2012, p. 36) argue that when the random assignment has been assumed the researcher should ask herself: first, whether the proposed treatment–control comparison can be guaranteed to be valid by the assumed randomization, and second, if it is not valid how the resulting control-treatment assignment relates to the comparison the researcher wishes to make. Because one of the aspects I am interested in studying is pork-barrel politics, it is important to acknowledge the fact that Hurricane Mitch caused lots of damage in terms of both personal losses and destruction of infrastructure, which poses a competing explanation for pork-barrelling. The sceptic can counter argue that this natural disaster pushed legislators to behave in a more particularistic way, and it was this behaviour that gradually made the electoral system change possible. This is equivalent to admitting that there is endogeneity between the variation in the electoral system and the variation in the legislators' behaviour. As already stated, this is problematic but is one of the most common dilemmas scholars of electoral reforms have to face.

I argue that there are reasons to treat the impact of Mitch and the change to OLPR as independent events. From a longitudinal point of view, I expect that after Mitch there will be a disturbance in legislators' targetable goods delivery behaviour,

but while the influence of this shock as might persist over time, it could also dissipate and the legislators' behaviour could return to the historical trend. My expectation is that OLPR will produce a new trend, because after its adoption the OLPR institution remains constant, as do the incentives to seek personal votes (see Figure 3.5). In chapters 5 and 7, which deal with time-series cross-sectional data, I control for autocorrelation in order to have more confidence in the results.
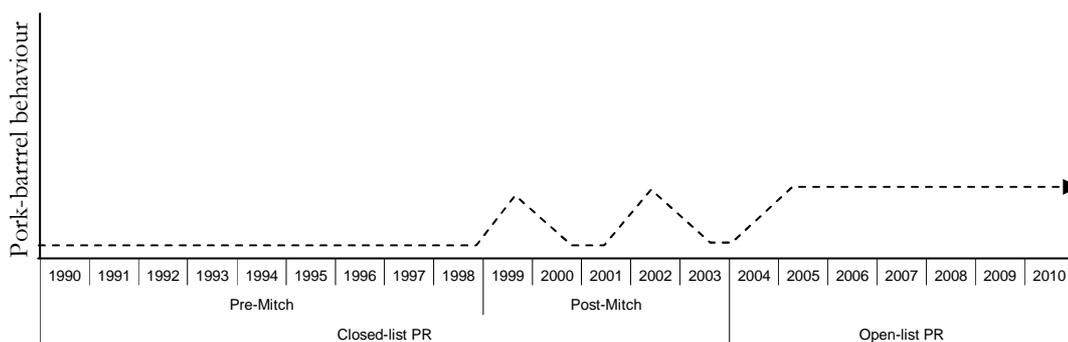
Figure 3.5. Time frame, major events covered in the present study and legislators' expected pork-barrel behaviour.

Certainly, the period is not long enough to be fully confident that the OLPR has produced a completely new cycle, which is a major concern in disciplines such as economics, in which case the variables are usually integrated, that is, they follow similar time trends. As Beck and Katz (2011, p. 344) demonstrate, in political economy studies the variables are less likely to be integrated, especially when they vary between zero and one, and they are usually affected by predictable events, such as changes in governments in presidential systems. Therefore, according to these scholars, it is recommended to control for autocorrelation, for example, by including lagged dependent variables in panel datasets when the time series are not very long.

From a cross-sectional point of view, even though it is calculated that around 80 per cent of the Honduran territory was affected by Hurricane Mitch, its greatest impact was on the North Coast—which was the first area of Honduran territory hit by the hurricane—, Choluteca, and Tegucigalpa (ECLAC, 1999, p. 8). Additionally, it should be recognized that Mitch impacted most on the poorest populations, and the subsequent relief efforts were targeted especially at that population, which is spread all over the country (Government of Honduras, 2001). Because district magnitude holds constant during this period, and the patterns of distribution of the poorest populations remain relatively constant as well (Flores et al., 2009), if legislators increased the allocation of targetable goods after Mitch the geographical distribution

(a) District magnitude distribution and the path of Hurricane Mitch
between 26th of October and 1st of November, 1998

N

District magnitude (M)

20 - 23
7 - 9
4 - 6
1 - 3

Path of
Hurricane Mitch
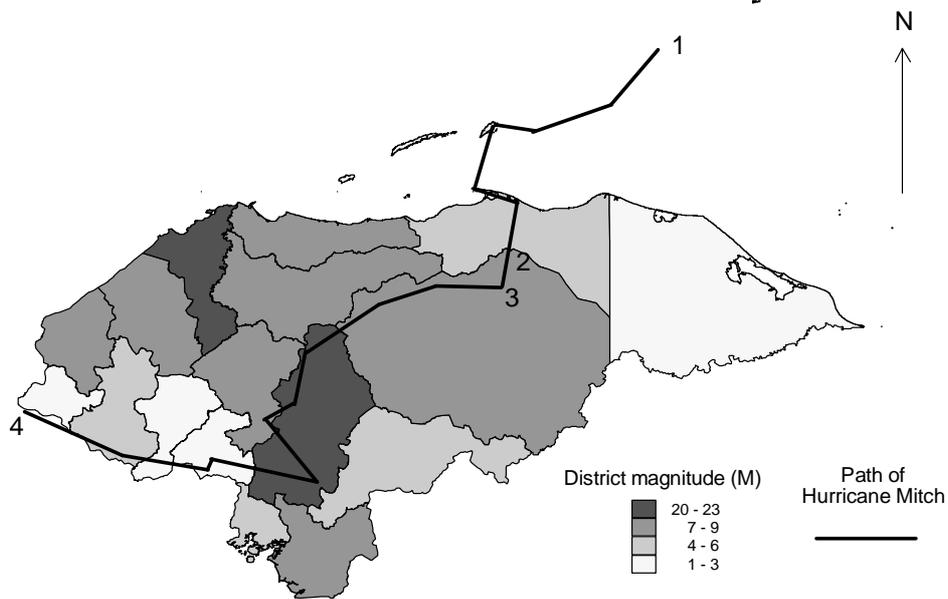
(b) Percentage of population with two or more
unsatisfied basic needs, per municipality, according to the Census of 2001

Percentage of population with
two or more unsatisfied basic needs

57.39 - 89.69
48.96 - 57.39
41.95 - 48.96
36.05 - 41.95
29.09 - 36.05
8.74 - 29.09
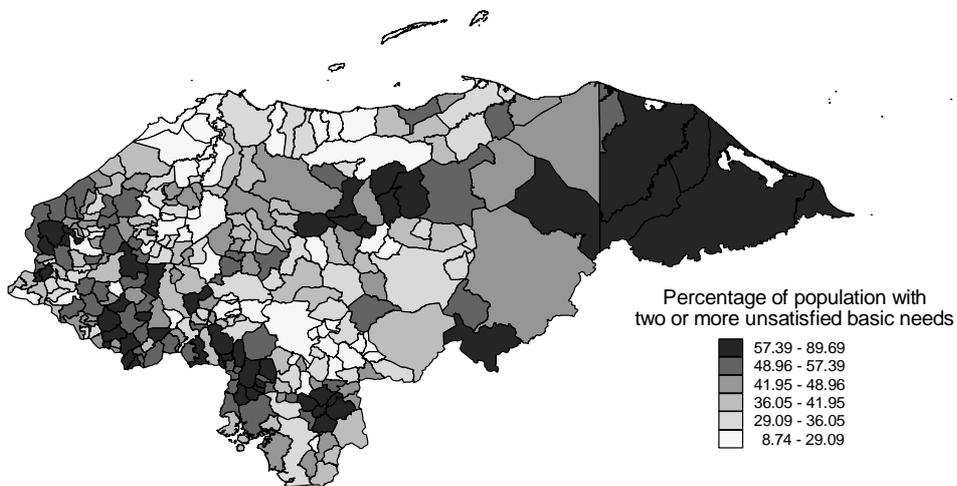
Figure 3.6 Maps of district magnitude distribution, the path of Hurricane Mitch in 1998 and poverty distribution in Honduras in 2001. In (a), the path of Hurricane Mitch has been reproduced on the basis of data from ECLAC (1999, p. 10). Between points 1 and 2 the wind speed ranged between 285 and 95 km/h, and was classified as hurricane. Between 3 and 4 the speed of the winds ranged between 70 and 85 km/h and Mitch was downgraded to a tropical storm. Note that M and the percentage of poor are relatively evenly spread throughout the country; however, where M ranges between one and six seats the percentage of population with two or more unsatisfied basic needs tends to be higher. By comparison larger M constituencies tend to have lower rates of poverty.

Sources: (a) own and ECLAC (1999), (b) National Institute of Statistics of Honduras (2002).

hould remain the same, or should be higher in small-M constituencies than in medium or large ones. This is because smaller-M constituencies tend to have higher percentages of poor population measured according to the Unsatisfied Basic Needs Method (the Pearson factor of correlation between the two variables is -.5279). Figure 3.6 demonstrates graphically that the spatial distribution of the poorest municipalities tends to be found towards the western border, the centre and the eastern border of the country. The smallest district magnitude constituencies are located along the western and eastern borders of Honduras.[36]

An alternative approach to control for the influence of Hurricane Mitch, as I will explain in chapters 5 and 7, is by focusing only in the municipalities that were not affected by this Hurricane. In this regard, one can compare those municipalities before and after the electoral reform. If Mitch caused no effect or its influence was minimal we can have more confidence that a change in pork-barrel behaviour is due to the electoral system change and not caused by the natural disaster.

3.4 Controlling for rival explanations

As noted earlier in this chapter, one of the advantages that the present research design has over other investigative approaches is that different factors can be expected to remain relatively constant during the period of study. Other factors that vary can be parameterized through statistical methods, i.e. holding them fixed to study the partial effect of the key variables in multiple variable regression analyses. In Chapter 2, it was explained that formal institutions, such as the form of government and type of state (unitary or federal), and informal institutions, such as clientelism, can partly explain legislators' personal vote-seeking behaviour. Additionally, we discussed that whether spending goes to core, swing or opposition supporters could be another factor in explaining pork-barrel behaviour. Other aspects are particular to the Honduran context. In this section I focus on four potential rival explanations of legislators' personal-vote seeking behaviour: (1) institutional factors, (2) party ideology, (3) political culture, and (4) level of socioeconomic development. In Appendix 3.1, I provide additional information in relation to the Honduran context.

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[36] The definition of the Unsatisfied Basic Needs Method to measure poverty, utilized in the Census of 2001 by the Honduran National Institute of Statistics, was the lack of basic needs in the areas of drinking water, sewerage, school attendance for children between seven and twelve years of age, having more than three dependents per household, and the co-habitation of three or more people per room (National Institute of Statistics of Honduras, 2009, p. 66).

3.4.1 Institutional factors

The form of government and whether the administrative organization is federal or unitary are factors which can explain the ways legislators behave (Ashworth & Bueno de Mesquita, 2006; Carey, 2009); it goes without saying that both are kept constant in this study.[37] The decentralization of fiscal and administrative powers from the central administration towards the municipalities, which has been taking place gradually in Honduras since the early 1990s, could affect the geographical allocation of spending. But in terms of differences between municipalities, the Honduran regulations indicate that municipalities with lower levels of development should be focalized. Therefore, because poor municipalities are more dependent on the government, the impact the decentralization processes could have is reduced. In Chapter 7, I deal specifically with pork-barrelling, focusing on spending from the central government, which is allocated with discretionary power.

3.4.2 Party ideology

Party ideology could contribute to explaining the distribution of welfare benefits in the form of pork-barrelling. Social democrat parties are believed to favour the redistribution of wealth in an economy, particularly across the less disadvantaged groups, whereas conservative parties are associated with macroeconomic policies that restrict the welfare state and leave the redistribution role to the markets (Boix, 1998). In Honduras, party politics has been dominated by two major political parties: the Liberal Party of Honduras (PLH) and the National Party of Honduras (PNH). The origins of these political parties date back to the formation of the Honduran state between 1890 and the first decade of the 1900s (see Appendix 3.1).

The PNH has been traditionally identified with conservatism in terms of its closer ties to the institutions of the clergy and the military. Internally, it tends to be more ideologically coherent and unified than the PLH. This phenomenon has been observed in relation to the fact that until the mid-1990s, the PNH primaries saw fewer factions competing for the presidency than in the PLH. Since its origins, the PLH has tended to be separated from the clergy, and throughout its history has detached itself from the military. It was also characterized by internal fragmentation, a characteristic that has become more noticeable since the 1970s, when conservative

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[37] In the appendix to this chapter I describe these formal institutions in more detail.

and social democrat factions emerged and remained relatively stable throughout different electoral processes (Ajenjo, 2001; Bulmer-Thomas, 1990; Taylor-Robinson, 2010).

One could argue that legislators' behaviour, particularly regarding pork-barrel politics, is a result of party ideology, especially for party deputies in government. This intervening factor can be controlled for, especially taking into consideration that during the period of study both parties have alternated in government—one can use variation to track the differences in terms of the geographical spending allocations of each party at an aggregate level. Furthermore, I can also control for each legislator's party, as I will show in chapters 5 and 6.

3.4.3 Party strongholds

There is discussion about whether pork-barrel spending is directed towards government strongholds or swing voters. Cox and McCubbins (1986) put forward a model of electoral competition aimed at explaining the distribution of funds allocated to constituency projects. They posit the existence of three types of groups to which a legislator who is seeking re-election must address herself: (1) *supporters*—the re-election constituency in Fenno's (1978) terms, (2) *the opposition*—those who have consistently opposed her, and (3) *swing groups*—those who have not consistently supported her or who have been hostile. In this context, it is not clear at which group politicians will target pork-barrel spending. From Cox and McCubbins' perspective, rational politicians will promise "benefits to those groups in their constituencies with the highest rates of return, and promise no or even negative benefits (i.e. costs) to those with the lowest rates of return" (1986, pp. 375–376). They conclude that candidates take into consideration the risk of losing their electoral constituency if they do not provide benefits to their voters. Therefore, their prediction is that risk-averse politicians will tend to over-invest in their closest supporters.

On the other side of the debate, Lindbeck and Weibull (1987) argue that candidates have good reason to appeal to swing voters. They assume that it is reasonable for politicians to aim to obtain as much support as possible so they can secure the minimum number of votes necessary to gain a seat. It may be possible that their core supporters are not enough to secure that minimum threshold.

3.4.4 Political culture

It is believed that there is a strong connection between political culture and socioeconomic development (Helmke & Levitsky, 2006; 2005). Populations with low levels of socioeconomic development tend to favour particularism over national politics, whereas increasing levels of socioeconomic development are associated with broader policy identification.[38] Overall, Honduran politics is categorized by different observers as very clientelistic (Ajenjo, 2001; Norsworthy & Barry, 1994; Taylor-Robinson, 2006; 2010).

For Taylor-Robinson (2010), there is an intrinsic connection between poverty and clientelistic politics in Honduras. Given the poor living standards of most of the Honduran population, good connections in government seem to be necessary to have access to even the most basic public services. Evidence of clientelism relies most of the time on observation and interviews. Yet, an analysis of survey data concludes that party activism increases in inverse proportion to the standards of living conditions (Booth & Aubone 2007, cited in Taylor-Robinson 2010, p. 117), which also suggests the existence of clientelistic relationships. In this regard, clientelism is a factor that varies little over time during the period of study. Moreover, according to Taylor-Robinson (2010), while poorer populations remain mainly in rural areas, urban areas also have important segments of poor populations, which makes them prone to clientelistic practices.

3.4.5 Socioeconomic levels of development

As I explained in the previous section, a hypothesis links increasing levels of economic and social development to policy-oriented electorates and legislators. In Honduras, during 2000s, there were some improvements in the economy and some social indicators. However, the changes were not dramatic. Honduras is still considered one of the poorest countries in Latin America and the Caribbean (alongside Bolivia, Haiti, and Nicaragua) (ECLAC, 2005; 2009). According to the Honduran Office of the United Nations Development Programme, in terms of income, in 1992 it was estimated that 47.4 per cent of Honduran families lived in

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[38] In this regard, the analysis of the formation of national parties in England by Cox (1987) provides a good example of how technological, social, and economic improvements during the 1800s can explain in part the change from particularistic to party-oriented electorates and MPs.

extreme poverty; by 2004 that figure had decreased slightly to 44.6 per cent (UNDP, 2006, p. 56).

It must be noted that in the years after Hurricane Mitch struck Honduran territory, the government, together with the international aid agencies and civil society organizations, instituted a reconstruction programme targeted in particular at the poorest populations, who were the most affected by the hurricane. In 2001, the government launched the Poverty Reduction Strategy (or ERP to use its acronym in Spanish), which was the result of a broad consensus between civil society organizations and political parties with the support of international donors (Government of Honduras, 2001). Yearly home surveys have showed that during the 2000s decade several indicators related to poverty improved slightly. According to UNDP (2009, p. 299), the probability of not surviving until the age of 40 was reduced from 11 per cent in 2001 to 9.4 per cent in 2006. The illiteracy rate in people aged 15 years or older was 20 per cent in 2001, while in 2006 it was 17.6 per cent. While the percentage of population with no access to sources of drinking water was 19.2 in 2001, this figure had been reduced to 12.8 per cent in 2006.

The small improvements in the living conditions of Hondurans could be also related to an economic growth rate that averaged 4.1 per cent between 2000 and 2010 (Central Bank of Honduras, 2012). This has come with an increase in the employment rate, specifically in tourism, the food and clothes manufacturing industries (*maquilas*), and services. However, there has also been an increase in the influx of remittances that Honduran nationals living abroad, especially in the United States, send to relatives in Honduras (UNDP, 2009, pp. 278-281). The improvements in the economy and their translation into benefits for Honduran society are especially felt in urban areas, particularly in the capital, Tegucigalpa (department of Francisco Morazán), the department of Cortés, which is known as the industrial centre of the country, and the Islas de la Bahía, which is the constituency that attracts the highest percentage of foreign tourists (UNDP, 2009, p. 281). In this regard, patterns of development across departments have not changed significantly over time—the poorest departments are still located in the western part of the country, and the most developed ones are to be found on the north coast and in the capital.

3.5 Methods

In the present work I combine quantitative and qualitative research methods; in the latter case, I rely in particular on interviews but, in Chapter 7, I also include evidence from official documents and other secondary sources to trace the pork-barrel mechanism in Honduras. Interviews not only allow me to trace the causal mechanism connecting electoral systems to legislators' behaviour, but this method can also be used to support the evidence of my statistical analyses.[39]

As I will explain in more detail in Chapter 4, I use three proxies of legislators' behaviour: (1) initiated bills per legislator, (2) geographically distributed grants, and (3) surveys of parliamentarian elites. The datasets from (1) and (2) form panel data structures; in other words, they consist of repeated observations over time of the same cross section units (Wooldridge, 2002, p. 6), in the first case legislators and in the second case constituencies. Because the units of observation are fixed in time, the assumption of random sampling used in most common econometric methods, typically the ordinary least squares, has to be relaxed. However, panel data methods—also know as time-series cross-section methods (TSCS)—compensate for the need to account for the inner variation of each unit, which is often wrongly attributed to the error term, therefore leading to biased inferences—known as the omitted variable bias—in most popular linear and non-linear statistical models and even experiments (Beck & Katz, 1995; see Chapter 10 in Wooldridge, 2002).

The idiosyncratic disturbances found in TSCS models could be correlated with the key independent variables, a situation known as fixed effects, or could be associated with the error term, i.e. random effects. Each situation requires different statistical methods and interpretations of the results. Deciding which method to use depends on a number of factors such as model specification and data availability. Furthermore, there are post-estimation statistical tools that help to identify whether random effects methods generate better estimators than fixed effects, or vice versa. But for the present work, the decision is more straightforward: "[i]n cases where the key variables in $\mathbf{x}_t$ do not vary much over time, fixed effects and first-differencing methods can lead to imprecise estimates. We may be forced to use random effects estimation in order to learn anything about the population parameters" (Wooldridge,

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[39] To test the theory posed in Chapter 2, I have had recourse to some common statistical tools, using the statistical package Stata 12.

2002, p. 286, emphasis in original). Because one of the key variables of this study, district magnitude, holds constant over time the use of random effects models becomes imperative when using TSCS methods.

In terms of the parliamentarian elite survey data analysis, survey data by definition implies randomization of the units of observation. In this regard, if what is being studied is each legislator included in the samples, TSCS cannot be applied in conjunction with survey analysis methods. Needless to say, for ethical reasons, each surveyed parliamentarian has been made anonymous, which makes it impossible to keep record of them at different points in time. Therefore, for the analysis of survey data I do not use TSCS methods.

Each of the three dependent variables imposes the use of different analytical approaches. I will discuss the statistical models that I will use in more detail in the part of this thesis dedicated to the empirical analysis (chapters 5 to 7).

3.5.1 Interactive effects analyses

To conclude this chapter I point to two aspects that are treated as standards in the empirical analysis chapters. One is the indicator of district magnitude (M) used to calculate the effect of this variable on legislators' behaviour. In the electoral systems literature, it has become common practice to employ the logarithmic form of M which helps to observe the marginal impact of M on different relationships of interest, such as the effective number of parties, legislators' behaviour or the allocation of spending (Cox, 1997; Hallerberg & Marier, 2004; Monroe & Rose, 2002; Shugart et al., 2005; Taagepera & Shugart, 1989). I use the same transformation, that is, the decimal logarithm of district magnitude, which I abbreviate as *logM*. It makes sense to use this indicator in the Honduran case since the density in the distribution of seats tends to be skewed towards medium and small constituencies. Furthermore, the long gap between small and medium-sized constituencies (where M is smaller than 10) and large constituencies (where M is equal to or larger than 20) must be taken into consideration. Hence, *logM* helps to make more linear relationship analyses.

The interactive effects between ballot type and *logM* on proxies of legislators' personal-vote seeking behaviour are more easily observable by plotting the predicted probabilities of regression outcomes.[40]
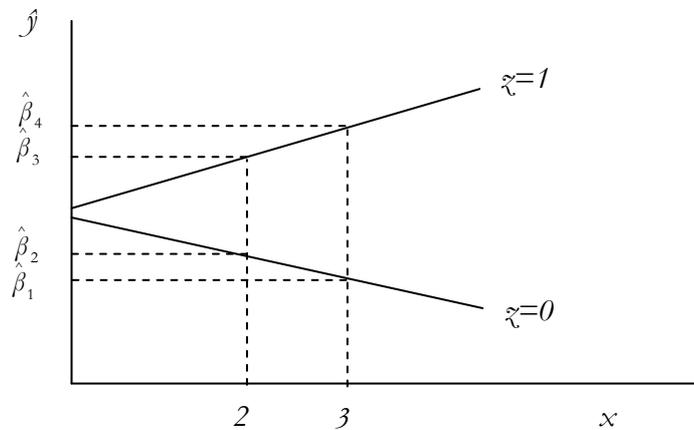
Figure 3.7. Illustration of predicted probabilities at different values of *x* and *z*

In Figure 3.7 above, the estimated coefficients of *y* are substituted with its predicted probabilities $\hat{y}$ at relevant values of *x* for the researcher. Moreover, one can keep constant *x* and analyse the effects of the intervening variable *z*. Holding other factors constant within this hypothetical example, it is observed that when *z* equals zero, the predicted probability of *y* when *x* equals two is the coefficient $\hat{\beta}_2$; whereas when *z* equals one $\hat{y}$ is equivalent to $\hat{\beta}_2$. Conversely, when *x* equals three and *z* equals zero $\hat{y}$ will be $\hat{\beta}_1$ and $\hat{\beta}_4$ if *z* equals one.

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[40] In chapter 3 of Kam and Franzese (2007) an explanation is provided on how predicted probabilities are computed (see also Brambor, Clark & Golder, 2006).

Appendix 3.1 Context

Honduras is a republic located in Central America. With an area of 112,432 square kilometres (National Institute of Statistics of Honduras, 2009, p. 5), it borders the Caribbean Sea to the north east, Nicaragua to the south east, El Salvador and the Pacific Ocean to the south west, and Guatemala to the north west (see Figure 3A.1). The country is characterized as having the most mountainous area of the Central American isthmus. The mainland territory is complemented by islands in the Caribbean Sea and the Pacific and Atlantic oceans, of which the Islas de la Bahía, a system of islands off the north coast, is the largest.

Figure 3A.1. Map of Honduras
Source: World Bank (2005).

The Honduran population is made up of approximately 90 per cent Mestizos, 7 per cent indigenous groups, 2 per cent Afro-descendants, and 1 per cent Caucasians (Central American Parliament, 2011). The religion is predominantly Catholic with an increasing number of Protestants in recent years. The total population, according to the last census carried out in 2001, is 6,535,344, of which 49.4 per cent are male and 50.6 per cent female.

Within the country there is internal variation in terms of the ways its population is distributed and in the degrees of social and economic development. The most

populous and wealthiest regions of the country are located in certain areas of a region known as the North Coast (on the Caribbean coast) and in the central department of Francisco Morazán, where the capital of the country, Tegucigalpa, is located. Very high levels of poverty exist in most of the country (see Figure 3.6 above and Bulmer-Thomas, 1990).

History

The colonization of Honduras by the Spaniards began in 1524, with settlers focusing on trade of indigenous slaves as the main economic activity. Puerto Trujillo in the North Coast region was the first settlement and an important port for trade with other Spanish colonies. By 1550, motivated by the search for gold and silver as well as for finding a way to connect the Caribbean Sea with the Pacific Ocean, Spanish *conquistadores* began to explore the rest of the territory (Payne-Iglesias, 2009; Vargas-Aguilar, 2006). In the second half of the 1500s, the Spaniards had some control over the North Coast and centre of the country. Mining of gold and silver as well as the need to develop routes to take these products to the main ports located on the North Coast are factors that explain the population distribution in Honduras. However, climatic and topographic variables as well as the social organization of the indigenous population in those areas made the colonization of those territories so difficult that by the end of the 18th century, the largest part of what nowadays constitutes the territory of Honduras had not been colonized.

The Spanish colony's economy was strongly based around the *encomienda*.[41] However, by the time the encomienda was introduced in Honduras the indigenous population was already diminishing. Slaves from Africa were introduced in order to complement the indigenous labour. In the first half or the 1600s two ships carrying black slaves sank close to the Caribbean coasts of Honduras and Nicaragua. The slaves mixed with the natives giving origin to two other ethnic groups, the Miskito and the Garifuna people, who have since dominated in the department of Gracias a Dios and in different parts of the North Coast (Vargas-Aguilar, 2006). Throughout the 17th century, English privateers established different alliances with the Miskito. The English later colonized what used to be known as Bay Islands, now the department of Islas de la Bahía. They brought with them black slaves from other

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[41] Under this regime a Spaniard would receive a set of property rights over 'Indian' labour, most of the time forced. In exchange, the *encomendero* provided the Indians with protection and Catholic faith instruction and paid the Indians' taxes to the Crown (Yeager, 1995, p.843).

colonies in the Antilles Islands, known as the Creole. Some of the Spaniards mixed with the indigenous peoples, giving birth to the Mestizo group. By the time of independence in the early 1800s, the Mestizo had become predominant in Honduras; some indigenous villages were spread throughout the country, while smaller populations of Afro-descendants, Miskito, and Garifuna peoples were located predominantly on the Caribbean coast.

In the early 1800s, Honduras was part of the Kingdom of Guatemala (a territory that extended from the south of Mexico up to the south of Costa Rica). On 15 September 1821, the Declaration of Independence of Central America was signed. Immediately after independence, divisions and conflicts sparked among the Honduran elite. Discussions about whether to join a federation of Central American states or the Mexican Empire, headed by Agustín de Iturbide, were the first points of conflict that led to the subsequent civil wars. Moreover, divisions between supporters of liberal reforms and sympathizers of the Spanish Crown and the clergy gave origin to the first liberal and conservative parties respectively. Honduras formed part of the Federal Republic of Central America between 1921 and 1938, when this was dissolved.

The government of Marco Aurelio Soto (1876–1883) is considered the starting point in the consolidation of a liberal state (Barahona, 2005). His government envisaged a development of the Honduran economy around mining and the export of minerals. Because the main gold and silver mines were located in the centre of the country, projects to develop a railway system to connect these areas to the main ports on the Caribbean coast were granted to American and British companies, who in exchange received large concessions of land in the territories close to the Caribbean coast. The foreign firms exploited those lands for the production of bananas to be sold in international markets, mainly the United States. These firms became quite influential, not only in the Honduran economy and society, but also in politics, leading Honduras, in the early 1900s, to be given the name Banana Republic (Bulmer-Thomas, 1990, p. 285).

In this context, the two main parties that currently dominate Honduran politics emerged: the PLH and the PNH. The PLH was founded in 1891 by Policarpo Bonilla. Bonilla became President of Honduras for the period 1895–1899. During his tenure in office, a new constitution was promulgated, as well as a set of laws

reflecting the largely liberal ideology of his party. These included the abolition of the death penalty, the instauration of civil unions and divorce, prohibition of the Church to participate in state affairs, as well as the elimination of the tithe and the establishment of religious freedom (Ajenjo, 2001, p. 196).

The period following the establishment of the PLH is characterized by the influence of caudillos in party politics and struggles between factions that in some cases descended into intermittent periods of civil war. One of the factions that arose from within the Liberal Party was the National Party (PNH). This party was created in 1902. Originally, its ideology was quite similar to that of the PLH but it became increasingly conservative over the years, developing closer ties with institutions such as the military and with the clergy (Ajenjo, 2001, p. 236). During this period foreign banana companies participated in domestic politics by providing financial help to the competing presidential candidates in exchange for favours (Bulmer-Thomas, 1990, p. 285). For Ajenjo (2001, p. 236), the origins of Honduran clientelism can be found in the birth of the PLH and the PNH and their relationships with the banana companies. Due to the high instability that characterized the period in which both parties originated, they only managed to become relatively stable organizations by attracting social and economic groups that provided human and financial resources.

In 1932, candidates for the PNH, Tiburcio Carías-Andino, and for the PLH, José Ángel Zúñiga-Huete, ran for presidential election. The elections were won by Carías by a very small margin and Zúñiga-Huete did not accept the electoral results. Both sides went on to engage in armed conflict, the outcome of which supported Carías-Andino, who was sworn in as constitutional president for a term of four years in February 1933. Just before the elections of October 1936, the Congress reformed the constitution, extending the presidential term from four to six years (Bulmer-Thomas 1990, p. 290). In 1941, the Congress reformed the constitution again to extend Carías' term until 1948, the year in which he finally retired after contesting peaceful elections. For Bulmer-Thomas (1990), the *Cariato*, as his term of 16 years in office is known, not only had the effect of diminishing any nascent democracy in Honduras in the 1930s, but by the end of the dictatorship it "also proved impossible to reverse the country's economic decline" (p. 291). He further states that the "weak fiscal position and the subordinate role of the government undermined the scope for economic diversification and left the economy dependent on an industry which appeared to be in structural decline. For most of the Cariato

the fruit companies remained the lender of last resort" (Bulmer-Thomas, 1990, p. 295).

Carías was succeeded in government by Juan Manuel Gálvez after the presidential elections held in 1948. In October 1954, new presidential elections were organized. The former dictator, Tiburcio Carías, stood for election as the National Party candidate. He competed against Ramón Villeda-Morales of the Liberal Party, who won the plurality of votes but could not get the absolute majority necessary to become president. The constitution dictated that in such cases the president must be appointed by Congress. However, the deputies could not agree to form a quorum and proclaim the new president. Julio Lozano-Díaz, who had become vice president following the recent resignation of Gálvez, proclaimed himself interim president. However, he did not relinquish power through elections, causing a period of turmoil in 1956 which ended with the intervention of the Honduran Army. A military junta ruled the country for the next year.

The Liberal representative, Villeda-Morales, was appointed president in the elections of 1957. During his six-year term in office he expanded a reformist programme already initiated by the Gálvez administration. The first income tax law in the country was promulgated in 1950; women's voting rights were recognized in 1957; and a labour code, granting workers rights such as a minimum wage and collective bargaining was introduced in 1955. Villeda-Morales went even further, introducing an agrarian reform to transform productive land tenure. By 1963, the next election year, many of these reforms had become unpopular among the Honduran elite. However, it was the possibility of having another term of Liberal Party rule, under the presidency of Modesto Rodas-Alvarado, a known anti-militarist who was the favourite to win the elections, that sparked a military coup only ten days before the elections were due to be held (Bulmer-Thomas, 1990, pp. 301–302).

An alliance between the de facto government and the PNH allowed the introduction of a new constitution, confirming the autonomy of the Honduran army, and facilitating the appointment of General López-Arellano as President of Honduras for the next six years. Constant conflict between the PLH and the PNH helped to prolong the military rule until 1981, with only a very brief period of civilian government in 1972. In 1975, General Juan Alberto Melgar-Castro was appointed head of state. During his term, discussions about a return to civilian rule began. In

1977, a new electoral law was passed, replacing the law of 1966. This event is considered by different observers as the beginning of the transition to democracy (Bulmer-Thomas, 1990; Posas, 1992; Sieder, 1996).[42] Constituent assembly elections were held in April 1980 (Bulmer-Thomas, 1990, p. 310).

In the 1970s, Honduras' external debt grew rapidly due to unfavourable international economic conditions. During the last military government in the late seventies, the level of debt became unbearable. Throughout the 1980s, Honduras managed to resolve some of the constraint on its economy thanks to the economic support of the US government, offered in exchange for Honduran cooperation in the armed conflict in Central America. Once the conflict showed signs of coming to an end in the late 1980s, US assistance started to wane and the real and untenable state of the Honduran economy became evident (Barahona, 2005; Bulmer-Thomas, 1990).

The economic policies of the three governments that assumed the administration of the country during the 1990s were characterized by the implementation of structural adjustment programmes (SAPs), with the assistance of the International Monetary Fund (Barahona, 2005, p. 279).[43] Different actions taken to increase the country's competitiveness in the international markets were adopted. For example, the introduction of a wider variety of agricultural and livestock products for export (such as melon, water melon and seafood products). Manufacturing became the largest sector of the economy.

Previous electoral reforms during the CLPR period

The introduction of the PR system with closed lists dates back to an electoral reform in 1957. Previously, deputies were elected in multi-member districts that used local ballots and majority rules to assign seats. After 1971, congressional and presidential elections were fused (Taylor-Robinson, 2010, pp. 106-107). In 1976, the military government appointed an Advisory Council responsible for enacting a new electoral

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[42] As Sieder (1996) explains, the electoral legislation of 1977 laid down unprecedented rules in terms of internal party organization, including a requirement for all internal factions and movements to be permitted to participate in internal selection processes using the proportional representation system. That law "also favoured the inscription of new parties by reducing the number of signatories necessary for registration from 15,000 to 10,000" in addition this regulation created the National Electoral Tribunal (Sieder, 1996, p.22).

[43] The first SAP was approved in 1990 and was followed by a second in 1994. The last SAP was approved in 1998.

law (Paz-Aguilar, 2008; Sieder, 1996). This law, meant to elect the deputies who formed a Constitutional Assembly in 1980, incorporated the institution of primary elections using a PR mechanism. The Constitutional Assembly was also responsible for the creation of the 1981 Electoral Law. In the law of 1981, the deputies opted to eliminate the requirement to hold primary elections within the political parties. For Taylor-Robinson (2010), although backbenchers in the Constituent Assembly could have defended internal democracy, the presidential control over state resources and the informal institutional structure of Honduran clientelism was an incentive for incumbent deputies to give up any form of democratic nomination for the legislative seats:

> When de facto presidents legitimized their rule through formal appointment by a Constituent Assembly, it was important for the leader to control backbenchers to ensure his "legitimate" election. Deputies continued to support or acquiesce to party leaders, instead of demanding internal party democracy for nominations, because they needed state resources for clientelism; in addition, they relied on presidential coattails to get elected, which cost less than running their own campaign (Taylor-Robinson, p. 107).

In 1985, after a failed attempt to extend his term in office, President Roberto Suazo Córdova (1982–1986) of the Liberal Party wanted to appoint the presidential candidate within his party.[44] This situation caused an institutional crisis involving the Executive, the Legislative and the Judiciary branches. At the heart of the conflict was the power the National Electoral Tribunal (TNE) had to interpret the Electoral Law and intervene in the political parties' internal disputes. The TNE was composed of one representative of each of the registered political parties and one representative of the Supreme Court. However, in reality, the representatives of the PLH and the Supreme Court belonged to Suazo-Córdova's faction, and the representative of the National Party was his ally. The President of Congress, Efraín Bú Girón, another of the PLH's potential presidential candidates, attempted to block Suazo-Córdova's efforts to dictate the nomination of his successor by replacing the Supreme Court representative at the TNE, and formed a legislative commission who found the members of the Supreme Court guilty of corruption. Congress ordered the removal

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[44] Previously, in 1984, Suazo-Córdova argued that he had been elected in November 1981, some months before the new constitution was enacted in January 1982. The new constitution fixed a four-year presidential term prohibiting re-election. In an attempt to extend his term in office, Suazo Córdova claimed that he had come to power under the 1957 constitution, which established a six-year presidential term. This situation led to a conflict between the executive and the Congress, also dominated by the Liberal Party.

of the judges; in response, Suazo Córdova accused the new members of the Supreme Court of high treason. The conflict lasted for two months and was resolved only when the three branches reached the *Acta de Compromiso* agreement, mediated by the US Embassy and the military. The main outcomes of this agreement were an increase in the number of seats in the Honduran Congress from 82 to 134 and a reform of the Electoral Law to allow party factions to present their own presidential candidates in primary elections that would be held on the same day as the general elections (Sieder, 1996, pp. 27-28).

In 1986, the Electoral Law was changed again, this time to introduce primary elections for the process of selecting party authorities and candidates for electable positions, including deputies. The reform to the Electoral Law of 1981 established that primaries should be carried out in each political party (Art. 19). However, this law did not include binding mechanisms to oblige parties to comply with the results of the primaries, which in practice allowed the political parties to alter the final composition of the party list of legislative candidates. The PLH and the smaller parties, the Social Democrat Innovation and Unity Party (PINU-SD) and the Christian Democrat Party of Honduras (PDCH), hold primary elections for the first time in 1993.

In the PNH, there was more resistance to this type of internal democratization process. Traditionally, the formation of the party list and the nomination of the party's presidential candidate were agreed among its elite, who had used the technicalities of its internal regulations and the Honduran legislation to avoid conducting primary elections. However, after holding the presidential office for the first time in Honduran democratic history between 1990 and 1994, the PNH lost the presidential elections. In an attempt to give an impression of inner democratization, and amid recriminations and accusations from different party factions, in May 1996, the PNH party assembly approved holding primary elections in November that year (*El Heraldo*, 1996; *Envío*, 1996). Since then, primaries have been held in the PNH.

The political crisis of 2009

In January of 2006, Manuel Zelaya-Rosales of the PLH became President of Honduras after winning the elections of November 2005. During his second year of government he changed his cabinet, incorporating in it a number of well-known leftist politicians. A change in the leaning of his government to the left became

clearer when Honduras joined the Petro-Caribe initiative of the Venezuelan government of Hugo Chávez. This programme allowed Honduras to receive oil imports from Venezuela at very low prices and offered the facility of a payment plan. A subsequent integration of Honduras into the Bolivarian Alternative for the Americas (ALBA) programme in July 2008, driven by President Hugo Chávez, also brought international financial assistance from Venezuela (Ruhl, 2010; Taylor-Robinson, 2009b).[45]

The alignment of the Honduran government with the Venezuelan leftist regime caused distress among different groups, including conservative factions and some deputies in the president's party. Some of his decisions, such as a 60 per cent increase in the minimum wage, also upset the business and political elites (Ruhl, 2010). But it was Zelaya-Rosales' intention to call for the establishment of a constituent assembly, announced in November of 2008, that was the main cause of the political unrest at the time. His justification for calling a constituent assembly was to change the legal order to facilitate the establishment of fairer relations among Hondurans (*La Prensa*, 2008b; Rodríguez, 2011). However, different sectors believed that the president's true intention was to reform the constitution to make possible his own re-election, following the example of constitutional reforms carried out in other South American countries.

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[45] Conflicts between the Executive and Legislative branches of government were commonplace during the Zelaya-Rosales administration (2006–2009), even before the events leading up to the coup. Interestingly, this discord seemed to reach its height during the primary election process that took place in November 2008. In an interview conducted in July 2007, the President was asked whether he was concerned by the lack of support among public servants from his own party—including legislators—as a result of the contentious primaries within the party. He replied: "that is exactly what I don't want, that when they wear 'two hats', dedicating themselves part-time to being deputies and candidates… and part-time to working for the country." (*La Tribuna*, 2007a, para. 3, own translation). In October 2008, the National Congress approved the adhesion of Honduras to the Bolivarian Alternative for the Americas (ALBA)[45] after days of discussion in Congress and the mass media.[45] According to news reports, Zelaya-Rosales managed to get that polemical bill passed after he publically supported Roberto Micheletti, who was serving as president of Congress, as presidential candidate for the Liberal Party in the primary elections.[45] It was also claimed that during their negotiations the President had agreed to allocate pork-barrel resources to deputies in Micheletti's faction to the detriment of the other strong faction within the Liberal Party, which was headed by the then Vice-President of Honduras, Elvin Santos (*El Heraldo*, 2008b; *La Prensa*, 2008a; *La Prensa*, 2012b). It is worth mentioning that in the first year of his government in 2006, Zelaya-Rosales created the Fondo Social Departamental, a budget managed by the Ministry of Finance with the aim of financing small projects across Honduras. The moneys from this fund would be distributed by the Honduran deputies, who would prioritize projects in their constituencies (*La Tribuna*, 2006). Elvin Santos and his followers accused Zelaya-Rosales of a biased and unfair allocation of those funds to help the campaign of Micheletti and the deputies in his faction (*El Heraldo*, 2008a; *La Prensa*, 2008a).

The government's plan was to include what they called the *Cuarta Urna* (Fourth Ballot) in the general elections of 29ᵗʰ of November 2009. The Cuarta Urna was a non-binding plebiscite to ask voters whether or not they agreed to a constituent assembly. The National Congress, the National Electoral Tribunal, the Supreme Court, and the Attorney General concluded that the proposal for the Cuarta Urna was illegal because it intended to change unamendable provisions of the Honduran Constitution, such as those that prohibit presidential re-election (Rodríguez, 2011; Ruhl, 2010).[46]

Despite this declaration of the Cuarta Urna as illegal, Zelaya-Rosales continued with his plan based on the Citizens' Participation Law, which allows non-binding citizen consultations. In the early morning of Sunday, 28 June 2009, a group of soldiers from the Honduran Army raided Zelaya-Rosales' house after the president's detention was ordered by the Supreme Court of Honduras. That same morning he was put on a plane to Costa Rica. In the afternoon, the President of the National Congress, the Liberal and Zelaya-Rosales' former campaign manager, Roberto Micheletti, was sworn in as interim President of Honduras after the deputies present voted unanimously for the removal of Zelaya-Rosales from office.

Internationally, many states, including the United States, did not recognize the interim government and Honduras was ousted from the Organization of American States. Domestically, the coup generated social upheaval and led to constant clashes between Zelaya's sympathizers and the army and national police. Zelaya's supporters and different governments around the world claimed that they would not recognize any electoral process unless Zelaya was allowed to return to the presidential office before the elections on the 29ᵗʰ of November. The US government decided that they would support the elections as the only possible solution to the conflict. Finally, on the 30ᵗʰ of October, Zelaya's team of negotiators and Micheletti's government signed an agreement that allowed the general elections to be held as planned.

One could argue that it was Zelaya-Rosales' ideological about-face due to the ALBA alignment in the second half of his government that generated the conflicts between the Executive and Legislative branches (Rodríguez, 2011; Ruhl, 2010;

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[46] The Honduran Constitution of 1982 has a set of three articles that cannot be amended according to the same Constitution. They are related to the form of government (art. 4), the Honduran territory (art. 9), and the presidential term with no re-election (art. 239).

Taylor-Robinson & Ura, 2013), which in turn led to him being overthrown. However, even before this ideological shift by the president and members of his cabinet there was friction between the two branches of government. This was exemplified by the presidential veto of the Electoral Law bill promoted by a faction of the Liberal Party in Congress and the President steadfastness in allocating time for the discussion of bills sponsored by legislators from his own party when the agenda setting in Congress was controlled by the Executive (*La Tribuna*, 2007b; *La Tribuna*, 2007c; *La Tribuna*, 2008). It is worth noting that conflicts between legislative candidates from different factions during primary elections can also be observed in the 2010–2014 National Party of Honduras (PNH) government of Porfirio Lobo-Sosa, something that it does not seem to be as common as when the electoral system was CLPR.

Governing structures

The current Honduran Constitution dates back to 1982. Honduras has a presidential form of government, i.e. the president of the republic is the head of state and chief of the executive branch, which in theory is counterbalanced by independent legislative and judiciary powers. The president is elected for a period of four years with no possibility of re-election, using a majority rule (50 per cent of the total valid votes plus one). The executive body is complemented by a number of ministries (*secretarías de Estado*) and autonomous institutions. Ministers and officials of the autonomous institutions are appointed by the president. There are three presidential appointees (*designados presidenciales*), who are the equivalent of vice-presidents of the republic. They are elected simultaneously with the president.

The National Congress is the legislative body of government, and is a single-chamber assembly comprised of 128 permanent legislators and their substitutes, representing 18 constituencies. These legislators are elected for a period of four years in simultaneous elections with the president, and they have the possibility to run for election an indefinite number of times. The role of the substitute deputy is to replace his respective permanent legislator in her absence.

The Judiciary branch in Honduras is comprised of the Supreme Court of Justice (CSJ), the tribunals, and the appeals courts. The candidates for judges in this body are nominated by an Appointments Board made up of representatives from different organizations, such as the CSJ itself, the Honduran Entrepreneurial Council, and the

National Autonomous University of Honduras. The CSJ has among its functions the duty to carry out the constitutional requirements.

The constitution provides for an independent institution in charge of organizing elections and the administration of electoral justice—the Supreme Electoral Court (TSE, to use its acronym in Spanish). There are four layers to the structure of the TSE. The first is the TSE itself, composed of three magistrates that serve for a period of five years. They are elected by the Congress and are permitted to seek re-election once their term is over. The second layer is made up of the Departmental Electoral Courts. The third and the fourth layers consist of the Municipal Electoral Courts and the polling stations boards.

Honduras is divided into administrative areas called departments; each department has a governor who is appointed by the Executive. The Municipal Law states that the departmental governor is a liaison between the institutions of the central government and the municipalities. Each department is divided into municipalities; there are 298 municipalities in total (see Figure 3A.2). Municipalities are governed by a municipality council composed of one mayor, one vice-mayor, and at least four aldermen. All council members are elected in simultaneous elections to president and deputies to the National Congress and the Central American Parliament, and serve for a period of four years. Re-election is allowed for all municipal positions.
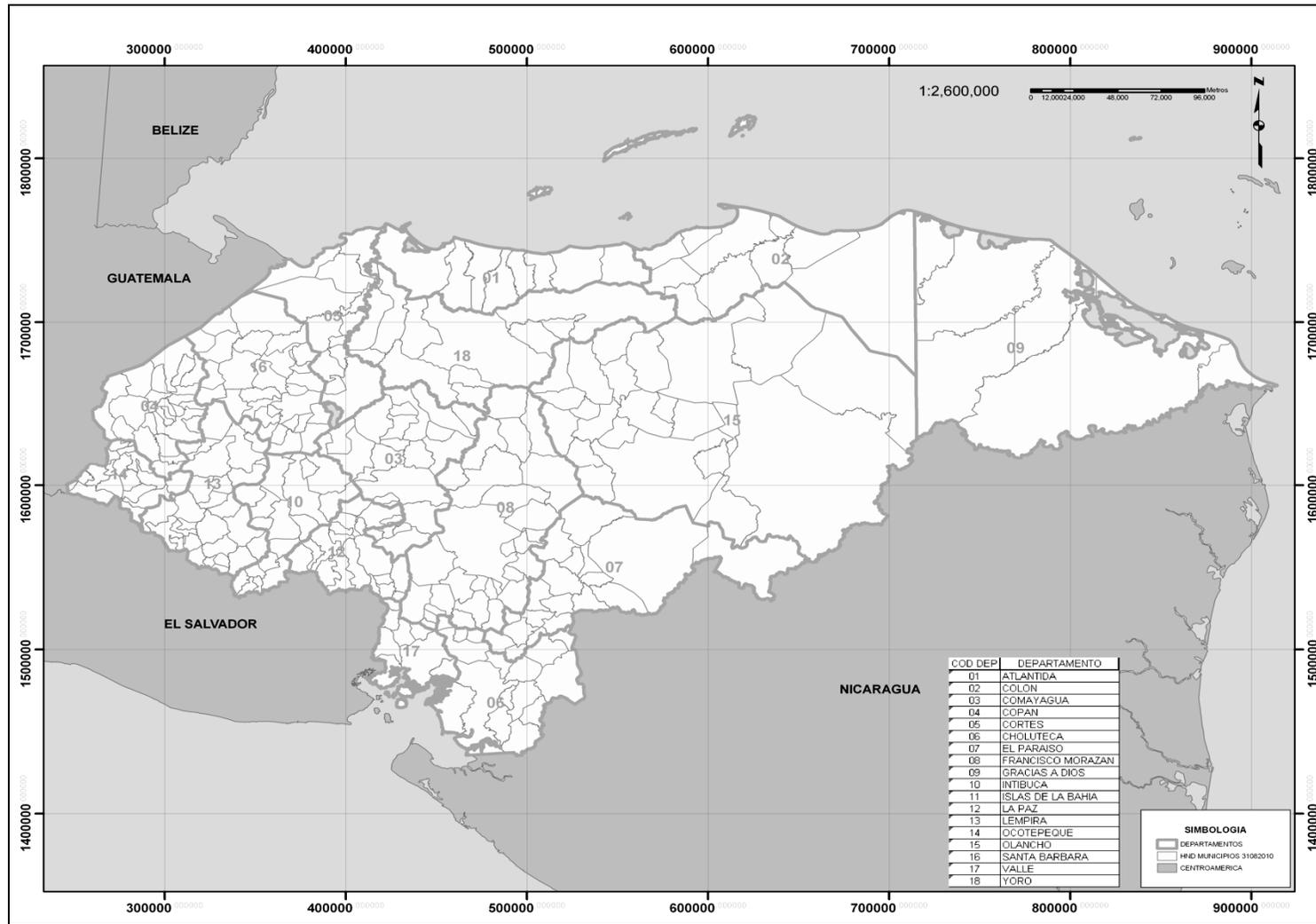
Figure 3A.2. Political division of Honduras in departments and municipalities
Source: Instituto Nacional de Estadística (2001).

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Political parties

Since the transition to democracy in the early 1980s, the PLH and the PNH have coexisted with three smaller parties: the Social-Democrat Innovation and Unit Party (PINU-SD), the Christian-Democrat Party of Honduras (PDCH), and the Democratic Unification Party (UD).

Table 3A.1 shows the electoral results for the elections that have taken place in the country between 1981 and 2009. The ENP Index column shows the index of the effective number of parties, a measure that shows which parties have tended to dominate the party system (Laakso & Taagepera, 1979). Using the number of seats per party, with values ranging between 2.17 and 2.42, the ENP Index indicates that the PLH and PNH have dominated the Honduran Congress over the last three decades. The table also shows how these two parties have alternated in power during that period, the PLH being the party that has held the presidency most times (five times, compared to the PNH's three times).

Table 3A.1 Presidential election results and parliament composition in Honduras, 1981–2009, in thousands

Election year	PL	PN	PINU	PDCH	UD[1]	Total valid votes	Voters turnout (%)	ENP Index[2]
1981	636*	491	29	19	-	1,178	22.0	2.17
	(44)	(34)	(3)	(1)				
1985	787*	701	23	30	-	1,543	16.0	2.12
	(67)	(63)	(2)	(2)				
1989	777	917*	34	25	-	1,755	23.4	2.03
	(55)	(71)	(2)	(0)				
1993	907*	735	48	20	-	1,712	64.97	2.03
	(71)	(55)	(2)	(0)				
1997	1,040*	846	41	25	24	1,977	27.65	2.20
	(67)	(54)	(5)	(1)	(1)			
2001	965	1,138*	32	21	24	2,179	33.73	2.42
	(55)	(61)	(4)	(3)	(5)			
2005	919*	850	19	26	27	1,841	55.08	2.41
	(62)	(54)	(3)	(4)	(5)			
2009	817	1,214*	40	38	36	2,146	NA	2.30
	(45)	(71)	(3)	(5)	(4)			

Notes: The seats per political party are in parentheses. [1]This party formed in 1992 and participated in elections for the first time in 1997. [2]There are two versions of this index: one is calculated using each party's vote share and the other using each party's number of seats in congress. The results presented here have been calculated based on the number of seats.
* Signifies the party that won the presidency.
Sources: Taylor (1996, p. 329), updated with information from the National Electoral Tribunal of Honduras.

Chapter 4

Measuring legislators' personal vote-seeking behaviour

Three of the most popular proxies political researchers use to investigate the different facets of the behaviour of legislators are records of bill initiation, elite surveys, and the geographical distribution of public spending. Each of these has its advantages and disadvantages. If taken together, the advantages of one compensate for the disadvantages of the other, increasing the reliability of causal inferences. As King, Keohane and Verba (1994) recommend, case studies can enhance a researcher's leverage of analysis to test a theory by increasing the number of dependent variables: "[a]dditional instances for the test of a theory or hypothesis can be generated by retaining the same unit of observation but changing the dependent variable. This approach involves looking for many effects of the same cause—a powerful technique for testing a hypothesis" (p. 223).

I have constructed an original dataset on bills initiated by each Honduran legislator between 1990 and 2009. I also employ data from four rounds of parliamentarian surveys conducted by the Ibero-American Institute of the University of Salamanca in the years 1998, 2002, 2006, and 2010. Finally, to study pork-barrel outcomes, I use an original dataset on projects executed in each municipality by the Honduran Social Investment Fund (FHIS) from 1990 to 2009. In this chapter I explain how these sources of data are good proxies of legislators' behaviour. To this end, I study the variation of the data to observe patterns of interest that could be associated with the change to an OLPR electoral system. Additionally, this chapter aims to describe the data collection process. I start with the bill initiation dataset in section one. Section two considers the parliamentarian survey data. The last part of this chapter is dedicated to the discussion and description of the geographically distributed spending dataset.

4.1 Initiation of bills data

The introduction of bills is an activity through which legislators leave traces of their behaviour. Political scientists are aware that this indicator provides valuable information which can be used to test relevant hypotheses. For example, Crisp et al. (2004) use the presentation of bills to test different hypotheses on the effects of political institutions on the ways in which legislators represent their parties and their constituencies in congress. They employ a dataset on patterns of bill presentation in six Latin American presidential democracies over several years. Similarly, Gam and Kousser (2010) test their hypothesis on a dataset of 165,000 bills presented by members of the lower houses of 13 state legislatures in the United States over a period of 120 years.

I have constructed a dataset of bills initiated by each of the permanent legislators of the Honduran Congress.[47] The dataset includes bills initiated between January 1990 and December 2010, allowing me to study the patterns of legislative behaviour in the Honduran Congress.[48] The data was collected from the annual bill indexes created by the Secretary of the Honduran Congress. Each entry for these indexes contains a code, a summary of the bill, and the name of the legislator who presented it (see Appendix 4.1). From these sources, information can be inferred about who introduced the bill, when it was introduced, the type of bill, and the targeted population. I coded every bill into one of the five following categories: district, national, sector, individual, and others.

4.1.1 District bills

To be coded as *district* a bill must mention a specific place or suggest that the benefits it is meant to create will be directed to a particular place.[49] In this regard, mention of a town, a municipality, or department was the main criterion for identifying this type

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[47] Or the substitute legislators, in cases where these replaced permanent deputies.

[48] Previous to the coding of the bills, I had to construct a database of legislators. I collected the information on individual legislators from the official announcements (*declaratorias de elección*), which are published by the National Electoral Tribunal in the Honduran statute books (*Diario Oficial La Gaceta*) after the official counting of the votes in each election, as well as from the registration of candidates each party had to publish in *La Gaceta* previous to the elections.

[49] In 27 out of 1,794 cases that were coded as district bills it was not possible to identify the places the bills were supposed to benefit. This was due to the fact that the geographical information was not included in the summary of the bills. For example, bill 382-99 is a proposal from 1999 requesting authorization for the transfer of 6.75 acres of lands from the ownership of the Ministry for Natural Resources to the Ministry for Health. In this case, the name of the place was not included in the summary of the bill, even though its existence can be inferred.

of bill. When a bill affected more than one department (i.e. constituency) it was also classified as a district bill. The rationale behind this decision was that on some occasions several legislators from different departments presented a bill together, creating a shared benefit for their constituencies. There were also cases where, for example, a project to build a road connecting municipalities in different departments was presented by a single legislator. While the project would affect different departments, it would most directly benefit that legislator's constituency.

A vast range of district bills are pork-barrel legislative proposals seeking funding to finance projects in the legislators' constituencies. For example, bill 365-2002, which seeks "[t]o instruct the Secretary for Finance to add to the budget of the Secretary for Public Works and Transports a special budget to build a bridge over the river Cuyamapa, cities of Victoria and Morazan, department of Yoro" (own translation). But district bills can cover a variety of other interests, for instance, if a municipality is granted an exemption from import tax for the import of a vehicle into the country for use by the local government. Another example might be the creation of new community college degrees. Municipality and town declarations are another kind of bills that Honduran legislators usually present, as well as authorizations for public institutions to donate or buy lands.

4.1.2 National bills

Legislative proposals were coded as *national* bills when they had the potential to affect the whole country or have an impact on large diffuse publics. For example, constitutional reforms, the creation of and amendments to laws such as the Labour Code, the Electoral Law, and other similar regulations. The creation of new laws such as the Access to Information Law, Municipalities Law, and the Citizens' Participation Law were also coded as national bills, because they attempt to regulate the social, political, and economic aspects of Honduran society.

Other bills had the potential to impact rather diffuse publics across the country. For example, bill 118-2010 instructs the Secretary for Finance to "cancel the collection of fines and sub-charges imposed on road users for the late payment of the vehicle circulation permit" (own translation). That bill benefits car owners. While not all Hondurans own cars, the car-owner population is not a well-defined sector (and certainly not organized) like public workers, teachers, and coffee producers. Therefore, any norm that can potentially affect voters who share similar

characteristics and who are spread across the country, like car owners, house owners and tax payers, is classified as a national bill.

4.1.3 Sector bills

The main criterion to be included in the *sector* category was that the proposed norm had to affect a defined sub-group of the Honduran population or an organization whose location was not well specified. Examples of this type of bill are norms to officialize and/or regulate professional guild associations (e.g. civil engineers, dentists, and lawyers); bills regulating the pension plans of the national association of public school teachers; or a bill to commemorate Indigenous People's Day or Afro-Descendant People's Day. These groups are usually spread throughout the country or in small areas that transcend the boundaries of a constituency.

Some bills generate benefits for particular sub-groups of the Honduran population but these are identified with a specific area of the country. I coded those bills as *district* rather than *sector* since they are likely to affect a discernible group of the population in a given constituency rather than diffuse groups spread out across the national territory. This is the case of well-defined ethnic groups, such as the Miskito, who are mainly based in the department of Gracias a Dios. Additionally, on some occasions the bills were aimed at generating benefits for a particular sector. For example, some legislators presented bills to exempt evangelical churches in specific cities from paying taxes, or requested funding from the government to repair a church building. As in the case of *district* bills, these proposals specified the location of the beneficiary group. As the legislator's objective was to bring benefits to a particular group within her constituency these bills were classified under the *district* label.

An exception was made when the proposed norm dealt with women's issues. Considering that women constitute more or less half of the population, I coded such bills as *national*. The same rationale was applied when bills were meant for children and the elderly, given that these are often non-organized groups and are often dependents in their families.

Most bills seeking awards to organizations were coded under the category of *sector* bills. However, an exception was made in a few cases involving sports and cultural figures, particularly in football. I reasoned that these had to be coded as

national bills, considering that these awards were conceded to figures representing Honduras in international competitions or at cultural events. Furthermore, the legislator's intention in presenting the bill could have been to evoke national sentiment.

4.1.4 Individual bills

I coded bills as *individual* in those cases were the proposals were aimed at benefiting individuals and private organizations. Examples of these bills are grants, honorary titles, and awards. In the case of individuals, even if the bill identified a place it was still coded as *individual*, because most of the time it was not clear whether a benefit for an individual could be extended to the whole constituency or a more or less diffuse group of voters. In the case of organizations, when the territory where the organization carries out its activities was not specified in the bill, I coded that bill as *individual*.

4.1.5 Others

In this category I included those bills for which I did not have sufficient information to judge the impact of the bill in terms of national, local, or private interests. The journals from which the data was collected only included summaries of the bills and did not show the justification for or details of what exactly was being proposed. In this category I also included bills related to the institutional work of the Congress. For example, it is usually the Secretary or the President of the Honduran Congress who calls for breaks or extraordinary sessions. In this regard, they do not necessarily reflect the behaviour of legislators since presenting such a bill is not part of their ordinary work. A similar criterion is used for the bills related to the appointments Honduran legislators have to make, for example, to the positions of the National General Attorney or the Judges for the Supreme Court of Justice. These appointments are strategic decisions made by the party, and not necessarily by individual legislators.

Table 4.1 displays a random sample of the bills that were coded into the different categories. The table includes a column for the category or type of bill

(district, national, sector, private, and others), its consecutively-numbered bill code and a summary of the bill.[50]

Table 4.1. Examples of bills presented by legislators in the Honduran Congress

Type	Code	Bill summary
District	365-2003	To instruct the Secretary of State for Finance to include, in the fiscal year 2003–2004, one million lempiras, to be used in the remodelling and construction of the Plaza Cívica, city of Siguatepeque, department of Comayagua.
	94-2001	To authorize the National Electrical Energy Board (ENEE) to forgive all debts held by costumers who live on the banks of the river Choluteca, city of Choluteca.
	331-2000	From the first half of 2000 to change the award for the current baccalaureate in computing at the Official Institute Paraíso Occidental, Department of Copán, to a baccalaureate in arts and computing.
National	58-1990	To form a special committee to analyse in detail the transactions made by Bank Banadesa.
	156-2005	To reform by addition article 87 of the Education Law, in the sense that the evaluation will take into consideration the students' performance, their aspects of their personalities, and the completion of projects, in accordance with the educational objectives.
	144-1993	To reform article 120 of the Labour Code (regarding the payment of workers' benefits).
Sector	5-1991	To create a postage stamp to commemorate the first centenary of the Liberal Party.
	387-1998	To add to the executive decree 28-97, in its article 5, that the members of the sports federations will serve for an honorary period of no longer than four years, and they will not be re-elected.
	48-2002	Organic Law of the Professional Association of Graduates in Communication.
Individual	189-1995	To give citizen Rafael Murillo-Selva authorization to accept an award conferred by the Government of Colombia.
	510-2006	To include in the National Budget a monthly budget of 100,000 lempiras for the economic strengthening of the Asociación Koinomia.
	207-1990	To grant citizen, Juan Fernando López, a lifelong pension of 3,000 lempiras.

(*continued on following page*)

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[50] To select random sub-samples within the database a variable containing pseudo-random numbers was generated. Then sub-samples for each of the sub-categories were created by shuffling the pseudo random numbers and the variables for each of the sub-categories.

Table 4.1

(*continued from previous page*)

Others	280-1993	To extend the current session by an additional 50 days, starting on the 1st of November 1993.
	538-2010	To include a budget item in the National Budget, fiscal year 2011, for the Secretary of Foreign Affairs, for the creation and operation of a consular office on Grand Cayman Island.
	45-1991	To instruct the Secretary of State for Finance to increase the current fiscal year budgets of the National Electoral Institutes by 7,221,758 lempiras.

4.2 Descriptive statistics

The unit of analysis in this study consists of every bill introduced by each of the permanent Honduran legislators or their substitutes between January 1990 and December 2010. As shown in Table 4.2, bills coded as *district* and *national* represent over 60 per cent of the observations included during the period of study. When *non-presentations* are excluded that figure increases to 78.5 per cent, meaning that between 1990 and 2010 more than three quarters of the bills initiated fell into the categories of district and national. The variable *non-presentations* can provide information on what type of legislators decide to present bills or not, given that depending on the electoral system some deputies will have greater incentives to introduce bills or not.

Table 4.2. Descriptive statistics of bill introduction by the deputies of the Honduran Congress, 1990–2010

Type of bill	Observations	Per cent
National	2,162	33.20
District	1,794	27.54
Non-presentations	1,479	22.71
Sector	595	9.14
Individual	367	5.63
Others	116	1.78
Total	6,513	100

In Table 4.3 I present the percentages for bill initiation in the National Congress of Honduras between 1990 and 2010. The figures are broken down by legislature.[51] An additional column indicates the number of seats the party held during that legislature. *Non-presentations* refers to the percentage of legislators who did not introduce bills in the four years of each legislature. During the CLPR period, as one might expect, it can be noticed that the main opposition party had the most non-

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[51] It must be borne in mind that in Honduras deputies serve for terms of four years starting on the 21st of January after their election, which takes place in November of the previous year. Therefore, the change from one legislature to the next happens in January of the same year.

presentations per legislature. In contrast, few legislators from the party in government fell into this category. The figures for this variable are also relatively minor for the smaller parties. During this period, all parties tended to introduce a majority of national bills, followed by district bills in second place, then sector and individual bills. Note that district bills tend to increase in importance between each legislature. For instance, by the end of the 1990–1994 period, the percentage of district bills was 11 per cent. At the end of the following legislature that figure increased to 18.1 per cent. By January 2006, the last month of the last legislature of the CLPR system, the percentage of district bills was 27.2. That does not mean that the presentation of other types of bills decreased. In fact, the increase in district bills seems to be correlated with a gradual reduction in the number of legislators who did not present bills.

During the OLPR period the percentage of national bills increases, particularly among the smaller parties. Nevertheless, we can notice that in the 2006–2010 legislature, 50 per cent of the bills introduced by legislators from the party in government were district bills. It is difficult to say whether that pattern will be repeated in the 2010–2014 legislature, because at the time this thesis was written only two years of the legislature had been completed, and data was available only for the first year. However, as I will show later, it seems that during the first year of that legislature there was a tendency among all the political parties to introduce mainly national bills and then district bills, a tendency that was higher still if it is compared to the CLPR period.

Table 4.3. Introduction of bills by political parties in the Honduran Congress, in percentages, 1990–2010 legislatures

Electoral system	Legislature	Party	Seats	Percentage of bills by type					Percentage of non-presentations
				District	National	Sector	Private	Others	
CLPR	1990–1994	PLH	55	7.6	29.4	4.4	3.8	1.6	53.2
		PNH*	70	13.8	29.7	13.0	4.7	3.1	35.7
		PINU-SD	3	0.0	69.2	3.8	0.0	3.8	23.1
		Total	128	11.0	30.8	9.4	4.2	2.5	42.0
	1994–1998	PLH*	70	24.4	35.0	10.9	4.4	2.4	23.0
		PNH	56	7.0	24.7	4.0	2.3	1.7	60.3
		PINU-SD	2	0.0	80.0	10.0	5.0	0.0	5.0
		Total	128	18.1	32.6	8.6	3.7	2.1	34.9
	1998–2002	PLH*	67	29.7	36.4	10.0	6.2	2.5	15.3
		PNH	55	11.5	34.2	7.0	2.2	0.6	44.5
		PINU-SD	3	0.0	53.3	0.0	0.0	0.0	46.7
		PUD	1	0.0	77.8	0.0	0.0	0.0	22.2
		PDCH	2	6.1	54.5	21.2	6.1	6.1	6.1
		Total	128	23.5	36.7	9.3	5.0	2.0	23.5
	2002–2006	PLH	55	23.8	28.5	6.9	6.9	0.5	33.3
		PNH*	61	29.4	29.7	8.6	10.4	1.9	20.0
		PINU-SD	3	4.5	59.1	9.1	18.2	0.0	9.1
		PUD	5	17.5	47.5	10.0	2.5	0.0	22.5
		PDCH	4	36.3	37.2	13.3	8.8	2.7	1.8
		Total	128	27.2	31.1	8.5	8.9	1.4	22.9
OLPR	2006–2010	PLH*	63	50.2	26.3	8.2	5.1	2.1	8.1
		PNH	54	28.7	35.4	10.2	7.3	0.6	17.8
		PINU-SD	2	35.5	45.2	16.1	3.2	0.0	0.0
		PUD	5	9.1	61.8	10.9	7.3	1.8	9.1
		PDCH	4	34.4	31.1	23.0	6.6	0.0	4.9
		Total	128	41.6	30.7	9.6	5.8	1.5	10.8

Table 4.3
(continued from previous page)

Electoral system	Legislature	Party	Seats	Percentage of bills by type					Percentage of non-presentations
				District	**National**	**Sector**	**Private**	**Others**	
OLPR	2010–2014[1/]	PLH	45	31.9	44.5	4.9	9.3	0.0	9.3
		PNH*	71	35.7	40.7	5.3	8.7	1.5	8.0
		PINU-SD	3	5.6	83.3	5.6	0.0	5.6	0
		PUD	4	8.3	58.3	8.3	8.3	8.3	8.3
		PDCH	5	43.8	37.5	0.0	15.6	3.1	0.0
		Total	128	33.1	43.8	9.1	4.9	1.4	7.7
Total			768	7.6	29.4	4.4	3.8	1.6	53.2

Notes: The mark * indicates the party in government. [1/] Data for this legislature considers only the year 2010.

Figure 4.1 illustrates that when the totals for each type of bill per year are compared, national and district bills are those introduced most frequently by Honduran legislators. After 1992, the year of the first ballot reform, some degree of disturbance in the trends can be observed, specifically a slight increase in the number of national and district bills. Between 1997 and 1998, three significant events occur. In 1997, the legislative ballot was completely separated from the presidential ballot. In January 1998, a new legislature with deputies elected under the non-fused CLPR system came into effect. At this point, the graph shows that the number of national bills introduced increases considerably in comparison to previous years. However, in October of the same year Hurricane Mitch hit the country. In the year after this natural disaster, national bills actually increased in number. By 2000, a significant decrease in these bills can be seen. This seems to be correlated with a rise in the number district bills introduced. In the period between Hurricane Mitch and 2004, in 2003, there is another important peak in the number of district bills. Also worth noting is that the number of legislators who do not introduce bills has been declining slowly since 1990.
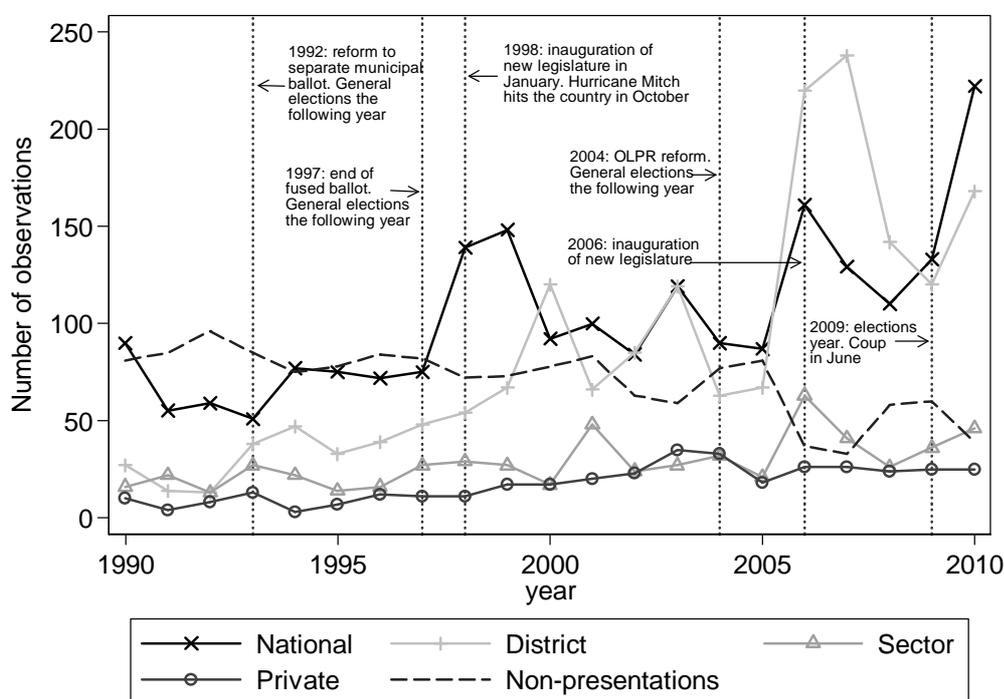
Figure 4.1. Introduction of bills by type, and non-introductions, by Honduran deputies in the period January 1990–December 2010

Despite the gradual changes observed in the 1990s, and in spite of the disruption to previous trends that occurred in the aftermath of Hurricane Mitch, the most important changes are observed after the OLPR reform. For instance, in 2006 the number of district bills grew in an unprecedented manner. Then around 2007 the number of bills introduced started to decline rapidly. Two hypotheses could provide an explanation for this decline. The first is that bill introduction behaviour is seasonal and that political cycles determine that seasonality. As can be noticed in Figure 4.1 above, in 2004 and 2008 there are significant declines in bill introduction, particularly of district bills. During those years primary elections were held under the new system. By contrast, 2006 and 2010 are years in which governments were inaugurated. While there is no evidence in this specific case to understand how political cycles work in Honduras, it is not irrational to suppose that legislators will tend to spend more time campaigning in their constituencies during primary election years. By contrast, during non-electoral years there are probably fewer incentives to campaign in their constituencies.[52] The second hypothesis is that OLPR makes it more difficult to get legislation passed—see Figure 4.2 below—and that this in turn potentially discourages legislators from introducing bills.[53]

As well as an increase in the number of district bills, 2006 also saw very high levels of national and sector bills. In the case of national bills, the peak is similar in magnitude to that of 1999. However, it was in 2010 that the introduction of these types of bill reached its zenith. In terms of sector bills, the increase of 2006 is the highest registered during the time frame considered in this study. Moreover, the number of legislators not introducing bills dropped considerably in the 2006–2007 period, a reduction that seems to be correlated with the rise in the number of national but especially district bills.

There are no formal impediments to the presentation of bills by deputies. And the incentives to present them can go beyond the mere fact of whether the bill is

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[52] Electoral cycles probably also affect the ordinary functioning of the Honduran Congress. The absence of deputies from parliament is probably more common the closer to an election, both primaries and general as are recesess requests to dedicate time to campaigning.

[53] One could argue that the decline in bills introduction after 2007 occured because deputies had initially thought that increasing the number of such bills was a rational response to the new electoral system but then concluded otherwise. However, judging by the increase in the introduction of national and district bills in 2010—an inauguration year—there is more support for the hypothesis that the bill introduction behaviour is seasonal rather than a finite outcome in response to the electoral system change of 2004.

passed or not. According to one of the interviewees, "most bills are draft budget proposals that come through the deputies to record their interest in the needs of their communities. Most are rejected directly by Finance, but the rest are dealt with at the time of negotiating the budget."[54] Another of the legislators interviewed suggested that there are internal negotiations within the political parties and between parties, as well as with the Congress Directorate, to decide who present bills, in what areas and on behalf of which constituencies:[55]

> Some legislators present bills with national scope, but in order for them to do so there must exist a consensus within the party and among the deputies represented in Congress, and the deputies of each constituency, to present, for example a bill seeking funding to build roads, municipality markets, or for the conversion of schools into community colleges. This is a complex process, and there has to exist a consensus among the deputies of the departments and the Congress Directorate.[56]

Taylor-Robinson & Díaz (1999) argue that the internal structure of the Honduran Congress provides incentives for legislators to negotiate power and perks. In this regard, the presentation and approval of bills is often the result of previous arrangements to decide strategic positions such as committee assignments and the appointment of the President of Congress, a position with a fixed term of four years. Figure 4.2 shows the percentage of bills presented by Honduran legislators in relation to the total number of bills presented in the Honduran Congress. Notice that after the electoral reforms of 1992 and 1997 the percentage of bills presented by legislators increased. After the reform of the electoral system to OLPR in 2004 there was a sharp decrease. However, following the inauguration of the new legislature elected under that system the percentage of bills presented by legislators increased substantially in comparison to the previous period. The graph also presents the percentage of bills passed as part of the total for bills presented by legislators. In this case, note how the percentage of bills passed increased after 1993, but started to decrease after the legislative and the presidential ballots were unfused in 1997. There is a sharp decrease in the percentage of approved bills after the system changed from

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[54] Deputy of the National Party of Honduras, personal interview, 7th February 2012.

[55] In a recent article, Grimmer, Messing and Westwood (2012) suggest that constituents may be more responsive to the number of a legislator's credit-claiming messages than the actual amount of money secured for the community by that legislator. It may therefore be further argued that, as the legislator quoted in this paragraph intimates, merely initiating a bill serves to send a message to constituents about the work of the legislator.

[56] Deputy of the National Party of Honduras, personal interview, 15th February 2012.

CLPR to OLPR in 2004, which could be an indication that negotiations have become more difficult in the Honduran Congress with institutional changes that decentralize power from the Executive to the Legislative branch.
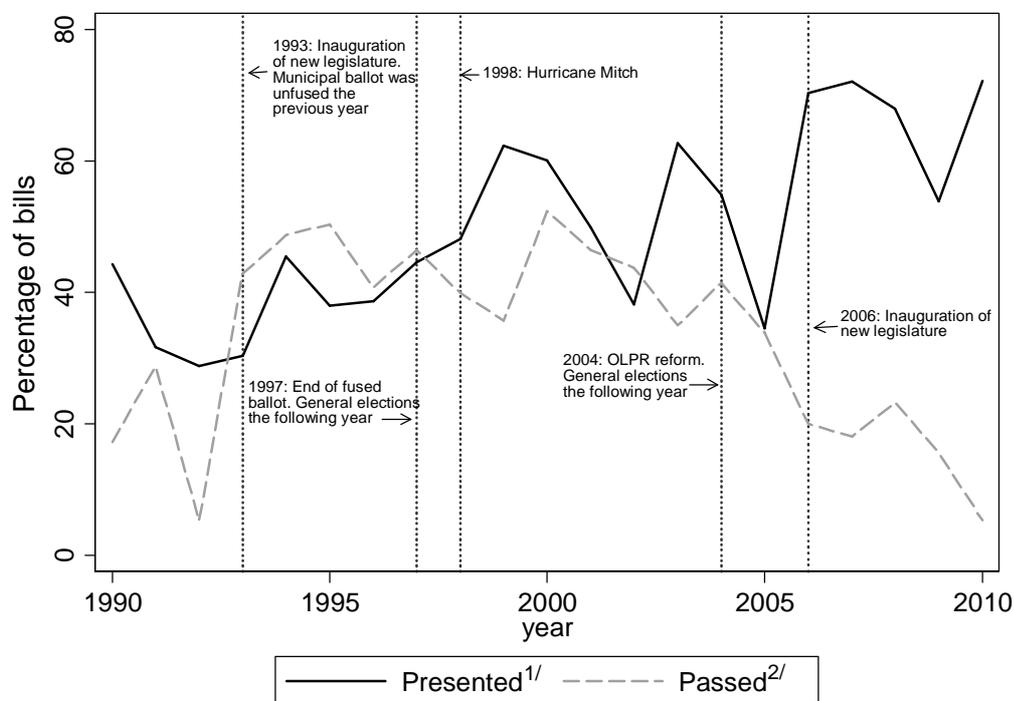
Figure 4.2. Percentage of bills introduced by legislators in the Honduran Congress by year [1]/Percentage in relation of the total number of bills presented by year. In addition to legislators, the Executive, the Judiciary and the National Electoral Tribunal can present bills. [2]/This is the percentage of bills passed as a share of the total of bills presented only by legislators. It was not possible to get a proper statistic for bills passed in 1992; as a result, it cannot be confidently stated whether the irregular pattern of bill approval observed that year is because of the legislators' behaviour or whether it is because of the form in which passed bills were recorded in the Honduran Congress.

To conclude this section, the preliminary evidence from the analysis of the dataset of introduction of bills per legislator in the Honduran Congress presented in this chapter seems to suggest that, in a longitudinal form, there is an association between the change in electoral system and the type of bill introduced by legislators. While there seem to exist some signs of endogeneity between those two variables, particularly after Hurricane Mitch, the most dramatic changes are observed after the institutional change of 2004. The variation is consistent with the theory, in other words, that greater importance is given to district bills under open-list PR (pork or local goods) than to national bills (non-targetable goods).

4.3 Parliamentarian survey data

Since 1994, the Ibero-American Institute of the University of Salamanca in Spain has conducted a series of surveys using as populations of study parliamentarians in all the Latin American countries. The project is called "Latin American Parliamentarian Elites Project" (PELA). The Honduran Congress inaugurated in January 1994 was included in the first round of interviews. Since then, every time a new Congress has been inaugurated, the University of Salamanca has sent a team of researchers to conduct interviews with a representative sample of the Honduran legislators. A total of five studies have been carried out, one for each of the following legislatures: 1994–1998, 1998–2002, 2002–2006, 2006–2010, and 2010–2014.

Since its beginnings, the reputation of PELA has increased and a considerable number of academics in the social sciences have used the survey data to conduct analyses on issues related to Latin American parliamentarians. The results of some of these investigations have been published by reputable publishing houses and in high-ranked peer-reviewed journals. For instance, Kitschelt et al.'s (2010) analysis of Latin American party systems is founded on the information gathered by PELA for its databases in the 1997 round of surveys. Saiegh (2009) uses the information on the parliamentarians' ideological self-positioning to comparatively analyse ideological variation among Latin American legislators. Carey (2009) and Carey and Reynolds (2007) utilize these databases to obtain information on the accountability of legislators towards their party leaders.

The PELA survey of 1994 did not include some of the questions that are relevant for constructing the dependent variables for the present analysis. However, the analyses that took place between 1998 and 2010 share many similarities. It was therefore decided to focus the analysis on this period, which provides samples of deputies from two legislatures elected using the CLPR system and two legislatures elected under OLPR. Similar surveys conducted by the same team of researchers in other Latin American countries yielded very low rates of response (e.g. Kitschelt et al., 2010, p. 348). In the case of Honduras, the proportion of legislators surveyed exceeded 50 per cent of the population of parliamentarians in each round of interviews. In order to create a sample with a fixation directly proportional to the population, each political party represented in Congress was taken as a stratum in the survey design. Random sampling was applied to each stratum of legislators.

Table 4.4. PELA surveys design by legislatures included in the analysis and electoral system type

Electoral system	Legislature	Dates of interviews	Sample size n (%)	Strata	Distribution of legislators in Congress	%	Distribution of designed surveys	%	Completed surveys	%	Weight	Confidence intervals[1/]
		6th July–15th August 1998	71 (55.5)	PLH	67	52.34	37	52.11	37	52.11	1.00	± 11.1
				PNH	55	42.97	30	42.25	30	42.25	1.02	±12.4
	1998–2002			Other parties	6	4.69	4	5.63	4	5.63	0.83	
				Total	128	100.00	71	100.00	71	100.00		±8.0
CLPR		1st–24th October 2002	102 (79.7)	PNH	61	47.66	49	47.57	48	47.06	1.01	±6.73
				PLH	55	42.97	44	42.72	42	41.18	1.04	±7.59
	2002–2006			PUD	5	3.91	4	3.88	5	4.90	0.80	±0.00
				Other parties	7	5.47	6	5.83	7	6.86	0.80	±0.00
				Total	128	100.00	103	100.00	102	100.00		±4.58
		2nd–31 July 2006	91 (71.1)	PLH	62	49.44	44	48.35	44	48.35	1.02	±8.22
				PNH	55	42.97	39	42.86	39	42.86	1.00	±8.75
	2006–2010			PUD	5	3.91	4	4.40	4	4.40	0.89	±25.82
				Other parties	6	4.69	4	4.40	4	4.40	1.07	±33.33
				Total	128	100.00	91	100.00	91	100.00		±5.78
OLPR		1st March–5th April 2010	91 (71.1)	PNH	71	55.47	50	54.95	50	54.95	1.01	±7.77
				PLH	45	35.16	32	35.16	32	35.16	1.00	±9.65
				PDC	5	3.91	4	4.40	4	4.40	0.89	±25.82
	2010–2014			PUD	4	3.13	3	3.30	3	3.30	0.95	±35.34
				PINU-SD	3	2.34	2	2.20	2	2.20	1.06	±57.74
				Total	128	100.00	91	100.00	91	100.00		±5.84

Notes: [1/] 95.5 per cent two-tailed confidence intervals.
Source: PELA (2011).

Table 4.4 above describes the design of each of the survey rounds included in the present analysis. The interviews were conducted personally over periods of two to five weeks. In the fourth column is the survey sample: data for the actual responses received is presented both in absolute numbers and in percentages, which are calculated in relation to the total number of responses per round. The columns under the heading *Sampling* detail the criteria used for the sampling procedure, specifically the strata, the total number of seats and their distribution by party in Congress, the designed survey, and the actual number of responses per legislature and per party. The remaining two columns present the weight that should be employed for the normalization of the data before conducting analyses, and the estimated sampling errors for a two-tailed confidence interval of 95.5 per cent.

4.4 Dependent variables

Building on the theory developed in Chapter 2, there are three dimensions of their work that can provide information on legislators' personal vote-seeking behaviour: (1) constituency service, (2) representation of interest groups, and (3) the provision of public goods. As I will explain in the following sections, I have selected three questions from the PELA surveys to use as dependent variables. These are related to pork-barrel politics, the representation of interest groups, and the formulation of laws as common activities of parliamentarians.[57]

4.4.1 Pork-barrel politics

To analyse the constituency service behaviour of legislators, I used the question "[w]hat degree of importance do you attach, during the course of your parliamentary activities, to providing resources for your constituency?" For ease of reference, I will label this variable simply as *pork*. I chose this question for two reasons: first, of all similar questions in the PELA surveys, it was the one that best approximates the pork-barrel behaviour of Honduran deputies. The second reason to conduct the analysis based on this question was that it had not changed in its phrasing over time or in the scale of its answers, facilitating comparison across the different surveys analysed in this chapter. To answer this question, legislators were given a list of options, ordered on a scale in the following manner: (1) none at all, (2) little, (3) a good deal, and (4) a great deal.

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[57] See Appendix 4.2 for a detailed description of the questions used in this chapter.

Figure 4.3 shows the variation of the responses for the variable *pork*. Overall, most surveyed legislators showed a very positive opinion towards pork-barrel politics. In 1998, more of the responses fell into the *a great deal* category than in other years. However, it must be taken into consideration that during that year the sample was smaller than in the subsequent rounds. Only one legislator picked *none at all* as an answer. Between 2002 and 2010, a gradual decrease in the percentage of legislators who chose *a great deal* as their answer can be observed, paired with a slight increase in the responses that fell into the *a good deal* category. In 2010, the percentage of legislators who selected *little* is very low compared to the previous years.
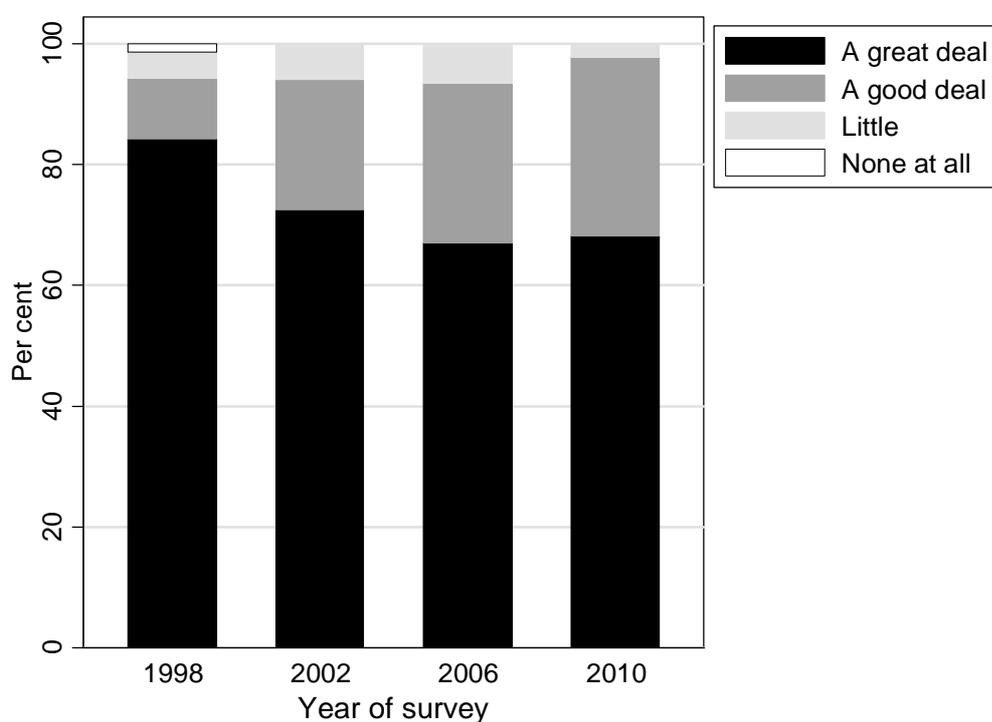
Figure 4.3. Distribution of the importance of pork for Honduran legislators, in percentages. PELA surveys 1998–2010. The question used to construct this graph asked legislators: "[w]hat degree of importance do you attach, during the course of your parliamentary activities, to providing resources for your constituency?"

4.4.2 Representation of interest groups

In each survey conducted between 1998 and 2006 deputies were asked to what extent they take into consideration the opinions of different groups, individuals, and institutions when making policy decisions. They were presented with a list of categories, one of which was 'interest groups.' Legislators had to rank their answers for each category according to the following scale: (1) not at all, (2) to little extent, (3) to some extent, and (4) to a great extent. In the survey of 2010 the question changed,

asking legislators to choose from the same list of groups and institutions given in the previous years and rank them first and second in order of the importance of their opinions on the legislator's policy decisions. Given this change of measurement, it was necessary to find a way compare the different rounds of surveys. One possibility was to standardize the scale. However, when applying this procedure the researcher has to make sure that the resulting scale reflects unidimensionality, which means that "each item measures the same underlying concepts" (de Vaus, 1991, p. 255).

I tried to create a single scale that could make the scales used in the questionnaires of 1998–2006 comparable with the one employed in 2010. Nevertheless, while in the case of the 1998–2006 surveys I found a more uniform distribution across items, in the 2010 survey virtually all observations fell into one item. Therefore, it could not be assumed that the scales were unidimensional. Fortunately, the period 1998–2006 covers variation in the type of ballot, which is our major concern, even though fewer observations subtracts degrees of freedom to make inferences.

Figure 4.4 displays the variation of the responses for the *representation of interest groups* variable in percentages. It can be noticed that in 2002 and 2006, the percentage of legislators who chose the answers *not at all* and *to little extent* increased in comparison with 1998. In 2002, there was a significant decrease in the percentage of legislators who chose *to a great extent*. In 2006, however, the number of responses that fell into that same item increased in comparison to the previous survey. Overall, visual inspection of the data does not reveal patterns that could be related to the electoral system change of 2004.
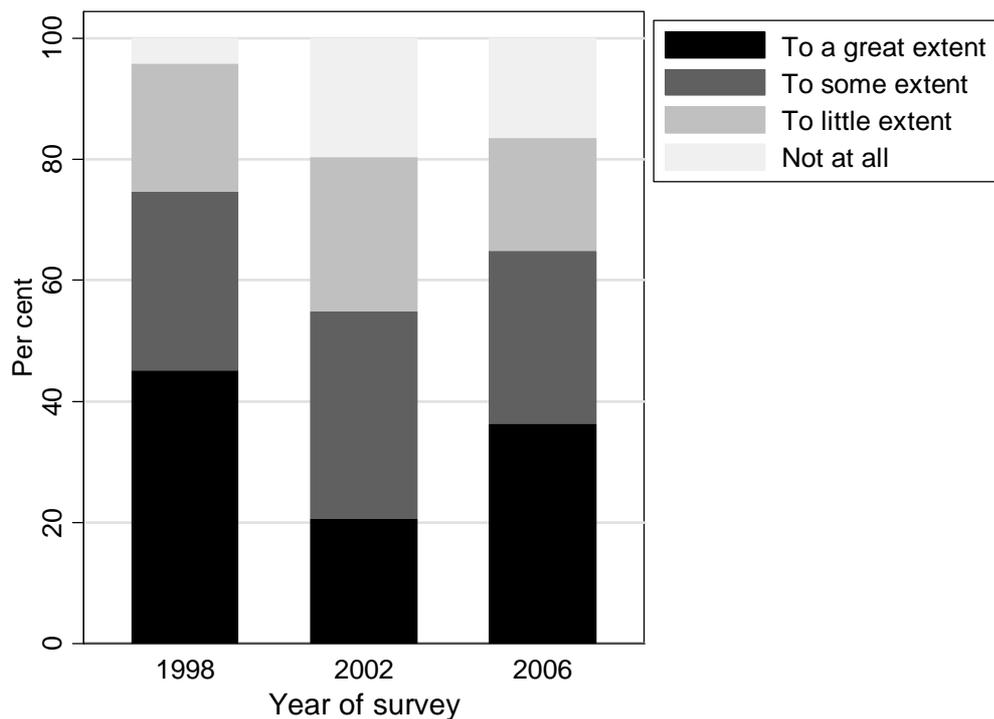
Figure 4.4. Distribution of the variable _representation of interest groups_, in percentages. PELA surveys 1998–2006. The question used to construct this graph asked: "[t]o what extent do you take into consideration the opinion of each of the following groups, individuals, or institutions when making policy decisions?" This graph shows the results for questions relating to interest groups.

4.4.3 Non-targetable goods: formulation of laws

In order to measure the provision of non-targetable goods by Honduran legislators, I chose an item related to the formulation of laws. As I have previously explained, the formulation of laws by deputies is one of the principal ways in which they can deliver general public goods (Cox & McCubbins, 2001; Crisp et al., 2004). Apart from the theoretical importance of this parliamentarian activity, by studying this variable through survey data, I can compare it with the observed behaviour of bill introduction in the Honduran Congress.

The question regarding law formulation has changed across the different survey rounds. In the survey of 1998, deputies were asked how important is during the course of their parliamentary work to making laws. They had to choose one of the following answers: (1) none, (2) a little, (3) some, and (4) a lot. In the 2002 and 2006 surveys, the question asked them to select from a list the three aspects of their work as deputies to which they attach most importance, one option being _making laws_. To answer this question they had to rank those aspects first, second, and third in

descending order of importance. The same question was used in the 2010 survey; however, this time legislators were asked to name only the first and second most important aspects of their work.

I rescaled the surveys held between 1998 and 2010 to make them as comparable as possible, without sacrificing data. Because in 1998 the highest value is 4, and is then reduced in the following surveys, to facilitate the comparison it was assumed that for that year the values 1 and 2 could be combined into a single category, 'low'. I then subtracted one from each of the values 3 and 4, making 2 the value for medium and 3 the value for high. Again, because in 2010, at the time the data was being coded, each category was included in different columns in the matrix, when I created the variables for that particular year I coded the resulting missing values as 1s (i.e. as having a value of 1) and assumed that these were the lowest responses for that item. To summarize, the resulting scale ranged between 1 and 3, where 1 reflects low levels of importance attached by legislators to making laws, 2 refers to medium levels, and 3 to high levels of importance for the same item. As can be observed in Figure 4.5, between 2002 and 2010 there is a trend which seems quite uniform in the sense that it shows an increase in responses falling into the high category, which is correlated with a decrease in the responses included in the low category. The same behaviour is not observed in the 1998 survey. However, notice that the percentage of responses in the medium category is very similar across all survey rounds. This would seem to imply that there is unidimensionality in the rescaled items. Nevertheless, in order to provide additional certainty, I will conduct robustness tests in Chapter 6, the parliamentarian survey analysis.
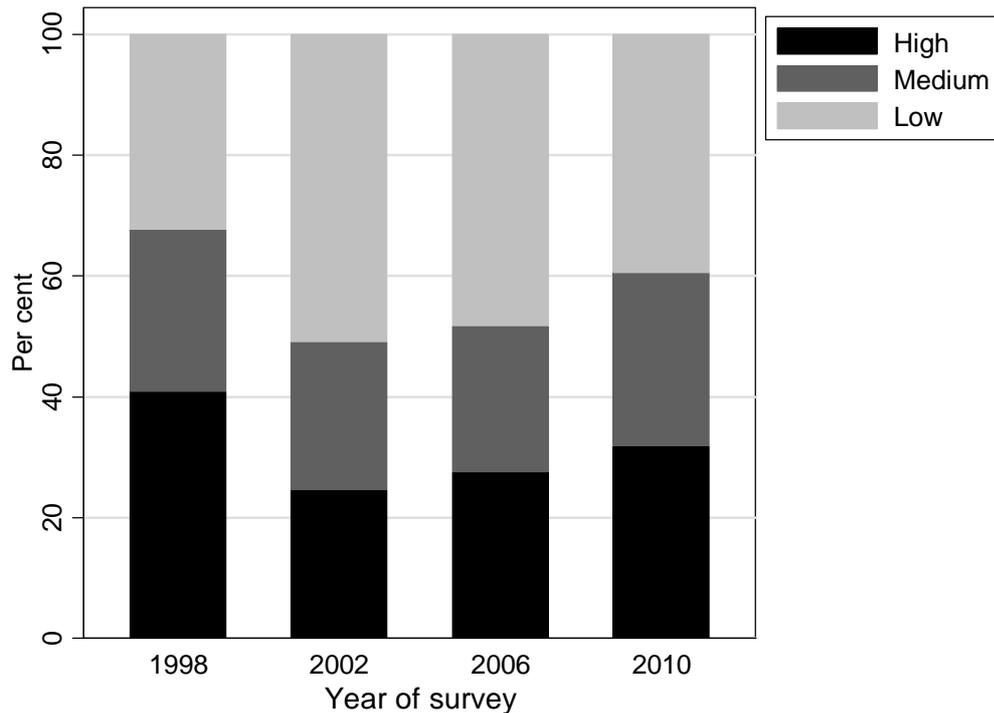
Figure 4.5 Distribution of the variable *making laws* for the Honduran legislators, in percentages. PELA rounds of surveys 1998-2010. There have been three versions of the questions asking legislators the importance they attach to formulating laws. The first in 1998, the second used in the surveys of 2002 and 2006, and the last one used in 2010. The items were rescaled in a range from low importance to high importance.

To conclude this section, I have shown that the Parliamentarian Elite Survey databases of the University of Salamanca contain valuable information that enables us to test the personal vote-seeking behaviour of legislators in Honduras. Because there is a high rate of response among Honduran parliamentarians across the four survey rounds that I will use in the analysis, we can have more confidence in the inferences. Moreover, the PELA surveys include information about the legislators' individual characteristics that I can use to test hypotheses regarding the impact their personal attributes have on pork-barrelling, the representation of interest groups, and law formation.

4.5 Geographical distribution of grants

In the present work I also use a dataset on social investment projects executed between 1990 and 2009 by the Honduran Social Investment Fund (FHIS). This dataset enables us to evaluate the impact of electoral systems on pork-barrel spending using actual data. There is an extant literature that proves the political influence of legislators on governments' decisions relating to the geographical

allocation of their spending (e.g. Ferejohn, 1974; Golden & Picci, 2008; Hallerberg & Marier, 2004; Lizzeri & Persico, 2001). As I will show in this section, the case of FHIS provides an excellent source of data to test how the type of electoral system in use also influences the final allocation of spending.

There are several reasons why I chose to conduct an analysis on the data relating to this particular institution. One important criterion was the availability and quality of the data. Since its foundation, FHIS has kept a systematized electronic record of the projects it has executed, including information on the sources of the budget, the amount of funding spent in the course of each project, and the place where the project was carried out. The level of disaggregation of the data was another criterion on which I based my analysis of the FHIS dataset. The data is disaggregated even at the sub-municipal level, which allowed me to control for different factors that pertain specifically to municipalities and could interfere with the statistical analysis. Finally, as I will later detail, the qualitative evidence suggests that this institution is prone to pork-barrel politics.

4.5.1 Evolution of FHIS

FHIS was created in February 1990 as a means of mitigating the effects of the structural adjustment programmes that had been recently introduced (Banegas-Lazo, 2009; FHIS, 2005). According to its constitutive law, the main objective of this institution is to promote improvement in the living conditions of marginalized social groups in both rural and urban areas by providing funding for programmes and projects of social or economic development, in order to increase productivity, employment levels and income, and contribute to meeting these populations' basic needs (Congreso Nacional, 1990). Since its creation, this institution's main source of finance has been international aid, provided in the form of donations or loans with very low interest rates and special conditions meant to promote development. Institutions such as the World Bank, the Inter-American Development Bank (IADB), KfW Bankengruppe, and the European Commission are among its principal partners, which also include other countries. Besides international funding, FHIS also receives national budget transfers and help executing projects from other ministries in Honduras.

The historical development of FHIS since its creation is closely tied to the credits it has received from the World Bank and the Inter-American Development

Bank. The institution received five credits between 1990 and 2005. The first, for a programme known as FHIS I, was approved in 1990 and its execution started in March that year. This credit ran until the 31ˢᵗ of March 1994. The objectives of this programme were: (1) to mitigate the social costs of adjustment, (2) to establish the basis for a decentralized programme of direct support for the poor and malnourished, and (3) support improvements in service delivery in the social ministries (Education and Health) (World Bank, 1994).

In July 1992, FHIS II was approved, beginning that month and running until October 1995. The objectives of this programme were:

> to help GOH (the Government of Honduras) to sustain its poverty alleviation efforts and maintain social cohesion during the period of economic adjustment, while the line ministries strengthened their institutional capacities and completed policy reform programs, building upon the achievements of SIF (the Social Investment Fund) I. As a follow-on to SIF I, the project was to provide additional funding to FHIS to continue to finance subprojects in social and economic infrastructure, social services, and informal sector credit. An ancillary component was to provide institutional strengthening through technical assistance to the National NGO Liaison Office (NLO) (World Bank, 1996, p. i).

The distribution of spending in FHIS I and II was meant to be neutral; in this regard, there was not a strict geographical targeting of the poorest populations. Instead, the resources were allocated across most municipalities with no consideration of the differences of their levels of socioeconomic development (World Bank, 2006, p. 13).

As agreed in the terms and conditions of the credits, FHIS was created as a short-term initiative. Towards the end of FHIS II, the execution of projects slowed down as a consequence of the electoral campaign and uncertainty among the staff regarding the continuity of the programme under a new government. FHIS was created under a PNH presidency; nonetheless, the new government inaugurated in January 1994 and headed by a PLH president secured its continuity and negotiated a third credit with the World Bank and other creditors. The objectives of the third credit were similar to those of the second, but the lenders considered that the country was now ready to start moving into a different phase, where only the poorest municipalities were eligible to receive spending from this institution.

FHIS IV, approved in early 1998, carried on the logic of focusing on the poorest municipalities. It incorporated the execution of participatory budgeting pilots with the intention of cementing the decentralization process initiated in the previous phase. More importantly, participatory budgeting was intended to ensure transparency and that the funds would reach the poorest populations to address their "actual" needs through prioritization of the projects (World Bank, 2006).

After Hurricane Mitch hit Honduras in October 1998, the international donors decided to relax the normal project procedures in order to allow the re-allocation of resources to emergency relief efforts. In addition, in December 1999, the World Bank assigned a further instalment of funding in the amount of US$ 22 million to help the areas most affected by the hurricane. It was also decided to suspend the participatory budgeting programme and focus efforts on reconstruction. According to an evaluation report for FHIS IV, because normal transparency procedures were suspended, this situation gave rise to irregularities in the allocation of the available resources (World Bank, 2006, p. 8).

The donors wanted to resume the normal execution of FHIS IV as agreed in the terms of reference of the contract, but there was lack of will among the national authorities, and as a consequence the term of the programme had to be extended. Those delays meant that FHIS V was not approved in 2002 as planned, but in 2005. A condition of the credits for FHIS V was that spending should be decentralized and targeted using a map of poverty which would identify the poorest villages in the country (World Bank, 2006).

4.5.2 Types of projects

Projects at FHIS are divided into different programmatic areas: (1) the *Local Development and Decentralization Programme*, which manages what is called within the institution "minor-infrastructure projects." These are small projects aimed at providing basic social services in the areas of education, health, sanitation, road engineering, and drinking water supply systems. Some examples include classroom buildings and participatory budgeting training courses. (2) *Major Infrastructure Projects*. This programme manages larger size projects in the following areas: water supply, sewerage, wastewater treatment, storm water drainage, landfills, municipal markets and slaughterhouses, and also has a component on road and bridge repair. (3) *Social Assistance*. This is targeted at providing assistance to populations other than the poor,

but who are still vulnerable, such as older people, children, teenage mothers, the homeless, and ethnic minorities. (4) *"Our Roots"* (*Nuestras Raíces*) aims to develop projects specifically tailored to indigenous and Afro-descendent groups that help them to cover basic social needs such as those included in other programmes. (5) *Health and Education* is a special scheme dedicated to the construction of infrastructure exclusively for health and education purposes. (6) *Combat Chagas Disease.* Its main objective is to improve the household conditions in rural areas vulnerable to the Chagas disease (FHIS, 2005).

4.5.3 Pork-barrel mechanisms

There are different avenues through which legislators might facilitate the allocation of internationally-funded projects to strategic territories in their constituencies. A programme evaluation report conducted by the World Bank criticized the tendency of some international cooperation agencies to use FHIS as "patchwork of donor-financed programs" which do not necessarily conform to the core activities of the institution (World Bank, 2006, p. 26), essentially facilitating the use of some international moneys for pork-barrel activities.[58] Nonetheless, it is difficult to control for the origin of the funds in the present work, especially when these are combined with national public funds.

The same evaluation report has pointed to a further deviation from FHIS' original objectives in that their efforts are not necessarily directed at the poorest municipalities:

> In recent years, there has been some pressure on FHIS, for example in the context of the Consultative Council that oversees the implementation of the Honduran PRSP (Poverty Reduction Strategy Paper), to allocate resources only to the poorest municipalities. But this proved politically impossible. As the FHIS minister stated during the mission in 2005, FHIS is a ministry and is expected to serve the whole country. Even leaving out large and rich municipalities such as Tegucigalpa and San Pedro Sula is politically impossible, according to another respondent (World Bank, 2006, p. 13).[59]

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[58] Former Programme Manager at FHIS, personal interview, 13th February 2012.

[59] As mentioned in Chapter 3, the municipality of Tegucigalpa, located in Francisco Morazán, is the capital city of Honduras. San Pedro Sula is the most economically prosperous municipality of Honduras and is the capital of the department of Cortés. These municipalities have the highest population densities in Honduras (see Chapter 3).

These restrictions, especially to its execution of internationally-funded projects, have resulted in a perceived reduction in the political influence of FHIS in comparison with other public institutions. At the same time, however, most international aid agencies have gradually begun imposing restrictions to ensure transparency and efficacy in the allocation of funds, making pork-barrel politics more difficult. For this reason, in the present study I will focus on the allocation of projects with national sources of funding from FHIS itself and from other institutions of the Honduran government that execute projects through FHIS.

FHIS is an autonomous institution but its Executive Director has the rank of minister in the Executive's cabinet. Above the Board of Directors in the FHIS hierarchy is a Superior Council of Administration, which oversees the internal regulations of the institution. The Council is composed of different representatives, including one of the vice-presidents of Honduras, the President of the Congress, and the Minister for Education. The Executive Director and the Superior Council of Administration have discretionary power in decisions concerning which projects are to be paid for with resources assigned to FHIS in the annual budget approved at the Honduran Congress. As stated in the internal regulations of the institution:

> both the Superior Council and the Board of Directors, in response to their institutional mandate, can authorize the use of Honduran state resources from the Public Treasury for projects considered of strategic interest. The cost of these projects is not charged to the pre-allocated municipal budget, and they are not subject to a participatory planning process (FHIS, 2005, p. 41, own translation).

Funds from other national institutions for projects that are executed by FHIS come essentially from national sources, but they also include moneys from international donors. In order to restrict political influence on the final geographical allocation of the project, it is not unknown for donors to divide their funds among different institutions.[60] As can be observed in Table 4.5, around 26 per cent of the nationally-funded projects executed between 1990 and 2009 were paid for from FHIS' own budget. However, most projects were executed on behalf of the Ministry of Education.

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[60] Former Programme Manager at FHIS, personal interview, 13th February 2012.

Table 4.5. Sources of funding at FHIS and their respective financial contributions in percentages, 1990–2009

Institution/donor	Contribution in percentages
Ministry for Education	34.68
FHIS	25.94
Office of the President	15.38
Ministry for Finance	12.12
Honduran Council of Science and Technology	8.61
Mixed funds (national funds only)	1.66
Honduran Institute of Childhood and Family (IHNFA)	0.95
Ministry for Agriculture	0.30
Ministry for Arts and Culture	0.18
Family Allowance Programme	0.13
Honduran Government	0.02
National Food Marketing Agency (BANASUPRO)	0.01

Source: FHIS (2009).

During its first years, FHIS operated with a centralized structure which international donors and lenders identified as a source of pork-barrel and clientelistic activities. As reported by a private consultancy firm, during FHIS I and FHIS II (1990–1998), some pork-barrel practices were common. First, the government pre-selected a range of projects for which communities could apply, rather than allowing communities to request funding for projects on the basis of their perceived needs. Second, while targeting the poorest communities has always been part of the philosophy of the institution, in practice moneys did not necessarily reach the poorest families. The consultants also found evidence of legislators acting as brokers:

> The presence of intermediaries in all of the negotiation and execution phases can be observed in every type of project, regardless of the socio-economic conditions of the beneficiary communities. This pattern seems to be related to a lack of initiative in some communities (which can itself be associated with authoritarian municipality mayors), or to the negotiation tactics employed by these communities, namely the use of intermediaries (the more politically influential, the better) to facilitate their demands (ESA Consultores, 1999, p. 27, own translation).

The political influence of legislators in the geographical allocation of projects through FHIS has also been the subject of public scrutiny (*La Tribuna*, 2003a). Moreover, one of the cables recently released by the organization Wikileaks revealed

that ministerial reshuffles under the presidency of Ricardo Maduro (2002–2006) were probably the result of unsatisfied pork-barrel demands within this institution.[61]

There are at least three ways in which legislators can seek projects for their constituencies through FHIS: (1) by sponsoring a bill in the National Congress, (2) through participation in the national budget negotiations in Congress, and (3) by brokering directly at FHIS or through the President on behalf of their constituents.

Sponsoring a bill in the National Congress

Very often Honduran legislators introduce bills in Congress requesting the Secretary for Finance the inclusion of a budget to finance an infrastructure project to be executed by one of the ministries, such as FHIS (see Chapter 5). An interview conducted in 2004 with Deputy Marco Antonio Andino, of the PLH, gives some clues as to how that mechanism works:

> We created 50 schools here in the capital. Well, we built them with the government, but if we hadn't taken the initiative, nothing would have been done. We introduced the bill in Congress, then we located the money in Finance, found the sites, the people, and made the arrangements with FHIS or other institutions for the plans and construction (quoted in Salomon, Meza & Flores, 2004, p. 180, own translation).

Further, within the introduction of bills dataset, which I described in section 4.1 of this chapter, FHIS was explicitly mentioned in eight bills as the institution that should execute the proposed projects. In addition, several other bills also included in the dataset requested budgets from the government to execute projects in the legislators' constituencies, but these do not mention which institution should be in charge of executing the projects. This means that if the projects were approved, the government could have decided to execute them through FHIS or a similar institution.

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[61] The Wikileaks' cable is read: "[a]s President Ricardo Maduro staggers to his first anniversary in office, there are emerging signs that he will make some changes in his Cabinet in an effort to recapture the political initiative in the country... FHIS Minister, Leony Yu-way, is viewed as not directing FHIS projects to Nationalist party interests in the departments. (According to political sources, this reticence is not a resistance to corruption as much as it is his unwillingness to treat FHIS projects as a political and legislative pork barrel)" (Wikileaks, 2011, para.6).

Negotiation of the institutional budget in Congress

Another possibility is that legislators seek to amend the annual budget project presented by the Executive branch in order to ensure that there are sufficient and reliable funds for the allocation of projects in their constituencies.[62] Opinions on this particular topic are divided. One of the legislators interviewed for this work stated that this is very unlikely, especially for members of Congress who do not form part of the Budget Committee.[63] In contrast, other legislators said that securing funds for projects for a constituency during the institutional budget negotiations in Congress is common practice.[64]

Brokering work

Most legislators interviewed for the present research admitted that intermediating between specific communities, particularly those who have a potential to reward their work with a good share of votes, and executive institutions such as FHIS demands a large part of their time. Since legislators must divide their time between their constituencies and the capital, they have relatively easy access to ministers and even to the president. They sometimes also facilitate audiences between mayors and ministries.[65]

For some legislators being part of the opposition is a disadvantage if they want to get pork-barrel resources for their constituencies. For example, a representative for the department of Lempira and a PLH deputy in the 2010–2014 legislature, declared: "In these two years of the current government, for us the deputies of the opposition, it has become almost standard for most ministers to answer our requests for resources for our communities by saying that certain projects are not possible because Honduras is not recognized by the international community (since the coup of 28th June 2009)."[66]

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[62] Staff member of the Planning Unit at FHIS, personal interview, 26th January 2010.
[63] Deputy of the PNH for the department of Atlántida, personal interview, 11th February 2010.
[64] Deputy of the PNH for the department of Cortés, personal interview, 7th February 2012, and deputy of the PNH for the department of Intibucá, personal interview, 15th February 2012.
[65] Deputy of the PNH for the department of Santa Bárbara, personal interview, 31st January 2012, own translation.
[66] Deputy of the PLH for the department of Lempira, personal interview, 1st February 2012.

A private programme-evaluation consultant in a randomly selected sample of 15 projects executed by FHIS between 1998 and 2002 recalls the intervention of a legislator in the facilitation of one of the projects they evaluated:

> The school teacher and her husband, who was a board member of the *patronato*,[67] said that they were the organizers of the project (to repair the community's school). On one occasion, they took advantage of the visit to the community of the then deputy, Victoria Contreras, to show her how dilapidated the school was. The deputy promised her help and shortly afterwards an engineer showed up to start the work (ESA Consultores, 2005, p. 24, own translation).

4.5.4 Descriptive statistics

A total of 22,765 projects were approved at FHIS between January 1990 and December 2009, the majority in the areas of education, municipal development, and energy. The present analysis is based on these projects. That a project is approved means that it is going to be executed. Of the total number of projects approved during that period, 4,957 were executed at FHIS using national funds. Because the focus of this study is on projects financed from national sources, Table 4.6 presents the descriptive statistics for the total amounts of these funds approved between 1990 and 2009 in the different categories into which projects have been classified by FHIS, in constant lempiras.[68] It can be observed that the majority of projects fall into the area of education, followed by employment generation and municipal projects.

Table 4.6. Descriptive statistics of projects approved at FHIS by project area, in thousands of constant lempiras

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Total	4,957	208	1,168	0	77,700
Education	3,531	190	399	0	12,200
Employment	465	32	22	3	121
Municipal	429	324	505	0	6566
Social assistance	128	122	313	0	2689
Health	104	265	245	4	1250
Water	82	485	436	0	2235
Procurment	41	2,313	12,100	11	77,700
Environment	21	297	169	1	750
Informal economy	2	462	467	132	792

(continued on following page)

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[67] In Honduras *patronatos* are community-based organizations, legally recognized by their municipal governments as representatives of the villages that comprise the municipality.
[68] The Lempira (Lps) is the Honduran currency. In recent years, exchange rates have remained relatively constant at around US$1 = 18 Lps. Real prices are calculated using the formula RS = spending / (CPI/100), where RS stands for real spending at FHIS. CPI is the consumer price index, divided by 100, which is used as a deflator (Abel, Bernanke & Croushore, 2008, p.48).

Table 4.6

(continued from previous page)

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Social infrastructure	2	230	30	208	251
Energy	1	43	0	43	43
Others	67	298	349	5	2,305

Figure 4.6 shows the averages for national and international spending at FHIS between 1990 and 2009, in constant lempiras. It can be observed that when FHIS started in 1990 there was an almost immediate increase in spending that reached an average of 2,000,000 lempiras, remaining more or less constant until 1994. Since its foundation, one of the conditions attached by international donors to their funding of FHIS is that the Honduran government must also commit funding to the institution; this contribution does not need to be equal and is, in fact, normally smaller than that supplied by the international donors. As can be observed in the graph, moneys from the national budget were minimal until the period immediately after Hurricane Mitch hit Honduras. Also noticeable is the sharp reduction in
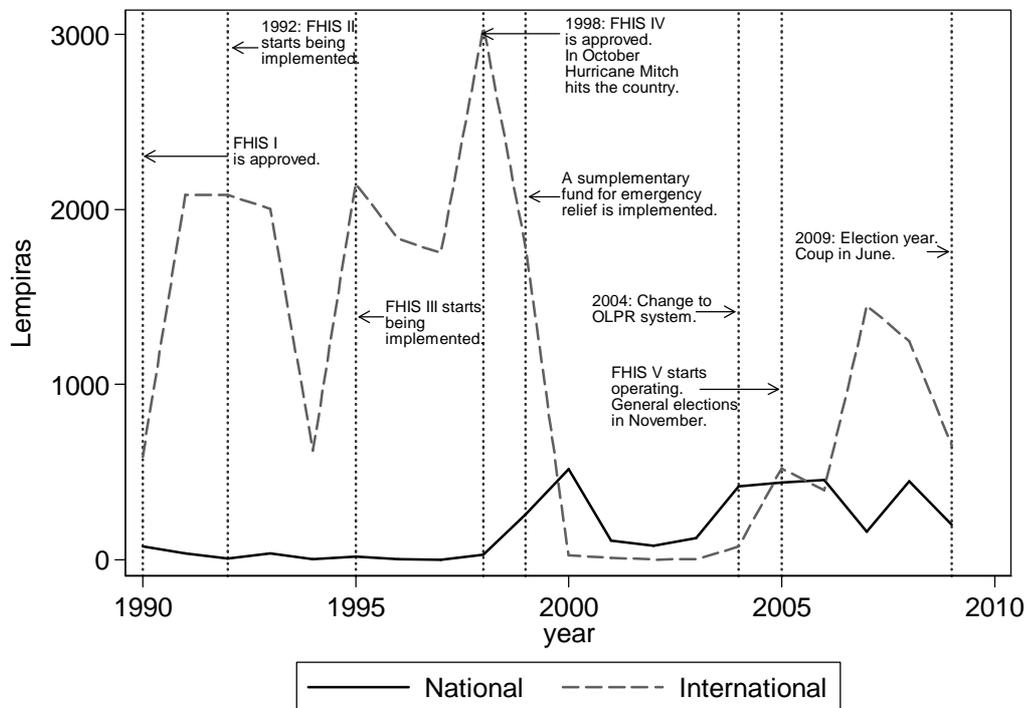
Figure 4.6. National and international spending at FHIS, in thousands of constant lempiras, 1990–2009
Source: own, based on FHIS (2009) and World Bank (1996; 2006).

international funding towards 2000, due in part to the delays in the normal execution of FHIS IV. Some donor agencies decided to suspend donations until the execution of the programme was resumed according to the established objectives.

In this section I have provided qualitative evidence from different sources that suggests a link between the geographical allocation of funds at FHIS and the influence of Honduran parliamentarians. I showed that this connection adopts different forms, from negotiations within parliament to the brokering work of legislators. The connection of pork-barrel spending data with legislators is not as direct as it is in the cases of the introduction of bills or the parliamentarians' survey responses. However, the pork-barrel spending data has the advantage that it allows for the observation of actual policy outcomes. Similarities between the results of the analysis of this dependent variable and the outcomes obtained in the introduction of bills and survey analysis datasets would lend greater confidence in the empirical strength of the theory.

In a different vein, because the data is disaggregated at the municipal level, I can control for some factors whose influence in the analysis would otherwise to be too difficult to rule out. Specifically, I can hold constant the influence of demographic variables that usually are correlated with district magnitude, such as percentage of population and the patterns of urban and rural population distribution. I will conduct the statistical analysis of the FHIS dataset in Chapter 7.

Appendix 4.1 Example of how bills are recorded in the Honduran Congress
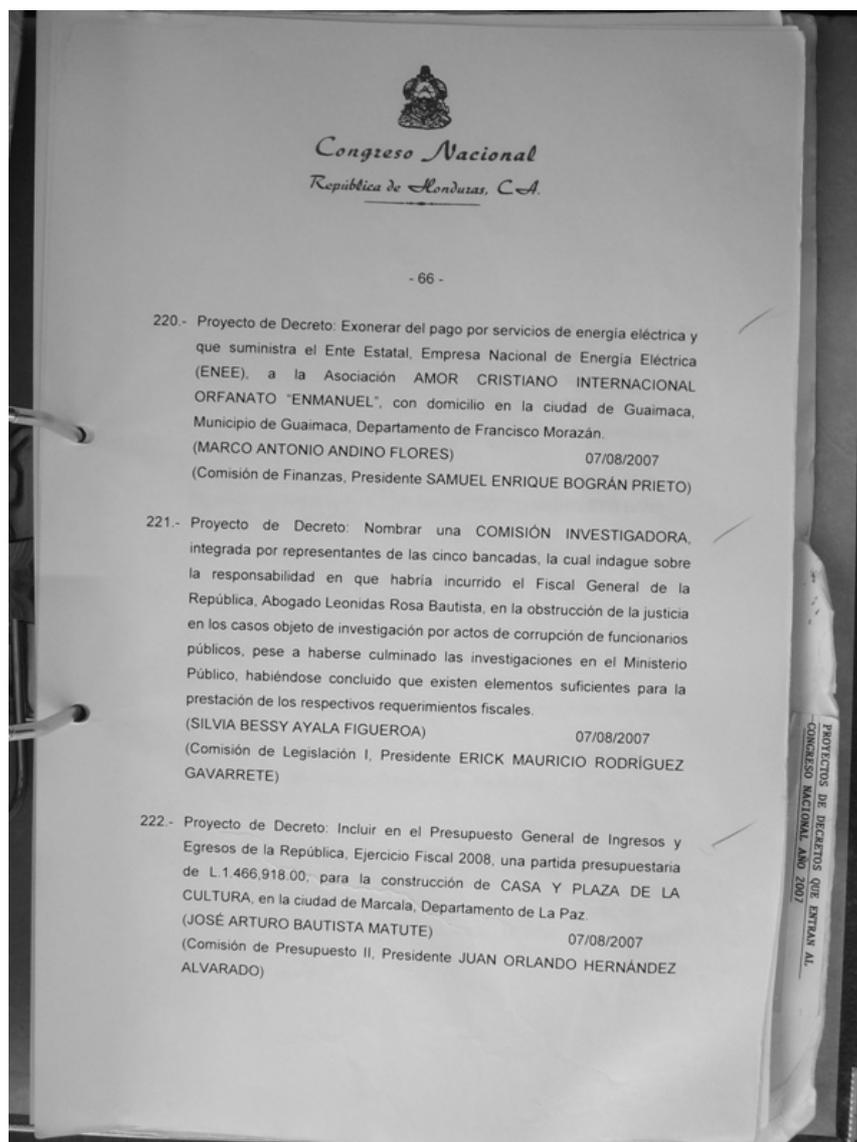
Figure 4A.1. Example of how initiated bills are recorded in the Honduran Congress. The indexes to bills are recorded in printed format. For the purposes of this research, a digital copy was taken using a digital camera. The number to the left is the code under which the bills are recorded. The name of the legislator appears in brackets immediately after the name of the bill.
Source: Secretaría, Congreso Nacional de Honduras.

Appendix 4.2 Questions used to construct the *pork, representation of interest groups,* and *making laws* variables

In Table 4A.1, I provide the translated versions of the questions used to construct the variables *pork*, *representation of interest groups*, and *making laws*. The second column from the left gives the scales that were used to conduct the analyses, after the scales were modified to match the PELA surveys. The original questions in Spanish are presented in Table 4A.2. The complete survey questionnaires can be retrieved in portable document format (.pdf) from the following website: http://americo.usal.es/oir/Elites/honduras1.htm

Table 4A.1. Questions used to construct the *pork, representation of interest groups,* and *law* variables

Variable	Measures after rescaling process	Year (question code)	Question*
Pork	4. A great deal 3. A good deal 2. Little 1. None at all 0. NA	1998 (P28) 2002 (P23) 2006 (P23) 2010 (REP1)	What degree of importance—a great deal, a good deal, little, none at all—do you attach, during the course of your parliamentary duties, to providing resources for your department? 　　A great deal (1) 　　A good deal (2) 　　Little (3) 　　None at all (4) 　　NA (9)
Representation of Interest groups	4. To a great extent 3. To some extent 2. To little extent 1. Not at all 0. NA	1998 (P59) 2002 (P52) 2006 (P56)	To what extent you do you take into consideration the opinion of each of the following groups, individuals, or institutions when making policy decisions?

	To a great extent	To some extent	To little extent	Not at all	NA
- The voters in your constituency	1	2	3	4	9
- Your party leaders	1	2	3	4	9
- Public opinion	1	2	3	4	9
- Your party's members	1	2	3	4	9
- The mass media	1	2	3	4	9
- Other deputies from your party	1	2	3	4	9
- Interest groups	1	2	3	4	9
- Your party's voters	1	2	3	4	9
- The government	1	2	3	4	9

Variable	Measures after rescaling process	Year (question code)	Question*
		2010 (REP6)	Of the following groups, people, and institutions, who you take most into account when you make political decisions? (PAUSE), and in second place? First place Second place - The voters in your constituency 1 2 - Your party leaders 1 2 - Public opinion 1 2 - Your party's members 1 2 - The mass media 1 2 - Other deputies from your party 1 2 - Interest groups 1 2 - Your party's voters 1 2 - The government 1 2
Making laws	3. High 2. Medium 1. Low 0. NA	1998 (P56)	Thinking about your work as a deputy, what degree of importance do you attach during your parliamentary activity to the following? A lot Some A little None NA - Representing the nation 1 2 3 4 9 - Making laws 1 2 3 4 9 - Solving the problems of Honduras 1 2 3 4 9 - Overseeing the government 1 2 3 4 9 - Defending your party's interests 1 2 3 4 9 - Formulating the general national budgets 1 2 3 4 9 - Representing your department 1 2 3 4 9
		2002 (P49) 2006 (P53)	Thinking about your work as a deputy, please tell me, of the following issues, to which <u>three</u> do you attach most importance during your parliamentary activity? First place Second place Third place - Representing the nation 1 1 1 - Making laws 2 2 2 - Solving the problems of Honduras 3 3 3 - Overseeing the government 4 4 4 - Defending your party's interests 5 5 5 - Formulating the general national budgets 6 6 6 - Representing your department 7 7 7 NA 9 9 9

Variable	Measures after rescaling process	Year (question code)	Question*
		2010 (REP3)	Thinking about your work as a deputy, please tell me, of the following issues, to which <u>two</u> do you attach most importance during your parliamentary activity?

			First place	Second place
		- Representing the nation	1	1
		- Making laws	2	2
		- Solving the problems of Honduras	3	3
		- Overseeing the government	4	4
		- Defending your party's interests	5	5
		- Formulating the general national budgets	6	6
		- Representing your department	7	7
		NA	9	9

Note: * The scales of the answers for some of questions are reversed in the original version in Spanish. Before creating the variables for this study the order of the scales was changed so 1 could be assigned to the lowest values and 3 or 4—depending on how many categories of answer were available—were the highest values. In cases where the legislators refrained from answering (NA), these were assigned the lowest value, i.e. 1.

Table 4A.2. Original versions of the questions used to construct the
***pork, representation of interest groups* and *making laws* variables**

Variable	Year (question code)	Original version in Spanish

Pork	1998 (P28)	¿Qué grado de importancia, mucha, bastante, poca o ninguna, concede Ud., durante el desarrollo de su labor parlamentaria, a conseguir recursos para su departamento?
		  Mucha importancia (1)
		  Bastante importancia (2)
		  Poca importancia (3)
		  Ninguna importancia (4)
		  NC (9)

	2002 (P23)	
	2006 (P23)	
	2010 (REP1)	
Representation of Interest groups	1998 (P59)	¿Hasta qué punto: mucho, bastante, poco o nada, tiene Ud. en cuenta la opinión de cada uno de los siguientes grupos, personas o instituciones cuando toma decisiones políticas?
	2002 (P52)	
	2006 (P56)	

	Mucho	Bastante	Poco	Nada	NS/ NC
- Los electores de su circunscripción	1	2	3	4	9
- Los líderes de su partido	1	2	3	4	9
- La opinión pública en general	1	2	3	4	9
- Los afiliados a su partido	1	2	3	4	9
- Los medios de comunicación	1	2	3	4	9
- Otros diputados de su partido	1	2	3	4	9
- Los grupos de interés	1	2	3	4	9
- Los votantes de su partido	1	2	3	4	9
- El Gobierno	1	2	3	4	9

2010 (REP6)

De los siguientes grupos, personas o instituciones que le nombro a continuación ¿A quién toma más en consideración cuando toma decisiones políticas? (PAUSA) y ¿en segundo lugar?

	Primer lugar	Segundo lugar
- Los electores de su circunscripción	1	2
- Los líderes de su partido	1	2
- La opinión pública en general	1	2
- Los afiliados a su partido	1	2
- Los medios de comunicación	1	2
- Otros Diputados de su partido	1	2
- Los grupos de interés	1	2
- Los votantes de su partido	1	2
- El Gobierno	1	2

(continued on following page)

Variable	Year (question code)	Original version in Spanish
Making laws	1998 (P56)	Pensando en el trabajo que desempeña como Diputado, ¿cuál es el grado de importancia: mucha, bastante, poca o ninguna, que otorga Ud. durante su actividad parlamentaria a los siguientes aspectos? Mucha Bastante Poca Ninguna NS/NC - Representar a la nación 1 2 3 4 9 - Elaborar las leyes 1 2 3 4 9 - Resolver los problemas de Honduras 1 2 3 4 9 - Controlar la actuación del Gobierno 1 2 3 4 9 - Defender los intereses de su partido 1 2 3 4 9 - Elaborar los Presupuestos Generales del Estado 1 2 3 4 9 - Representar los intereses de su departamento 1 2 3 4 9
	2002 (P49) 2006 (P53)	Pensando en el trabajo que desempeña como Diputado, durante su actividad parlamentaria, dígame por favor, a que tres de los siguientes aspectos le da Ud. más importancia? Primer lugar Segundo lugar Tercer lugar - Representar a la nación 1 1 1 - Elaborar las leyes 2 2 2 - Resolver los problemas de Honduras 3 3 3 - Controlar la actuación del Gobierno 4 4 4 - Defender los intereses de su partido 5 5 5 - Elaborar los Presupuestos Generales del Estado 6 6 6 - Representar los intereses de su departamento 7 7 7 NC 9 9 9
	2010 (REP3)	Pensando en el trabajo que desempeña como Diputado, durante su actividad parlamentaria, dígame por favor, a qué dos de los siguientes aspectos le da Ud. más importancia. Primer lugar Segundo lugar - Representar a la nación 1 1 - Elaborar las leyes 2 2 - Resolver los problemas de Honduras 3 3 - Controlar la actuación del Gobierno 4 4 - Defender los intereses de su partido 5 5 - Elaborar los Presupuestos Generales del Estado 6 6 - Representar los intereses de su departamento 7 7 NC 9 9

Chapter 5

Bill initiation behaviour in the National Congress of Honduras

In Chapter 4 I presented descriptive evidence showing that after the change of electoral system from CLPR to OLPR in Honduras, there was an increase in the number of bills legislators introduced in Congress, in particular pork-related bills. Moreover, we could observe that during the CLPR period a high proportion of legislators, especially from the main opposition party, did not introduce any proposals. By contrast, that pattern was reversed under OLPR. This chapter is the first empirical test of the implications of the theory developed in the present work.

This chapter consists of four parts. In the first section I set out my hypotheses. The following part details the statistical model specification, where I describe the dependent variables, the method of estimation, and the independent variables used. The third part of the chapter is devoted to the presentation of the results. In the last section I discuss the results and their implications for the theory.

5.1 Hypotheses

Pork-barrel politics. In the absence of actual spending data that can be directly related to individual legislators, the introduction of bills related to projects meant to bring benefits for their constituencies is probably the best way to establish a direct connection with the pork-barrel behaviour of legislators. In Chapter 2, I provided an explanation as to what we could expect in terms of pork-barrelling. Briefly, I stated that regardless of ballot structure, the importance attached to pork-barrel politics should increase the smaller the district magnitude, because then it is easier for legislators to claim credit for projects undertaken in their constituencies. However, based on Carey and Shugart's (1995) argument that preferential voting list systems such as OLPR generate more intraparty competition the larger the district magnitude, I expect that a change to OLPR will increase the importance of pork in larger magnitude constituencies, whereas in small magnitude constituencies there will be

virtually no significant differences between the ballot types. Considering this argument, I anticipate in the present analysis to find evidence to support the following two hypotheses:

Hypothesis 1. Regardless of ballot type, legislators will introduce more district bills the smaller the district magnitude.

Hypothesis 2. Under OLPR, the number of district bills legislators introduce as district magnitude gets larger will be bigger than under CLPR. However, even under OLPR in larger district magnitude constituencies the number of district bills will not be as big as in small district magnitude constituencies.

Private interests. During their parliamentary work some legislators must choose between delivering private goods to interest groups who, especially in the OLPR system, can contribute financial support to personal campaigns, and the interests of their constituents who, through their votes, can determine whether or not a legislator is re-elected (Bawn & Thies, 2003; Denzau & Munger, 1986). As I argued at the beginning of this section, in small-M constituencies legislators have compelling reasons to be accountable to their constituents. In contrast, as district magnitude increases, deputies have more freedom to establish relationships with interest groups and be accountable to them. Winning votes in large-M constituencies through pork strategies is not as easy as in small-M districts. Therefore, incumbent legislators need to attract votes from other electorates, some of whom may vote based on policy and ideological proposals and not necessarily pork. To reach those voters deputies need campaigns that allow them to bring their message to broader publics. Those campaigns can be expensive; therefore, the financial help of private groups could be beneficial for the incumbents and increase their chances of re-election. However, once their re-election has been secured, the legislators will have to be accountable to these private groups and protect their interests. We can expect that one form of honouring their campaign commitments to interest groups is the introduction of bills that generate benefits for them. In CLPR, legislators will still represent interest groups, and their importance will be greater the larger the district magnitude,[69] but the favours legislators might obtain from interest groups are

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[69] I have argued that, under CLPR, in smaller magnitude districts party leaders will recruit candidates who can attract votes for their party; it is very likely, considering the arguments that I have presented

primarily for the benefit of the party. In this regard, assuming that once elected legislators present bills and advocate for them in representation of interest groups, I formulate the following hypothesis:

Hypothesis 3. Independently of ballot type, legislators will introduce more private bills the larger the district magnitude. Furthermore, the rate of increase in the introduction of private bills as district magnitude grows should be higher in OLPR than in CLPR.

General public goods. As I explained in Chapter 2, Cox and McCubbins (2001) argue that when the electoral system encourages a personal vote, as is the case with OLPR, legislators have greater incentives to favour the provision of local public goods and private goods. However, that does not necessarily imply that legislators will eschew the provision of general public goods. It is worth bearing in mind that in constituencies with large portions of urban populations, there are more voters who vote on the basis of policy and ideology rather than simply for pork. Hence, there are still strong incentives to provide general public goods. Because urban populations are more common in larger magnitude districts, I expect that legislators in this sort of constituency will be more likely to favour national legislation over pork. For example, according to one legislator interviewed for the present work, incumbents in large constituencies do not necessarily win elections appealing to pork-barrel politics. In the words of this deputy from Francisco Morazán (where M is 23 seats):

> In the largest constituencies, practically speaking, it is legislation work that increases your popularity as a deputy. Strengthening popularity via constituency service is very difficult because the constituency is too big. Therefore, the main reason you get re-elected is because of your public image rather than your constituency service work. In the countryside, which is less politically mobilized and smaller, constituency service tends to prevail, although public image is still important.[70]

Even though the delivery of public goods becomes more important the larger the district magnitude, this should be less the case than under CLPR. This effect occurs because, as Cox and McCubbins (2001) argue, the creation of public goods,

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in this work, that the profile of those legislators will be pork-barrel-oriented. Nevertheless, legislators in small magnitude districts use personal-vote seeking strategies to seek votes for their parties, and not necessarily for themselves (see Chapter 2, p. 23). The same logic applies in terms of private interests: some legislators represent interest groups who, in return, finance the campaigns of the party; that is more likely to happen in medium and large magnitude districts.

[70] Deputy of the Liberal Party, personal interview, 1st December 2009, own translation.

such as those produced via legislation, implies the intervention of many actors, which makes it difficult for individual deputies to claim credit for the final outcome. In this regard, it makes sense for some of them to take time that they would normally dedicate to legislation and use it instead for constituency service purposes. As a result, I formulate the following hypothesis:

Hypothesis 4. Legislators will be more likely to introduce national bills as district magnitude increases. However, the rate of increase in the introduction of national bills as district magnitude grows should be lower in OLPR than in CLPR.

Personal attributes. In the present analysis I am using as proxy of the personal attributes of legislators the number of terms for which they have been re-elected. This indicator can give us information on how legislators use their personal attributes to attract votes under different electoral systems. It has been claimed that in CLPR senior legislators are more immune to electoral punishments from the electorate than their junior colleagues: "[a]s a politician advances within the party leadership, her access to power and perks increases dramatically, but her electoral vulnerability decreases in a corresponding manner because leaders occupy the top positions on closed party electoral lists" (Carey, 2009, p. 8). Therefore, because senior legislators are usually party leaders who can more easily secure top positions in their party lists, they probably do not have to deliver constituency services to get votes for their parties. Instead, they leave that task to backbenchers who need to prove loyalty to their party leaders if they wish to seek re-election.

However, backbenchers may try to free-ride and attract large numbers of potential voters so that the party's selectorate will perceive them as indispensable. They might appeal to strategies that help them reach a broader public, such as appearing often on television or using their plenary time to discuss key policy issues. In some circumstances, these legislators might feel tempted to distance themselves from their party's positions, even in subtle ways. For instance, some bills are more unpopular than others, such as those related to tax increases. The discussion of such proposals might break a party's unity in parliament if they have the potential to negatively impact on all the legislators at election time; this is particularly the case for those legislators who belong to the party in government. It can happen that the party leaders might deprive free-riders of the opportunity to run for re-election if they believe that these legislators might jeopardize the party's unity in a future legislature

(Carey, 2009, p. 8). Sieberer (2010, p. 485) argues that backbenchers who do not expect to be re-elected have little incentive to follow the party line and are more likely to deviate from the party's position. In contrast, senior legislators have more to lose by breaking party unity. Therefore, when Honduras used a CLPR system it could be expected that, among less experienced legislators, the fewer the number of terms they had accumulated in parliament the more time they needed to devote to constituency service rather than national politics. As they accumulated more experience they could become influential in parliament and able to devote more time to national politics. Empirically, we could expect the following:

Hypothesis 5. In the CLPR system, the higher the number of terms legislators have served in office the higher the probability that they will present national rather than district bills.

Under OLPR, because it is difficult to claim individual credit for national policy legislation or pork-barrel projects, legislators need to spend their time getting votes by legislating, delivering local goods, or a combination of both. I argue that their choice of strategy will depend to a great extent on the legislators' personal attributes or, as argued in the present chapter, their experience as parliamentarians. Legislators that are well-known, recognized figures can reach broader electorates by introducing national bills and by proclaiming their backing for important legislation. They can use their plenary time to present and discuss new legislation that, via mass media, will reach broad publics. The following quote from a legislator from the department of Francisco Morazán exemplifies this:

> When you are a deputy, as in my case, you have an advantage over other candidates from your own party, because you are already known. It also has its disadvantages because people judge you for what you've done. My strategy after being elected as a legislator for the first time was to offer a constant, systematic, and organized opposition and to make good use of the mass media. My presence in the mass media has essentially become my electoral campaign during my four years in office. During the electoral process, neither I nor my party has the financial means to set up a large campaign, so my re-election campaign is based on my legislative work.[71]

By contrast, new legislators need to fulfil their campaign promises if they want to pursue re-election. Because many of them are not well-known public figures, they

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[71] Deputy of the Democratic Union Party, personal interview, 1st February 2012, own translation.

probably need to satisfy the particularistic interests of their constituents and closest supporters in order to extend their presence in parliament for additional terms and gain more popularity. Considering these arguments, hypothesis 6 reads:

Hypothesis 6. Legislators with higher number of terms in office are more likely to present national bills under OLPR than in CLPR.

In terms of the presentation of private bills and the seniority of a legislator, it is difficult to relate the experience of legislators to the provision of private goods to interest groups without making further assumptions, or focusing on the particular context of the case study—e.g. country—that is being analysed. In Honduras, party leaders are likely to also be part of the economic elite, and they probably have closer connections with interest groups for sociological rather than political reasons.[72] I believe this to be the case because of the apparent correlation between district magnitude and the turnover patterns in the Honduran Congress. Under CLPR
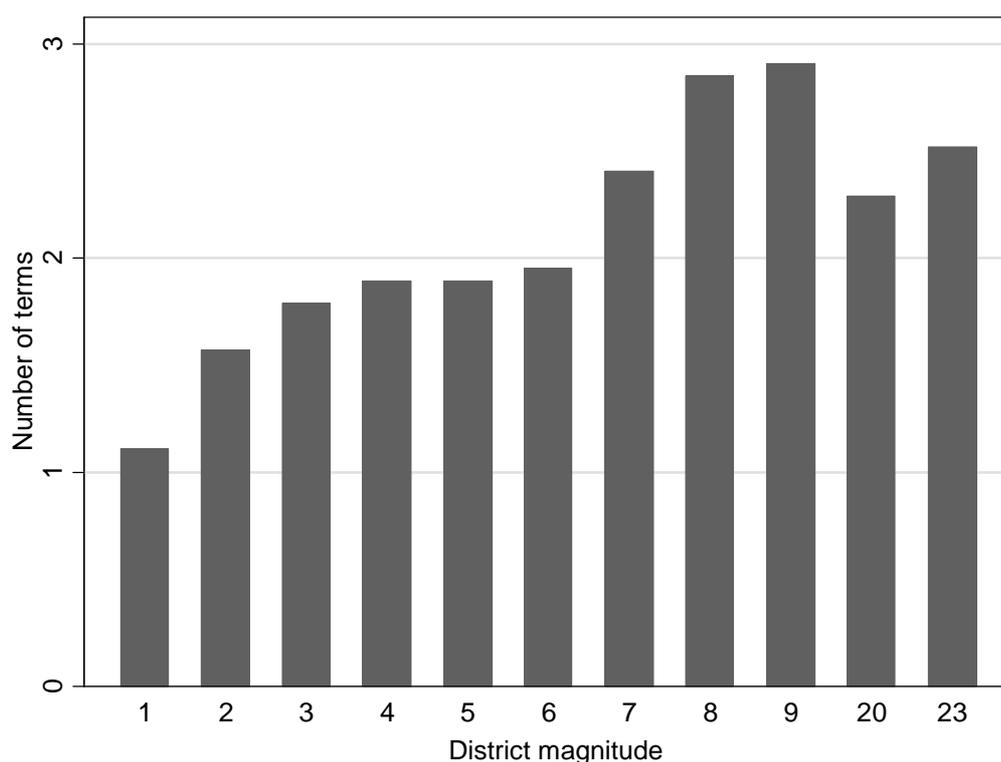
Figure 5.1. Average number of terms legislators have served in the Honduran Congress, by district magnitude, elections 1981–2001

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[72] For instance, people from political and business elite background probably attended the same schools and universities, which facilitates networking.

turnover was very high in small-M constituencies, whereas in medium and larger constituencies legislators tend to be re-elected more often (see Figure 5.1).[73]

Because small-M constituencies are more pork-barrel oriented, theoretically interest groups will be less likely to invest in legislators who have a greater need to be accountable to their constituencies than to interest groups.[74] Moreover, the financially influential business elites are most likely located in urban areas. If urban areas are more likely to be found in medium and large-M constituencies, then it is possible that there exists a relationship between the re-election prospects of legislators and the representation of interest groups. Connections with business elites are beneficial to the legislator and to the party in a closed-list PR context. If a legislator can attract contributions from private donors—or if she is a donor herself—the party can reward her with electable positions on the party list and other advantages that reinforce her leadership. In OLPR I expect that the relationship between senior legislators and the representation of interest groups will be stronger, because interest groups might consider it more likely for experienced incumbents to be re-elected than candidates with no previous legislative experience. Therefore, interest groups are more likely to contribute to the campaigns of senior legislators, who in return will represent their interests when re-elected to congress by introducing bills intended to generate private benefits. In this regard, hypothesis 7 reads:

Hypothesis 7. Under CLPR, the higher the number of terms legislators have served in office, the more likely it is that they will introduce private bills. Legislators with higher numbers of terms in office will introduce more private bills under OLPR than under CLPR.

5.2 Model specification

The statistical method that I use for the present analysis is a negative binomial for time-series cross-section analysis. This model can tell us whether the explanatory variables under consideration can explain the number of bills of a specific type a legislator introduces during a given year. The negative binomial has the advantage that it can correct for those cases of legislators who tend on average to introduce

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[73] However, the turnover patterns have not reverted significantly under OLPR.
[74] This is not to say that interest groups do not exist in small-M constituencies; however, those that are most likely to contribute to campaigns and become influential nationally are located in larger magnitude constituencies.

more bills (see Wooldridge, 2002, p. 657). In order to conduct this analysis, the bill initiation dataset described in Chapter 4 was collapsed, adding the bills—or the absence thereof—each legislator introduced per year, in the categories district, national, sector, and individual (see Chapter 4). I use three dependent variables: *district*, *national*, and a combination of individual and sector bills, which, as I have already shown, share similar variation. In the present analysis I label this combined variable *private*. In addition, I run a set of different statistical analyses of district, sector, and individual bills under the label *targetable*, which is a replication of the dependent variable used by Crisp et al. (2004). Basically, the *targetable* variable combines the district, sector, and private bills into a single variable. The dataset structure is unbalanced; this is because what is being analysed is the introduction of bills per legislator. In this regard, the patterns of bills introduction vary across and within legislators.

5.2.1 Explanatory variables

As previously mentioned, I am using the log of district magnitude (*logM*, see Chapter 3) for the empirical analysis. *OLPR* is a dummy variable that equals one starting in the year the open-list PR system was adopted (2004 onwards). To assess the interaction effects between district magnitude and type of ballot, the interaction *logM×OLPR* is added to the models. *Experience* accounts for the number of terms deputies have served in the Honduran Congress, with the count starting in 1981.[75] The range of variation of this variable depends on the term that is being analysed. For example, by 1990 a legislator could have served two terms in office. If the same legislator continued to be re-elected for consecutive terms, by 2009, the last election considered in this study, the number of terms served by this individual would be seven. I introduce an interaction effect of this variable with the electoral system (*experience×OLPR*).

5.2.2 Controls

The dummy *liberal* takes on the value of one for deputies from the PLH. As I mentioned in Chapter 3, the PLH tends to be more fragmented and integrates members with different ideologies, from conservative to social democrat. Therefore, I expect that legislators from this political party to be more inclined towards pork, be

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[75] The same indicator for experience is used by Taylor-Robinson (2006, p.115).

it because of ideological concerns—leftist parties lean more towards social spending than conservatives—or because of its lack of unity. To control for electoral business cycles I include a count variable, *cycles*, which ranges between one and four, with one being the first year of government and four an election year. *Govdeps* is a dummy variable which takes on the value of one for legislators who belong to the same party as the president. Following the argument put forward by Crisp et al. (2004), the expectation is that this type of deputy will be more likely to introduce bills than deputies from opposition parties. I also include the product *govdeps×OLPR* to observe the interaction effect of this variable with the change of ballot.

To control for the possibility that legislators target core supporters, especially legislators from the party in government—considering the previous argument that legislators from the party that holds the presidency are more likely to appeal to pork—I include the dummy *strong* which equals one for the constituencies where the party in government is electorally strongest.[76] I also include the interaction *strong×OLPR*, since we might expect a different type of behaviour from legislators towards strongholds after the change of ballot type.[77]

Legislators might focus on less developed constituencies because factors such as illiteracy and poverty tend to be correlated with a more clientelistic vote. I control for this potential explanatory factor by including a variable for the human development index (*HDI*)—as calculated in 2008 by the Honduran office of the United Nations Development Programme (UNDP, 2009)—for each constituency in the models that use particularistic bills.[78] I chose this indicator because with a

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[76] To identify those departments—i.e. constituencies—I averaged the percentage of votes earned by the PLH and the PHN—which are the only parties that have held the presidential office—from the elections that took place between 1981 and 2005. Constituencies where the average of votes for the PLH was 50 per cent plus one were coded as strongholds of that political party. By default, the remaining constituencies were coded as PNH strongholds. The variable *strong* equals one for the stronghold constituencies of the party in government.

[77] Because these are multi-member constituencies and the variable does not differentiate the dynamics at the sub-constituency level, only averages them, one possibility is that legislators from the party in government will try to gain as many votes as possible in places where the vote tends to be pivotal, i.e. where voters tend to vote strongly for one of the two main parties. Those dynamics could probably be observed in the aggregate of the party strongholds at the constituency level.

[78] Because in the early 2000s UNDP changed the methodology used to calculate *HDI*, to avoid inducing errors in the estimations I decided to focus on the cross-section variation in 2008, the year of the last report published by this organization, and assume that there has not been any inner variation in terms of *HDI* in the constituencies.

Pearson correlation factor of .5 it shows lower levels of correlation with district magnitude than other proxies, such as poverty and population.[79]

Finally, to control for time dependency, which in turn might be a potential cause of endogeneity in the electoral system, I use the cubic splines method for discrete data developed by Beck, Katz and Tucker (1998). This method consists of adding a counter of time units (in the present case years) between events. Hurricane Mitch in 1998 and the change to OLPR in 2004 are the major events of concern in the present analysis. I have also added the two previous electoral reform changes: the separation of the presidential and municipal ballots in 1992 and the separation of the legislative from the presidential ballot in 1997. To compute the cubic splines, I ran the programme developed by Tucker (1999) in Stata 12.

5.3 Results

Table 5.1 presents the results of the time-series cross-section data analysis, using the negative binomial method on the three dependent variables in the dataset of bills initiation behaviour in the Honduran Congress. The unit of analysis is the number of bills introduced by legislator per year. The dependent variables are indicated in the headings of each column in the following form: models (1) to (3), district bills; (4) to (6), private bills; (7) to (9), national bills. Models (1), (4) and (7) use interactive terms, while the rest present the results of regressions for the main components with no interactions.

Hypotheses 1 and 2 establish that regardless of the electoral system, legislators will tend introduce district bills the smaller the district magnitude, and that under OLPR legislators in larger-M constituencies will tend to introduce more bills of this type than under CLPR. Model (1) in Table 5.1 above seems to partially confirm these hypotheses. As can be observed in this model, when *OLPR* equals zero the coefficient of *logM* is negative and statistically significant at the five per cent probability value; this suggests that under CLPR legislators tend to introduce more pork bills the smaller the district magnitude. In contrast, the coefficient of *logM×OLPR* indicates that a change to OLPR, when everything else is held constant,

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[79] Bear in mind that there is violation of the assumption of no-collinearity when the variables are perfectly correlated (Wooldridge, 2009, p. 85).

Table 5.1. Random effects negative binomial results for the impact of the OLPR system on the initiation of bills in the Honduran Congress

	(1) District	(2) CLPR	(3) OLPR	(4) Private	(5) CLPR	(6) OLPR	(7) National	(8) CLPR	(9) OLPR
OLPR	0.622**			0.840**			0.930**		
	(0.29)			(0.41)			(0.33)		
logM	-0.293**	-0.251**	-0.076	0.647***	0.695***	0.661***	0.779***	0.808***	0.553***
	(0.09)	(0.10)	(0.11)	(0.12)	(0.14)	(0.14)	(0.10)	(0.11)	(0.12)
logM×OLPR	0.240**			0.090			-0.227**		
	(0.11)			(0.14)			(0.12)		
Experience	0.208***	0.255***	0.055	0.201**	0.220**	0.046	0.031	0.146**	0.066
	(0.06)	(0.06)	(0.05)	(0.07)	(0.08)	(0.06)	(0.05)	(0.06)	(0.06)
Experience×OLPR	-0.117**			-0.162**			0.049		
	(0.06)			(0.07)			(0.05)		
Liberal	0.150	0.149	0.262*	-0.100	-0.138	0.005	-0.126	-0.088	-0.062
	(0.11)	(0.14)	(0.15)	(0.13)	(0.17)	(0.17)	(0.11)	(0.14)	(0.17)
Cycles	-0.188***	0.048	-0.311***	-0.068*	0.039	-0.193**	-0.162***	-0.136***	-0.160**
	(0.03)	(0.04)	(0.06)	(0.04)	(0.05)	(0.08)	(0.03)	(0.04)	(0.06)
Govdeps	0.980***	1.037***	0.540***	0.821***	0.852***	0.218	0.506***	0.558***	0.087
	(0.11)	(0.11)	(0.10)	(0.13)	(0.14)	(0.13)	(0.10)	(0.10)	(0.11)
Govdeps×OLPR	-0.344**			-0.418**			-0.256*		
	(0.15)			(0.18)			(0.14)		
Strong	-0.088	-0.115	-0.123	0.065	0.287**	-0.101			
	(0.08)	(0.11)	(0.12)	(0.10)	(0.14)	(0.16)			
Strong×OLPR	0.042			0.519**					
	(0.19)			(0.23)					

(continued on following page)

Table 5.1
(*continued from previous page*)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	District	**CLPR**	**OLPR**	**Private**	**CLPR**	**OLPR**	**National**	**CLPR**	**OLPR**
HDI	2.795**	3.366*	1.618	-3.070*	-5.786**	-2.778			
	(1.35)	(1.80)	(1.88)	(1.84)	(2.53)	(2.47)			
Spline(1)	0.076**	12.735**	0.076**	0.061*	-10.425*	0.078	0.055**	-9.489**	0.055
	(0.03)	(4.51)	(0.04)	(0.03)	(6.07)	(0.05)	(0.03)	(4.07)	(0.04)
Spline(2)	-0.339***	-2.237**	-0.441***	-0.188	1.977*	0.032	-0.090	1.824**	-0.061
	(0.10)	(0.88)	(0.13)	(0.13)	(1.18)	(0.21)	(0.10)	(0.79)	(0.16)
Spline(3)	0.606**	11.162**	0.700**	0.406	-9.286*	0.144	0.273	-8.410**	0.259
	(0.19)	(4.04)	(0.25)	(0.25)	(5.46)	(0.39)	(0.20)	(3.65)	(0.30)
Spline(4)	-0.631**	-44.750**	-0.649**	-0.484*	36.641*	-0.418	-0.406*	33.283**	-0.414
	(0.20)	(15.86)	(0.26)	(0.27)	(21.37)	(0.38)	(0.21)	(14.32)	(0.30)
Intercept	-1.412	-2.071*	0.866	-0.100	1.181	2.111	-1.377***	-1.504***	0.306
	(0.87)	(1.13)	(1.23)	(1.13)	(1.49)	(1.57)	(0.30)	(0.34)	(0.45)
Parameter α	1.733***	1.979***	1.979***	1.836***	1.540***	2.520***	1.206***	1.215***	1.573***
	(0.14)	(0.22)	(0.26)	(0.17)	(0.21)	(0.43)	(0.11)	(0.14)	(0.23)
Parameter β	0.144	-0.009	0.000	-0.059	-0.337*	-0.067	-0.207**	-0.277**	-0.413**
	(0.12)	(0.17)	(0.15)	(0.14)	(0.18)	(0.20)	(0.10)	(0.13)	(0.15)
N	3065	2030	1035	3065	2030	1035	3065	2030	1035
Chi2	266.99	125.71	106.77	136.16	78.73	39.12	178.66	108.61	61.07
Log likelihood	-2690.352	-1441.552	-1225.623	-1882.877	-1082.873	-800.161	-2878.556	-1760.221	-1114.422

Note: standard errors in parentheses. * significant at 0.1; ** significant at 0.05; *** significant at 0.01.

leads to an increase in the number of district bills the larger the district magnitude. That result is significant at a five per cent probability value. When looking at models (2) and (3), which do not include the interactive terms but calculate the coefficients of district magnitude when *OLPR* equals zero and one respectively, we see that, in the first case, increases in *logM* are clearly associated with decreases in the number of bills legislators present in CLPR. In OLPR, however, there are virtually no differences across district magnitudes. That result coincides with the observation of the predicted probabilities for the interaction *logM×OLPR* when everything else is held constant, as can be observed in Figure 5.1(a).

Hypotheses 3 and 4 make predictions about the behaviour of legislators regarding the introduction of private and national bills. In both cases I have argued that the larger the district magnitude the higher the number of these types of bills deputies will introduce in the National Congress of Honduras. Nonetheless, a change to OLPR should lead to an increase in the number of private bills and a decrease in the number of national bills. Note that in models (4) to (9), larger district magnitudes are essentially associated with higher numbers of private and national bills, regardless of the ballot structure. However, in terms of private bills, *OLPR×logM* is positive, as can be observed in Model (4), indicating a slight increase in the coefficient of *logM* under OLPR. However, in Model (6) the coefficient of *logM* is smaller than in Model (5). Consequently, from these results we cannot conclude that a change to OLPR will lead to an increase in private bills. By contrast, the interaction *logM×OLPR* in model (7) is negative and statistically significant at the ten per cent probability value, which suggests that a change to OLPR leads to a decrease of .226 national bills per unit increase in the log of district magnitude. In this regard, notice how in model (9) the coefficient of *logM* decreases slightly in comparison to the same coefficient in model (8).

Graphically, Figure 5.1(b) and 5.3(d) aid the observation of the interaction effects of the variables *logM* and *OLPR* in the introduction of private and national bills. Notice that under the OLPR system (the grey lines) in larger magnitude constituencies there is a slight increase in the linear predictions of private bills in comparison with CLPR. Similarly, in terms of national bills, even though in the CLPR system the number of national bills is always higher the larger the district magnitude, it is interesting to note that under OLPR the number of bills seems to

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increase in small-M constituencies, whereas it decreases the larger the district magnitude.

Regarding *experience*, the hypotheses state that the higher the number of terms legislators have held office the more likely they are to introduce national and private bills rather than district bills. However, as can be observed in models (1) and (2) in Table 5.1, the more senior the legislator is, the more likely she is to introduce district bills under CLPR. This result is not new; Taylor-Robinson (2006) conducted an analysis of bill introduction in the Honduran Congress between 1990 and 1997. As in the present study, she found that senior legislators were more likely to initiate local bills. This, however, does not imply that they are less likely to introduce national bills. In fact, as can be observed in all models under CLPR, the higher the number of years legislators have accumulated in office, the higher their rate of introduction of private and national bills. The results are statistically significant in models (4) and (5) of private bills, and model (8) of national bills. Notice though that the interaction *experience×OLPR* is negative and statistically significant for private bills and positive for national bills.[80] I believe that the loss of importance in the variable *experience* under OLPR is a sign of increased intraparty competition. In other words, under CLPR the seniority of a legislator was an indicator of access to power perks, such as pork and initiating new legislation discussions.[81] However, under OLPR, while more senior legislators may still have more or less the same privileges, junior legislators are not as easily prevented from trying to procure pork for their constituencies or from introducing legislation.

It is worth discussing the impact of other controls on the patterns of bill introduction. The variable *liberal* is positive in models (1), (2), (3) and (6) but it is statistically significant only in model (3), under OLPR; however, it must be taken into consideration that most observations for the OLPR period coincide with a Liberal

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[80] Table 5A.2 in the appendices I present robustness checks results for models with no cubic-spline covariates. It is found that after removing this time dependency control the coefficient of *experience* in the main component model under OLPR is .105 and not .066 as in the original model. Moreover, it is statistically significant at the five per cent probability value.

[81] It could be argued that the determining factor in the bill introduction behaviour of legislators is position on the list rather than number of terms in office. In the appendix to this chapter, in Table 5A.1, I present results using, instead of the variable *Experience*, the position on the list the legislator occupied in the elections when she was elected. It was found that the results using that alternative proxy do not contradict the results presented in Table 5.1 above. As a matter of fact, it seems that *Experience* has more explanatory power than position on the list.

party government. Therefore, in these models the fragmentation and the ideological orientation of the party are not strong predictors of the legislators' behaviour. The dummy *govdeps* is positive and statistically significant at a one per cent probability value in all models except for (9). This result confirms that legislators from the party in government are more likely to introduce bills of any type. However, in the models with interaction terms, a change to OLPR leads to a decrease in the coefficient for this variable. This does not necessarily mean that legislators from the party in government introduce fewer bills under OLPR. As noted in Chapter 4, legislators from both the party in government and from the opposition tend to introduce more bills than in CLPR. Therefore, what that coefficient is telling us is that legislators from the opposition feel more confident introducing bills of any kind under OLPR than under CLPR.
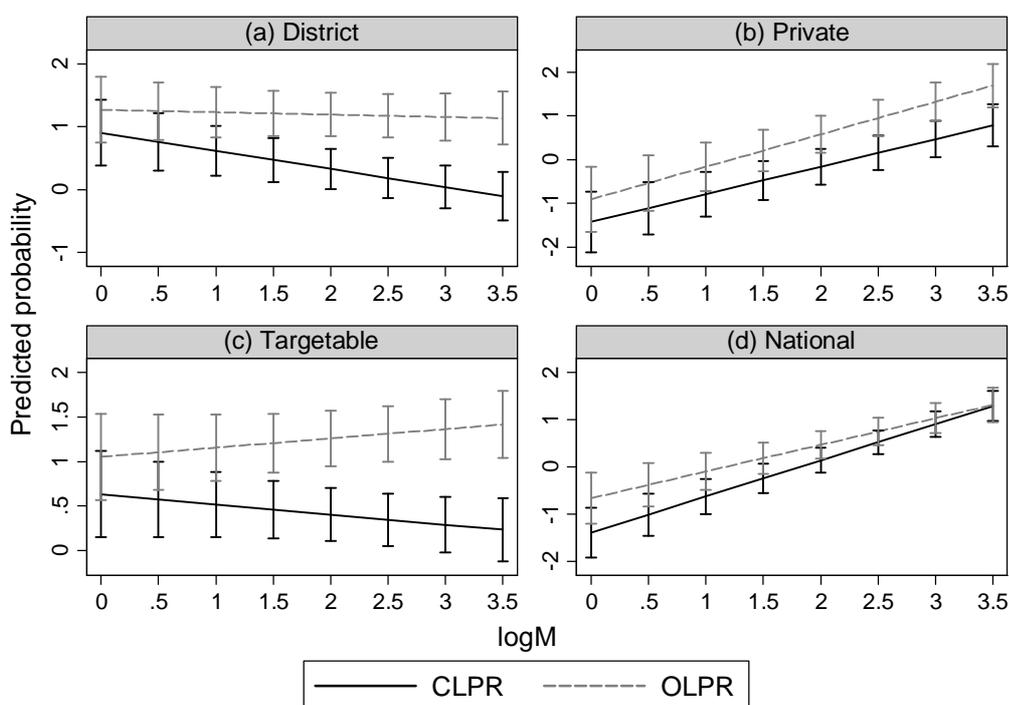
Figure 5.1. Predicted probabilities of *OLPR* over the number of bills initiated across the log of district magnitude. 95 per cent confidence intervals are denoted by the vertical capped lines. Graph (c) uses as dependent variable the combination of district and private bills.

Finally, the cubic splines are statistically significant in all of the district bills models, which suggests that the institutional changes and Hurricane Mitch have had

lasting effects on the pork-barrel behaviour of legislators. For private and national bills the splines are statistically significant under the CLPR electoral system.

Figure 5.1(c) above presents the results for targetable bills. As I mentioned previously, this is a combination of district and private bills. In their analysis of the introduction of bills, Crisp et al. (2004) distinguish between *targetable* and *non-targetable* bills. The former refers to the combination of private and local bills and the latter to national bills. In the present analysis, for the case of the *targetable bills* model, I follow the same estimation procedure that I used for the previous models, i.e. the negative binomial method for time-series cross-sections.

In Figure 5.1(c) we observe that, under CLPR, increases in the log of M have a negative effect on the number of bills introduced per legislator. By contrast, under OLPR, as the log of M grows so too does the number of bills introduced per legislator. Those results are not very strong in the case of CLPR, considering that the curve is very close to zero, therefore the effect is not statistically significant. In contrast, the interaction of *logM* and *OLPR* does differentiate from zero, and because there is no overlapping in the confidence intervals between the predictive probabilities plots of CLPR and OLPR, we can be more confident that there are clear differences between the two models. The regression results for this interaction effect are presented in model (10) in Table 5.2 below. Note that the coefficient of the interaction *logM×OLPR* is significant at the five per cent probability value. The results for targetable bills with no interactions (models 11 and 12) are not significant; however, their resulting signs are as predicted.

Table 5.2. Random effects negative binomial results for the impact of the OLPR system on the initiation of targetable bills in the Honduran Congress

	(10) Targetable	(11) CLPR	(12) OLPR
OLPR	0.635** (0.27)		
logM	-0.116 (0.09)	-0.071 (0.10)	0.050 (0.10)
logM×OLPR	0.209** (0.10)		
Experience	0.197*** (0.05)	0.261*** (0.06)	0.038 (0.05)

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Table 5.2

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	(10) Targetable	(11) CLPR	(12) OLPR
Experience×OLPR	-0.115**		
	(0.05)		
Liberal	0.077	0.053	0.198
	(0.10)	(0.14)	(0.14)
Cycles	-0.168***	0.060	-0.269***
	(0.03)	(0.04)	(0.05)
Govdeps	0.932***	1.013***	0.521***
	(0.10)	(0.11)	(0.10)
Govdeps×OLPR	-0.288**		
	(0.13)		
Strong	-0.066	-0.044	-0.098
	(0.07)	(0.10)	(0.11)
Strong×OLPR	0.181		
	(0.18)		
HDI	2.117*	1.992	1.158
	(1.27)	(1.73)	(1.75)
Spline(1)	0.077***	8.689**	0.070**
	(0.02)	(4.17)	(0.03)
Spline(2)	-0.295**	-1.461*	-0.371**
	(0.09)	(0.81)	(0.12)
Spline(3)	0.528**	7.507**	0.606**
	(0.17)	(3.75)	(0.23)
Spline(4)	-0.581**	-30.472**	-0.582**
	(0.18)	(14.69)	(0.24)
Intercept	-1.230	-1.476	1.037
	(0.81)	(1.09)	(1.14)
Parameterα	1.760***	1.921***	2.079***
	(0.13)	(0.20)	(0.25)
Parameterβ	0.267**	0.029	0.147
	(0.11)	(0.15)	(0.15)
N	3065	2030	1035
Chi2	280.94	138.65	98.60
Log likelihood	-3012.950	-1636.386	-1352.239

Note: standard errors in parentheses. * significant at 0.1; ** significant at 0.05; *** significant at 0.01.

The models specified above provide evidence that the change from CLPR to OLPR in Honduras had an impact on legislators' behaviour, especially in terms of pork-barrel politics. Despite the autocorrelation controls added to the models, some methodologists argue that the statistical control of aspects such as time dependency does not eliminate the influence of confounders (for a discussion see Dunning, 2012). In this regard, to ensure greater robustness of the results, I ran a different analysis focusing only on municipalities that did not report personal or infrastructure

damage as a result of Hurricane Mitch.[82] To minimize the possibility of including municipalities that were affected by Mitch, which could have been targets by deputies and the government, I focused on 12 indicators of information on damage. Seven of these indicators are related to personal damage: number of deaths, missing people, the wounded or sick, evacuees, and those relocated; also, homes affected and homes completely destroyed. The other five cover damage to infrastructure and agriculture: damaged roads, crops and woods, livestock, educational centres, and health centres.
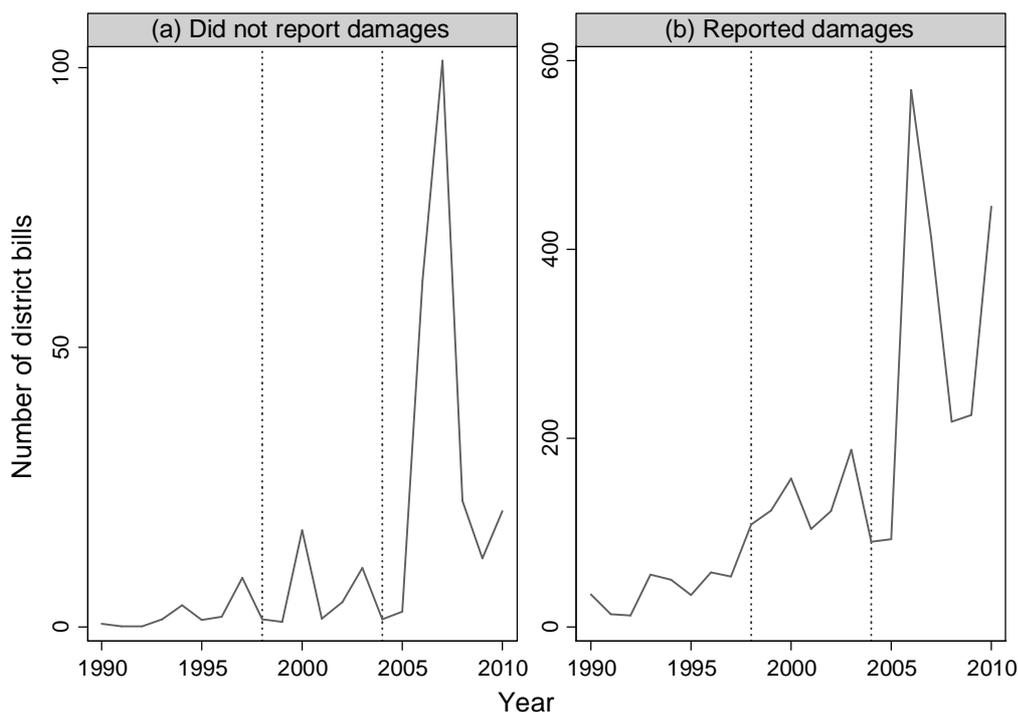
Figure 5.2. District bills in municipalities targeted by legislators, according to whether municipalities reported damage after Hurricane Mitch or not. From left to right, the first vertical dotted line in each of the graphs is for the year 1998, when Hurricane Mitch hit the country. The second vertical line is for year 2004, when the electoral system changed to OLPR. Note that the scales for the average total of district bills are not the same between graphs.

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[82] To identify those municipalities I used official data compiled in the Disaster Inventory System (DesInventar), which is an online repository of information on disasters. In the case of Honduras, this database has been fed with data generated by the Permanent Contingency Commission of Honduras (COPECO), which is the official body in charge of managing natural disaster situations in the country. The DesInventar database cannot provide exact information for municipalities where there was no damage at all. Some municipalities reported zero damage but others simply did not report anything at all. In this latter case, that a municipality did not report any damage does not mean that it was not affected. It could mean that the municipality did not have precise estimates of the damage caused by the hurricane when the data was recorded in 1999.

For the robustness tests, I selected municipalities that did not report any damage in these areas. As can be observed in Figure 5.2, this method greatly reduces the number of observations that could have been targeted by legislators because of Hurricane Mitch, lessening considerably the potential for an endogeneity problem.

Some business groups—especially in the agricultural sector—might have been affected by Hurricane Mitch, and therefore deputies and the government could have supported their recovery. After examining the trends it was noticed that the data was sensitive to the effects of Mitch in four sub-categories of private bills: bills that created benefits for agrarian business activities, tax exemptions, debt relief bills, and bills that regulated guilds such as the board of chartered lawyers and the teachers' unions (see Figure 5.3).
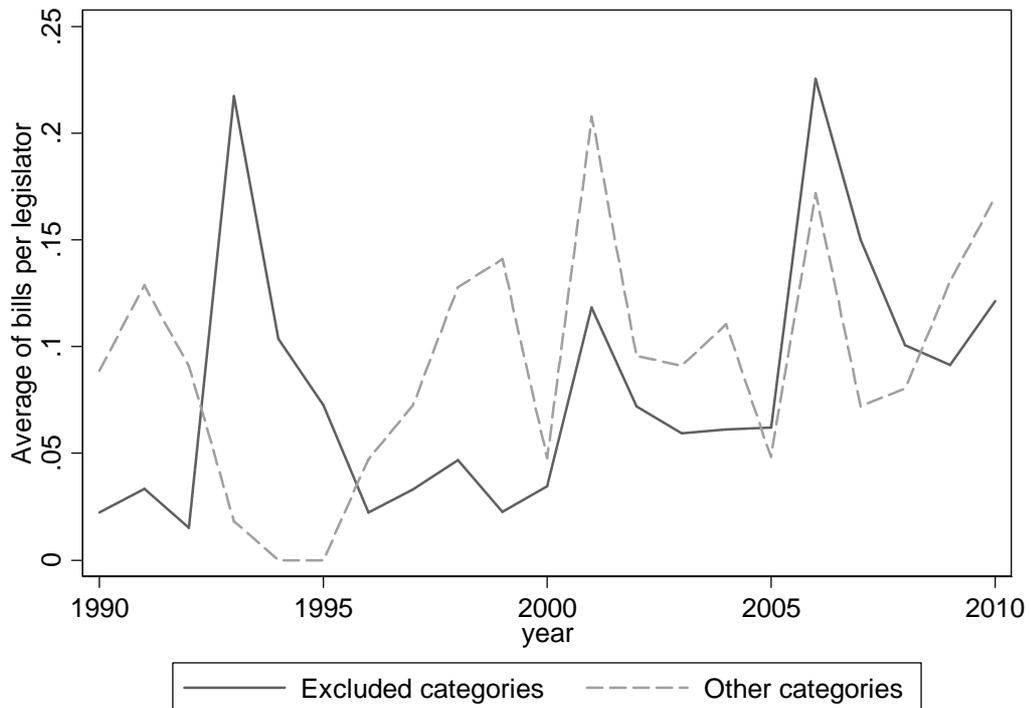
Figure 5.3. Average of private bills by excluded and non-excluded sub-categories. The excluded categories are agrarian business activities, tax exemptions, debt relief, and bills for specific guilds.

In Table 5.3 I present the results for models that exclude the municipalities that did not report damage after Mitch and the results for private bills that do not fall into the agrarian, taxes, debt relief, and guilds categories. As can be observed in model (13), when everything else is held constant, under CLPR *logM* is negative and statistically significant at the one per cent probability value—the same as in the

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original models. A change to OLPR is not statistically significant this time; however, the positive sign of the coefficient of *logM×OLPR* indicates that legislators from larger constituencies tend to introduce more district bills under OLPR than they would have under CLPR. That effect is observed when the CLPR and OLPR models are contrasted without interactive terms, as can be seen in (14) and (15). We see that the coefficient of *logM* tends to be slightly closer to zero under OLPR than under CLPR.

In terms of private bills, the exclusion of observations in the selected categories does not generate a statistically significant effect in the number of private bills legislators introduce. Nevertheless, in the original set of models the coefficient of *logM* was very close to zero for private bills, indicating no interaction effect. In contrast, in model (16) in Table 5.3, a significant increase in the coefficient of that variable can be observed. Moreover, we notice that in models (17) and (18), which do not have interactive terms, there are increases in the log of district magnitude that seem to indicate more private bills per legislator. The coefficient of *logM* is higher in OLPR than in CLPR; however, the standard errors of the model's intercept in (18) indicate that the model does not efficiently estimate the coefficient parameters, probably because of a smaller number of observations for the OLPR period. Models (19) to (21) combine the district bills for municipalities that did not report any damage after Mitch with private bills, excluding categories for sectors probably affected by the hurricane. As in the original set of models presented in Table 5.1 the resulting variable has been labelled *targetable*. Notice that very similar patterns to those found in Table 5.1 hold in this other set of models. In this regard, the coefficients of *logM* and *logM×OLPR* are not statistically significant, but both follow the predicted signs: negative under CLPR and positive in OLPR—that result is confirmed in models (20) and (21) with no interaction terms.

Figure 5.4 presents the predicted probability results for the interaction effects between *logM* and *OLPR* in district, private, and targetable bills. Regarding district bills, it can be noticed that the change to OLPR produces an increase in the number of district bills each legislator introduces in most constituencies regardless of district magnitude. The pattern for OLPR is significantly different from that observed in the original models presented in Figure 5.1. However, judging by the decreasing overlapping of the confidence intervals on the curves as *logM* grows, one could argue that the effect of a change in ballot type is stronger in larger magnitude

Table 5.3. Random effects negative binomial results for the impact of the OLPR system on the initiation of bills in the Honduran Congress, selected observations

	(13) District	(14) CLPR	(15) OLPR	(16) Private	(17) CLPR	(18) OLPR	(19) Targetable	(20) CLPR	(21) OLPR
OLPR	0.724			0.817			0.668		
	(0.51)			(0.71)			(0.42)		
logM	-0.692***	-0.627***	-0.479**	0.766***	0.666**	1.062***	-0.172	-0.172	0.095
	(0.16)	(0.17)	(0.20)	(0.20)	(0.21)	(0.22)	(0.13)	(0.14)	(0.15)
logM×OLPR	0.176			0.235			0.216		
	(0.20)			(0.24)			(0.15)		
Experience	0.221**	0.205*	0.013	0.194*	0.160	0.034	0.139*	0.126	-0.010
	(0.10)	(0.11)	(0.11)	(0.11)	(0.12)	(0.12)	(0.08)	(0.09)	(0.09)
Experience×OLPR	-0.190*			-0.205			-0.150*		
	(0.11)			(0.14)			(0.09)		
Liberal	0.560**	0.426*	0.780**	-0.133	-0.049	-0.175	0.255*	0.161	0.391**
	(0.18)	(0.24)	(0.25)	(0.18)	(0.25)	(0.24)	(0.14)	(0.19)	(0.19)
Cycles	-0.088*	0.231**	-0.255***	-0.105	0.064	-0.251**	-0.122**	0.162**	-0.291***
	(0.05)	(0.08)	(0.07)	(0.07)	(0.10)	(0.08)	(0.04)	(0.07)	(0.06)
Govdeps	1.096***	1.145***	0.744***	0.912***	0.936***	0.275	1.021***	1.097***	0.569***
	(0.21)	(0.22)	(0.20)	(0.23)	(0.24)	(0.21)	(0.16)	(0.17)	(0.15)
Govdeps×OLPR	-0.254			-0.613**			-0.353		
	(0.29)			(0.30)			(0.22)		
Strong	-0.011	0.044	0.046	0.184	0.158	0.062	0.028	0.107	-0.003
	(0.20)	(0.20)	(0.22)	(0.21)	(0.22)	(0.24)	(0.15)	(0.16)	(0.17)
Strong×OLPR	0.314			0.091			0.224		
	(0.28)			(0.32)			(0.22)		
HDI	-8.753**	-9.097**	-10.830**	-6.632**	-4.104	-8.245**	-6.701**	-5.939**	-9.819**
	(2.77)	(3.64)	(4.03)	(2.80)	(3.74)	(3.94)	(2.12)	(2.86)	(3.18)

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Table 5.3

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	(13) District	(14) CLPR	(15) OLPR	(16) Private	(17) CLPR	(18) OLPR	(19) Targetable	(20) CLPR	(21) OLPR
Spline(1)	0.007**	0.458**	0.005	0.001	0.024**	-0.000	0.003	0.031**	0.001
	(0.00)	(0.19)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)
Spline(2)	0.134**	0.998***	0.058	0.021	0.255**	0.002	0.061	0.366***	-0.002
	(0.06)	(0.28)	(0.07)	(0.05)	(0.13)	(0.06)	(0.04)	(0.10)	(0.05)
Spline(3)	-0.097**	-1.292**	-0.046	-0.015	-0.211**	-0.001	-0.043	-0.291***	-0.001
	(0.04)	(0.43)	(0.05)	(0.03)	(0.10)	(0.04)	(0.03)	(0.08)	(0.03)
Intercept	5.217**	5.097**	7.920**	1.240	-0.864	16.837	3.684**	2.919*	7.181***
	(1.68)	(2.24)	(2.43)	(1.67)	(2.21)	(1116.49)	(1.28)	(1.72)	(1.93)
Parameterα	1.291***	1.651***	1.303***	2.157***	1.717***	15.225	1.547***	1.707***	1.686***
	(0.18)	(0.30)	(0.28)	(0.29)	(0.33)	(1116.49)	(0.16)	(0.25)	(0.28)
Parameterβ	-0.482**	-0.402	-0.709**	-0.140	-0.149	-0.492*	-0.096	-0.176	-0.391**
	(0.19)	(0.30)	(0.25)	(0.24)	(0.40)	(0.28)	(0.15)	(0.23)	(0.20)
N	2706	1812	894	2706	1812	894	2706	1812	894
Chi2	165.18	79.25	73.81	91.33	36.25	37.60	159.18	70.22	68.43
Log likelihood	-1092.899	-554.343	-528.945	-830.227	-452.037	-371.618	-1597.704	-841.113	-744.763

Notes: standard errors in parentheses. * significant at 0.1; ** significant at 0.05; *** significant at 0.01. The regression analysis excludes municipalities that reported personal and infrastructure damage from Hurricane Mitch; in addition, it excludes bills that created benefits for private individuals and organizations in the categories agrarian, taxes, debt relief, and guilds.

constituencies, as the theory predicts. Similarly, when looking at Figure 5.4(b), we can see that unlike the behaviour previously reported, the predicted probability curve grows higher under OLPR than CLPR as district magnitude gets larger. Finally, Figure 5.4(c) presents the results for the combined variable *targetable*. In this case, the patterns of the lines are as expected, i.e. declining as M grows in CLPR and rising as M gets bigger in OLPR. However, the effect of OLPR is smaller than reported in the original set of models.
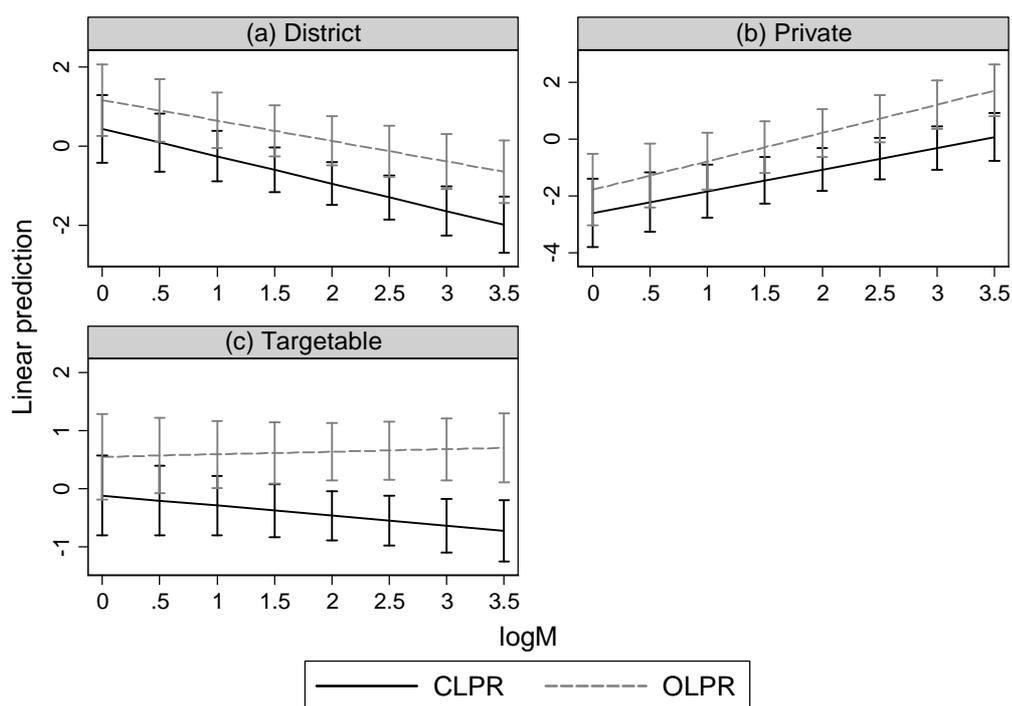
Figure 5.4. Predicted probabilities of *OLPR* over the number of bills initiated across the log of district magnitude, selected observations. 95 per cent confidence intervals are denoted by the vertical capped lines. The regression analysis used to calculate the figures in this graph excludes municipalities that reported personal and infrastructure damage from Hurricane Mitch. In addition, it excludes bills that created benefits for private individuals and organizations in the categories agrarian, taxes, debt relief, and guilds.

5.4 Discussion

In the analysis presented in this chapter, evidence was found that seems to confirm the theory that the interaction of ballot type with district magnitude generates incentives for legislators to seek personal votes. The variation between CLPR and OLPR was very small in terms of the number of national and private bills legislators decided to introduce. However, when it comes to district bills, there was a strong interaction effect between ballot type and the logarithmic form of district magnitude.

As hypothesized, the evidence confirms that under CLPR, the smaller the district magnitude the more likely legislators are to introduce larger numbers of district bills than any other type. In a sample of bills that included municipalities that did not report any damage from Mitch, a significant increase in the number of pork-barrel bills introduced by legislators was noticed, but that increase tended to be proportional to the district magnitude. In other words, small-M constituencies tend to favour pork more than larger-M constituencies. Nevertheless, for pork-barrel bills, legislators from larger magnitude constituencies were more sensitive to the electoral system change than legislators from smaller constituencies.

The theory did not anticipate an increase in pork-barrel bills where district magnitude equals one. However, it was found that even in those constituencies there was an increase in the number of this type of bill. Moreover, it was not expected that legislators from small constituencies would show an interest in general public goods, in this case the presentation of national bills, but this was in fact the case. There are two possible explanations for this. One is that the inclusion of legislative candidates' photographs in the legislative ballot under OLPR increases the incentives for legislators to be accountable to their constituencies. Another explanation for this unexpected result could be related to the form of government, which in Honduras consists of a presidential system with a fixed four-year term for the president, and the fragmentation of the country's main political parties. Faction leaders in the main political parties are usually presidential candidates, and it usually is they who, with the help of leaders from the constituency, identify potential legislative candidates to join the faction. Under CLPR these actors had a determining influence on the re-election prospects of legislators in small-M constituencies, where seats are scarcer (see Figure 5.1 above). I will discuss this topic again in the conclusion, after the analysis of the elite survey data (Chapter 6).

Regarding experience of legislators, the results show that experience matters and that there is an interaction effect between seniority and the type of electoral system. It was found that senior legislators are more likely to introduce district bills under CLPR than under OLPR. Furthermore, in CLPR, these legislators are more likely to introduce district bills than junior legislators. Taylor-Robinson (2006) conducted a similar analysis of the fused-CLPR period in Honduras and achieved comparable results. Her interpretation of this phenomenon was that "those deputies are likely to be party and Congress leaders, and they may be sponsoring bills for

backbenchers that think that pork has a greater likelihood of being delivered to their district if a party leader initiates the bill" (p. 117). The reason this factor fails to explain a major increase in pork and private bills in OLPR might be due to the increased number of competitors in parliament (not only from within the same party but from the other political parties as well) who feel more confident about introducing this kind of bill by themselves. However, in spite of the fact that the evidence is not very strong, it is found that senior legislators are more likely than their junior colleagues to introduce national bills in both the CLPR and OLPR systems. Overall, the results have withstood additional robustness checks (see Appendix 5.1).

Appendix 5.1 Robustness checks

Hypothesis 5 stated that the higher the number of terms legislators have served in office, the higher the probability that they will present national rather than district bills. The evidence supports this claim, but in addition it was found that under CLPR senior legislators tend to introduce district and private bills more often than freshmen. One could argue that longer-serving legislators will have higher positions on the list and hence under CLPR need to spend less time cultivating personal constituency support. If the key, determining factor is position on the list, then this could be a better indicator than the number of terms a legislator has served in office. In Table 5A.1 I test Hypothesis 5 using position on the list (variable *List*) instead of the number of terms legislators have served in office.[83]

Table 5A.1. Random effects negative binomial results of the effects of position on the party list on bill introduction in the Honduran Congress, CLPR electoral system period

	(38) District	(39) Private	(40) National
List	-0.087**	-0.098**	-0.096***
	(0.03)	(0.04)	(0.03)
logM	0.076	0.908***	1.008***
	(0.14)	(0.18)	(0.14)
Liberal	0.294*	0.164	0.078
	(0.17)	(0.19)	(0.17)
Cycles	0.017	-0.015	-0.180***
	(0.05)	(0.06)	(0.04)
Govdeps	1.282***	1.029***	0.724***
	(0.14)	(0.16)	(0.12)
Strong	-0.107	0.218	
	(0.14)	(0.15)	
HDI	3.178	-6.861**	
	(2.08)	(2.79)	
Spline (1)	12.794**	-8.922	-7.587*
	(5.28)	(6.67)	(4.57)
Spline (2)	-2.313**	1.732	1.514*
	(1.03)	(1.30)	(0.89)
Spline (3)	11.345**	-7.997	-6.813*
	(4.74)	(6.00)	(4.11)

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[83] In this particular case, the analysis only considered bills introduced by permanent legislators. Observations for those cases where substitute legislators introduced the bills were not included because it is difficult to defend the assumption that substitutes will adopt the behaviour of permanent legislators when they have to cover for them under special circumstances (e.g. sick leave). In this regard, substitutes have a different hierarchical status; sometimes they can even have more seniority than permanents but they could also have been included on the list just to fill a position.

	(38)	(39)	(40)
	District	**Private**	**National**
Spline (4)	-45.064**	31.371	26.655*
	(18.59)	(23.50)	(16.10)
Intercept	-2.638**	1.632	-1.804***
	(1.30)	(1.62)	(0.37)
Parameter α	1.640***	1.364***	1.029***
	(0.21)	(0.21)	(0.15)
Parameter β	-0.173	-0.351*	-0.393**
	(0.18)	(0.20)	(0.15)
N	1789	1789	1789
Chi2	108.80	70.34	108.47
Log likelihood	-1147.317	-902.289	-1443.345

Note: standard errors in parentheses. * significant at 0.1; ** significant at 0.05; *** significant at 0.01.

It can be observed that the hypothesis is partially rejected. As is discernible in Model (38), the evidence suggests that the effect of position on the list is very small in terms of district bill introduction. Contrary to the expectation, the lower ranked the legislator the less likely she is to introduce district bills. The result is significant at a five per cent probability value. The results do support the hypothesis that those legislators elected to top positions on the party list are more likely to introduce national and private bills. In this regard, the magnitude of the coefficients is very small in comparison to the beta coefficients resulting in regression analyses using the number of terms as control (see Table 5.1). However, the statistical significance and the signs confirm the assumption that position on the list and number of terms served in office are similar proxies of the influence of a legislator. However, judging by the impact each of these indicators has, the latter seems to be a better predictor than position on the list. This is not surprising, considering that district magnitude tends to be correlated with position on the list (the Pearson correlation factor between the two is .5706), whilst the correlation factor between district magnitude and number of terms in office is only .0172.

In Table 5A.2 I check whether the exclusion of the other political controls alters the coefficients of the key independent variables. In other words, I keep only *OLPR*, *logM*, the interaction term *logM×OLPR*, *Experience* and its interaction with *logM*, as well as the variables that control for autocorrelation. Overall, the results are quite similar to those for all models presented in Table 5.1, which suggests that other explanatory factors for which I control do not significantly alter the influence of the

Table 5A.2. Random effects negative binomial results for the impact of the OLPR system on the initiation of bills in the Honduran Congress, with no controls

	(19) District	(20) CLPR	(21) OLPR	(22) Private	(23) CLPR	(24) OLPR	(25) National	(26) CLPR	(27) OLPR
OLPR	0.308			0.551			0.614*		
	(0.27)			(0.38)			(0.31)		
logM	-0.233**	-0.200**	-0.097	0.507***	0.494***	0.583***	0.733***	0.746***	0.573***
	(0.09)	(0.09)	(0.10)	(0.11)	(0.12)	(0.12)	(0.09)	(0.10)	(0.12)
logM×OLPR	0.171			0.086			-0.199*		
	(0.11)			(0.14)			(0.12)		
Experience	0.169**	0.133**	0.082	0.162**	0.156**	0.052	0.030	0.118**	0.079
	(0.06)	(0.06)	(0.05)	(0.07)	(0.07)	(0.06)	(0.05)	(0.06)	(0.06)
Experience×OLPR	-0.095*			-0.163**			0.038		
	(0.06)			(0.07)			(0.05)		
Spline(1)	0.027	11.134**	0.010	0.033	-11.077*	0.031	0.006	-6.140	0.016
	(0.02)	(4.70)	(0.03)	(0.03)	(6.24)	(0.04)	(0.03)	(4.12)	(0.03)
Spline(2)	-0.363***	-2.010**	-0.651***	-0.184	2.028*	-0.111	-0.088	1.269	-0.185
	(0.10)	(0.92)	(0.13)	(0.14)	(1.22)	(0.20)	(0.10)	(0.80)	(0.16)
Spline(3)	0.607**	9.850**	1.059***	0.382	-9.740*	0.367	0.218	-5.575	0.447
	(0.19)	(4.23)	(0.26)	(0.26)	(5.63)	(0.36)	(0.20)	(3.71)	(0.29)
Spline(4)	-0.473**	-39.184**	-0.690**	-0.382	38.854*	-0.418	-0.204	21.614	-0.411
	(0.20)	(16.54)	(0.28)	(0.27)	(22.00)	(0.38)	(0.21)	(14.50)	(0.30)
Intercept	0.338	0.585*	1.151***	-1.476***	-1.536***	0.313	-1.509***	-1.554***	-0.100
	(0.26)	(0.31)	(0.34)	(0.32)	(0.35)	(0.69)	(0.28)	(0.31)	(0.41)
Parameter α	1.482***	1.683***	1.561***	1.681***	1.338***	2.613***	1.154***	1.142***	1.575***
	(0.12)	(0.18)	(0.19)	(0.15)	(0.18)	(0.50)	(0.11)	(0.14)	(0.23)
Parameter β	0.119	-0.002	-0.060	-0.051	-0.265	-0.159	-0.144	-0.184	-0.443**
	(0.12)	(0.16)	(0.15)	(0.14)	(0.19)	(0.19)	(0.11)	(0.14)	(0.14)
N	3067	2032	1035	3067	2032	1035	3067	2032	1035
Chi2	102.94	33.71	41.72	80.30	31.16	28.93	115.11	64.73	53.86
Log likelihood	-2775.709	-1492.054	-1257.109	-1915.296	-1109.458	-805.451	-2912.587	-1785.089	-1118.060

Note: standard errors in parentheses. * significant at 0.1; ** significant at 0.05; *** significant at 0.01.

main dependent variables.[84] In this regard, it can be noticed that the signs of the coefficients in all cases are the same as those present in the counterpart to these models, i.e. the coefficient of log of M is negative when it comes to pork bills and is positive for private and national bills, as well as for the product of *logM* and *OLPR* in the district bills model. Nevertheless, there are differences in the levels of statistical significance. While the main term *OLPR* is significant for the district and private bills models in Table 5.1, it is not in Table 5A.2, nor is it in the coefficients for *logM×OLPR* in the latter case. As I mentioned previously, this is related to the likelihood that the legislators are from the party in government, who are more likely to introduce district bills than deputies from other parties.

I conducted an analysis of the robustness of the previous results excluding the political control variables. It was found that the outcomes presented in Table 5.1 did not change significantly, which suggests that the key independent variables account to a large extent for the variation in the legislators' behavioural patterns. The magnitude of the coefficients is very similar; moreover, their sign remained the same (see Appendix 5.1). However, in terms of district bills, the interaction *logM×OLPR* is not significant in this other set of models. The reason the result is not significant seems to be associated with the absence of the variable *govdeps*. In presence of that variable the coefficient of *logM×OLPR* is significant at the ten per cent probability value (those results are not reported in the present work). This is not surprising considering that legislators from the party in government probably believe that they have greater chances of getting their pork-barrel bills passed than legislators from the opposition.

In Table 5A.3 above I replicate the models presented in Table 5.1 but have ruled out the cubic-splines, which are the control variables for time dependency. In terms of *logM* and the interaction *logM×OLPR*, it is observed that after the exclusion of the cubic splines the coefficients of these two variables remain almost the same. The most noticeable change that is of interest for the present analysis can be seen in model (37). In this model, the coefficient of the variable *experience* is .105 and is statistically significant at the five per cent probability value. In the original set of

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[84] I also conducted two different sets of statistical tests: one for the analysis of ballot type and district magnitude, and another for the analysis of ballot type and the experience of legislators. In both cases I kept the controls for autocorrelation. The results, which are not reported in the present work, did not differ significantly from those presented in Table 5A.2.

Table 5A.3. Random effects negative binomial results for the impact of the OLPR system on the initiation of bills in the Honduran Congress, with no time dependency controls

	(28) District	(29) CLPR	(30) OLPR	(31) Private	(32) CLPR	(34) OLPR	(35) National	(36) CLPR	(37) OLPR
OLPR	0.523*			0.877**			0.983**		
	(0.29)			(0.41)			(0.33)		
logM	-0.327***	-0.271**	-0.087	0.531***	0.545***	0.576***	0.771***	0.797***	0.523***
	(0.09)	(0.10)	(0.11)	(0.11)	(0.12)	(0.12)	(0.10)	(0.10)	(0.12)
logM×OLPR	0.255**			0.084			-0.243**		
	(0.11)			(0.14)			(0.12)		
Experience	0.251***	0.299***	0.070	0.225***	0.266***	0.051	0.067	0.155**	0.105*
	(0.06)	(0.06)	(0.05)	(0.07)	(0.07)	(0.06)	(0.05)	(0.06)	(0.06)
Experience×OLPR	-0.130**			-0.175**			0.041		
	(0.06)			(0.07)			(0.05)		
Liberal	0.160	0.076	0.318**	-0.123	-0.177	0.011	-0.156	-0.088	-0.127
	(0.11)	(0.15)	(0.15)	(0.13)	(0.18)	(0.17)	(0.11)	(0.14)	(0.17)
Cycles	-0.149***	0.018	-0.240***	-0.055	0.057	-0.136**	-0.155***	-0.121***	-0.161***
	(0.03)	(0.04)	(0.04)	(0.03)	(0.05)	(0.05)	(0.03)	(0.03)	(0.04)
Govdeps	0.960***	0.984***	0.524***	0.846***	0.889***	0.211	0.508***	0.545***	0.106
	(0.11)	(0.11)	(0.10)	(0.13)	(0.14)	(0.13)	(0.10)	(0.10)	(0.11)
Govdeps×OLPR	-0.310**			-0.434**			-0.227		
	(0.15)			(0.18)			(0.14)		
HDI	2.859**	3.655**	1.557						
	(1.34)	(1.85)	(1.86)						
Intercept	-1.438*	-2.116*	0.650	-1.724***	-2.132***	0.214	-1.404***	-1.653***	0.262
	(0.85)	(1.16)	(1.20)	(0.36)	(0.41)	(0.60)	(0.30)	(0.34)	(0.42)

Table 5A.3

(continued from previous page)

	(28)	(29)	(30)	(31)	(32)	(34)	(35)	(36)	(37)
	District	**CLPR**	**OLPR**	**Private**	**CLPR**	**OLPR**	**National**	**CLPR**	**OLPR**
Parameter α	1.661***	1.846***	1.822***	1.774***	1.473***	2.465***	1.173***	1.184***	1.451***
	(0.13)	(0.21)	(0.22)	(0.16)	(0.20)	(0.40)	(0.11)	(0.14)	(0.21)
Parameter β	0.115	-0.067	-0.009	-0.124	-0.381**	-0.070	-0.194*	-0.257*	-0.392**
	(0.12)	(0.16)	(0.15)	(0.14)	(0.18)	(0.20)	(0.10)	(0.13)	(0.15)
N	3065	2030	1035	3065	2030	1035	3065	2030	1035
Chi2	244.08	95.14	88.26	122.36	63.97	34.17	160.89	99.05	46.19
Log likelihood	-2701.953	-1455.533	-1234.779	-1890.243	-1090.286	-803.077	-2885.636	-1764.726	-1120.287

Note: standard errors in parentheses. * significant at 0.1; ** significant at 0.05; *** significant at 0.01.

models its value was lower (.066) and not significant. This result offers evidence that supports my initial expectations.

I also conducted robustness tests removing the cubic splines for the municipalities that did not report damage after Mitch and which were targeted by legislators. But the results were, practically speaking, the same as in the models with cubic splines.

Chapter 6

Parliamentarian elite survey analysis

The Latin American Parliamentarian Elites Project (PELA) at the University of Salamanca provides a very rich source of information on the perceptions and attitudes of Honduran legislators in relation to their work. In addition, PELA is of particular value for approximating the influence of legislators' individual attributes on their behaviour, something that is relevant for the theory developed in the present work but for which I lack primary data to control. Furthermore, to my knowledge, the analysis that I present in this chapter has not been conducted before. Therefore, the aim of the present chapter is twofold. First, it is expected to reinforce the evidence found in the analysis of legislators' bill presentation behaviour (Chapter 5). Second, it aims to empirically study the influence of legislators' personal attributes on their personal vote-seeking behaviour.

In the first part of this chapter the hypotheses are set out. Section two presents the model specification for the statistical analyses, and in section three I discuss the statistical results.

6.1 Hypotheses

In the preceding chapters of this thesis it has been shown useful to classify the behaviour of legislators is into targetable and non-targetable types of behaviour. That was the case in Chapter 5 for targetable and non-targetable bills in particular. Similarly, in the present chapter, one can talk about targetable and non-targetable attitudes, and the orientations or preferences of legislators. The present study replicates to a great extent the analysis conducted in Chapter 5, the obvious difference being the dependent variables used. With survey data I am not analysing the actual behaviour of legislators, but their attitudes, which can provide information about their preferences and some indication of their actual behaviour. In this chapter I test hypotheses for pork-barrel politics, the representation of interest groups, the formulation of non-targetable public goods, and the personal attributes of legislators.

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Pork-barrel politics. Between 1998 and 2010 the PELA surveys asked legislators, "What degree of importance—a great deal, a good deal, little, none at all—do you attach, during the course of your parliamentary duties, to providing resources for your department?" My argument states that regardless of the ballot structure, pork-barrel politics should be more important the smaller the district magnitude. This is because the larger the district magnitude the more difficult it becomes for legislators to claim individual credit for projects that have benefited their constituencies. Not to mention that larger magnitude districts are more likely to have bigger portions of urban populations, where some voters will vote not for pork but according to ideology and policy. However, the OLPR system will generate incentives for some legislators in larger M constituencies to appeal to pork-barrelling as a form of attracting personal votes. Thus, there will be an increase in pork-barrel politics activities in larger magnitude constituencies, but these will not be as important as they are for legislators in smaller M constituencies. In this regard, I have formulated the following hypotheses:

Hypothesis 1. Legislators will attach more importance to pork-barrel politics activities the smaller the district magnitude.

Hypothesis 2. Under OLPR, pork-barrelling increases in importance across all district magnitudes in comparison with CLPR, but legislators will still tend to attach more importance to pork-barrelling the closer the district magnitude is to one.

Private interests. I have argued that the importance legislators give to interest groups should be greater the larger the district magnitude because legislators can be less accountable to their constituencies as M grows. Taking into consideration that in larger-M constituencies some voters cast their votes on the basis of policy and ideology, to reach those voters parties and legislators may need to run expensive campaigns. This means that they may require the financial help of interest groups. In return, legislators will represent the interests of private organizations through different facets of their parliamentary work. In Chapter 5 we had the opportunity to analyse one of those facets, the introduction of bills with the potential to benefit interest groups. The indicator I am using in the present analysis is more general. The PELA surveys asked legislators to what extent they take into consideration the opinions of interest groups during their parliamentary work. We can expect their behaviour in this regard to be consistent with the following hypothesis:

Hypothesis 3. Legislators will attach greater importance to the opinions of interest groups the larger the district magnitude. Moreover, the level of importance attached to the opinions of interest groups in larger-M constituencies will be greater under OLPR than CLPR.

General public goods. Similar to the representation of interest groups in CLPR, I argue that legislators will be more likely to attach greater importance to law making the higher the district magnitude. By contrast, under OLPR, while formulating laws should be still more important the larger the district magnitude, legislators will be less likely to privilege law formulation than in CLPR. This is because of the increased incentives to procure pork for their constituencies. Thus, some legislators might think that they have better chances of re-election if they deliver pork than if they provide general public goods. In the PELA surveys legislators were asked to indicate the degree of importance they attach to formulating laws in the course of their parliamentary activities. I predict the following:[85]

Hypothesis 4. Legislators will attach higher levels of importance to the formulation of laws the larger the district magnitude. However, the importance that legislators give to law formulation should decrease in OLPR in comparison with CLPR.

Personal attributes. In Chapter 5 I used the number of terms legislators have served in office as a proxy of their personal attributes. In this chapter I replicate that analysis but instead of the number of terms, I used as a proxy the number of years legislators declared having served in office when the surveys were conducted. Therefore, the hypotheses for the present analysis do not differ from those stated in the preceding chapter, except for the unit of observation, which in this case is the number of years served.[86] The hypotheses are:

Hypothesis 5. Under CLPR, the higher the number of years legislators have served in office the more likely they are to privilege national legislation over pork-barrel politics.

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[85] Bear in mind that this question has had three similar formats across the different rounds of PELA surveys.

[86] For a reminder of the arguments, go to page 33.

Hypothesis 6. Legislators with higher number of years in office are more likely to present national bills under OLPR than in CLPR.

I also take into consideration two personal attributes that the relevant theoretical contributions suggest produce significant outcomes in terms of legislators' behaviour: local background and business elite background.[87] In a CLPR context, Gallagher (1988a, p. 251) suggests that of the different characteristics legislators can possess, party leaders will almost invariably prioritize candidates' local roots. This is not only because party leaders want their parties to have representation throughout a constituency, but also because they want local leaders who can gain local votes for the party.

Under OLPR some legislators with local backgrounds may have the advantage of having built personal reputations as local leaders, which they can use to attract votes, especially in those places where they are well-known among the voters (Shugart, Valdini & Suominen, 2005). Moreover, this type of deputy will probably base her work in office on providing pork more than any other strategy in order to maintain their local support (Ames, 1995). However, legislators with other backgrounds will also use pork to attract new voters. As such, we can expect in the survey data to see little variation in the importance legislators give to pork under the OLPR system.[88] Based on these considerations, I formulate the following two hypotheses:

Hypothesis 7. Under CLPR, legislators with local backgrounds will be more likely to attach importance to pork-barrel politics.

Hypothesis 8. Under OLPR, the local backgrounds of legislators will not be an indicator of the degree of importance legislators give to pork-barrel politics.

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[87] Ames (1995) also discusses the role of legislators who have had executive experience in government (e.g. as ministers or directors) and who had previously managed pork resources, and could therefore use their personal reputations as former providers of projects to increase their chances of re-election. Thinking of the particular case of Honduras, one could also add media figures, such as footballers and television celebrities, to the analyses. As I showed in Chapter 1, the number of legislators with government executive and media figure backgrounds has significantly increased since the change to OLPR. However, the number of legislators who had those two characteristics is too small in the CLPR sample to include it in the analysis. Thus, the decision to restrict the analysis to the local and business background is based on the variation they have across different survey rounds, in addition to the theoretical attention they have received.

[88] Variation could be found at the sub-constituency level, as the theory by Ames (Ames, 1995) suggests. At the municipal level legislators will focus on targeting certain municipalities depending on their public experience background.

Ames (1995) also takes into consideration the role of legislators with a business-related background. For him, these politicians have contradictory incentives:

> The electoral support of business candidates is more fickle than the support enjoyed by local politicians. Better offers sway bosses loyal to the highest bidder. Thus businessmen face contradictory incentives. While opportunities are clearly better for candidates unconstrained by local careers, businessmen can lose support as quickly as they gain it (Ames, 1995, p. 417).

In terms of legislators with a business-related background, I expect that regardless of the electoral system these legislators will be more focused on the provision of general public goods and private goods than pork-barrel politics because firms and large businesses in general are believed to influence important political economy outcomes (Bernhagen & Bräuninger, 2005). Under OLPR, I anticipate that legislators with a business-related background will stress the provision of general public goods and private goods. Thus, contrary to Ames (1995), I believe that their support of local public goods, such as pork, will be minor in comparison to the provision of the other two types of goods. As I have argued, it is very likely that legislators supported by interest groups will have conflicting interests with regard to their constituencies. If deputies with a business background are more likely to be closely connected to interest groups, as I expect, then they will be less likely to provide service to their constituencies. In addition to representing private interests they will probably focus on introducing national legislation, considering that they will need to gain as many votes as possible in order to win elections. If they do not get votes via constituency service, then they probably get them from policy and ideologically-driven voters. In this regard, I formulate the following hypothesis:

Hypothesis 9. Legislators with a business-related background will be more likely to favour interest groups and the formulation of national laws than pork-barrelling. Furthermore, they will tend to exhibit that behaviour more under OLPR than CLPR.

6.2 Model specification

For the present analysis the dataset has been set according to the survey data analysis functions available in Stata 12. In this sense, the strata are the years in which the surveys were held, the sampling unit is the political party, and the finite population correction factor is the total number of seats in the Honduran Congress, which

remains constant (see Table 4.4 in Chapter 4 for details). In total, the dataset comprises 355 observations. The sample of legislators surveyed under CLPR is 173, and 182 for OLPR. The sample design model leaves out 13 degrees of freedom, six in CLPR and seven for OLPR. I use three dependent variables: *pork*, *representation of interest groups*, and *making laws*. The questions and the answer scales used to construct these variables are briefly described in Table 6.1.

Table 6.1. Dependent variables

Dependent variable	Question	Answer scale	Surveys
Pork	What degree of importance do you attach, during the course of your parliamentary activities, to providing resources for your constituency?	(4) A great deal (3) A good deal (2) Little (1) None at all	1998–2010
Representation of interest groups*	To what extent you do you take into consideration the opinion of each of the following groups, individuals, or institutions when making policy decisions?—Interest groups	(4) To a great extent (3) To some extent (2) To little extent (1) Not at all	1998–2006
Making laws*	Thinking about your work as a deputy, what is the degree of importance you attach during your parliamentary activity of the following?—Making laws	(3) High (2) Medium (1) Low	1998–2010

Notes: *As noted in Chapter 4, the questions and the answer scales for these variables changed throughout the different survey rounds. In the case of the variable *representation of interest groups* only the surveys from 1998 and 2006 could be considered. Regarding *making laws*, the questions and the scales changed, but their range of variation suggests unidimensionality; it was therefore rescaled.

Because these are ordinal scale variables, an appropriate statistical method for dealing with this type of categorical dependent variable is the ordinal logit, which is an extension of the logit model in the sense that each category is a simple logit whose cumulative probabilities are then added into a single coefficient.[89]

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[89] According to Agresti (2007), "[w]hen response categories are ordered, the logits can utilize the ordering. This results in models that have simpler interpretations and potentially greater power than baseline-category logit models" (p. 180).[89] The logit is a binary-choice model in which $y_i = 1$ if $y_i^* > 0$, where the coefficient of the latent variable y_i^* denotes the point where the set of parameters $x_i\beta$ intersect y_i (Agresti, 2007; Baum, 2006). In the ordinal logit model, as Baum (2006) explains, "[i]f $y^* \le k_1$, we observe $y = 1$; if $k_1 < y^* \le k_2$, we observe $y = 2$; if $k_2 < y^* \le k_3$, we observe $y = 3$, and so on, where the k values are the thresholds" [emphasis is from the original] (p. 257). Stata 12 reports the coefficients of those thresholds under the label *cut points*.

Some researchers use linear regression models to conduct analyses with survey data.[90] However, this method requires having a considerable amount of variation in the ordinal scale so it can be treated as if it was a continuous variable (de Vaus, 1991). Sometimes, researchers combine different survey items into indexes to obtain a single continuous variable that can be analysed afterwards using linear regression analysis. However, one of the disadvantages of this method is that the selected items should be able to measure the same attributes the researcher intends to analyse (Weisberg et al., 1996). This inconvenience could result in very few variables to aggregate and lead to heteroscedastic distributions of the observations. In any case, one of the advantages of conducting an ordinal logit rather than an ordinary least squares (OLS) analysis is that with the former method one can calculate the marginal effects. By aggregating the data into indexes and then analysing the models using OLS regressions, it is possible that other aspects of interest, such as marginal effects, will not be observable (de Vaus, 1991, p. 220).

6.1.1 Explanatory variables

OLPR is a dummy that equals one for the surveys conducted when the open-list PR system was adopted (the legislatures of 2006–2010 and 2010–2014) and 0 otherwise. As previously explained, *logM* is the logarithm to base ten of district magnitude. To test for the interaction effects between district magnitude and type of ballot, the interaction *logM×OLPR* is added to the models.

One of the proxies of legislators' personal attributes is *experience*, which is a counter for the number of years legislators declared having served in office. The range of variation in this variable is zero to 12 years. Two dummies were created to test the hypotheses regarding the legislators' local and business backgrounds. The first of these is *local*, which equals one for deputies who had previously been elected to municipal government positions. The second, *business*, equals one for legislators who reported having a business-related background.[91] These three last variables are interacted with *OLPR*. The Pearson correlation coefficients for these variables, which

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[90] In Stata the use of different statistical models for survey data analysis implies the inclusion of the prefix *svy:* before the command.
[91] To construct this variable I focus on four professions as coded in the PELA databases: farmers, cattle ranchers, business people, and finance people. According to Meza et al. (2007), farmers, cattle ranchers, people working in business and finance are very influential in the economic and political realms of Honduran society. See Appendix 6.1 for a more comprehensive account of the legislators' careers as reported in the PELA surveys considered in the present analysis.

are related to the legislators' personal attributes—hence one might suspect that they are highly correlated—range between .00 and .09; therefore, there is no multicollinearity and all three can be included simultaneously in the analysis.

6.1.2 Controls

In addition to these potential explanatory factors for the targetable and non-targetable orientations of legislators, the ideology of the party could also contribute to explaining the legislators' preferences. To control for this intervening factor I include the dummy *liberal*, which equals one for legislators who belong to the Liberal Party of Honduras (PLH). Bear in mind that the PLH and the National Party of Honduras (PNH) dominate in Honduran politics. As in Chapter 5, I include the dummy *govdeps*, which equals one for legislators who belong to the same party as the president, in order to hold constant the partial effect this factor might have on the legislators' behaviour. I also include the product *govdeps×OLPR* to observe the interaction effect of this variable with the change of ballot.

6.3 Results

Pork-barrel politics. Table 6.2 presents the ordinal logit results for the degree of importance Honduran legislators attach to pork barrelling, according to the PELA surveys of 1998–2010. Model (1) includes the key variables plus the additional control variables and their interactions. It is found that, consistent with the predictions, during the CLPR period the larger the log of M the less likely it is that legislators will show preferences for pork-barrel politics; however, that result is not statistically significant. When the electoral system changes to OLPR, even though it is not significant, the interaction *logM×OLPR* indicates that a change of ballot structure marginally increases the probability that legislators will favour pork-barrel politics as district magnitude gets larger. The predicted probabilities for this model when other factors are held constant at their means are displayed graphically in Figure 6.1.[92] It can be observed that under the CLPR electoral system it is almost certain that legislators from small-M constituencies will

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[92] Notice that for the present analysis I have omitted the confidence intervals (CI) from the marginal effects figures, while in chapters 5 and 7 I decided to report them. The reason I do not display those results here is to reduce the amount of information displayed in the graphs. Considering the significant overlapping between categories, the inclusion of CI would make the interpretation of the results very difficult.

Table 6.2. Ordinal logit analysis of explanatory factors for the variable *pork*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Interactions	CLPR	OLPR	Interactions	CLPR	OLPR	Interactions	CLPR	OLPR
OLPR	-1.204			-1.220			-0.295		
	(1.00)			(0.77)			(0.37)		
logM	-0.565	-0.616*	-0.302	-0.654**	-0.634**	-0.311			
	(0.33)	(0.28)	(0.18)	(0.25)	(0.23)	(0.20)			
logM×OLPR	0.381			0.354					
	(0.33)			(0.32)					
Experience	0.037	0.035	-0.009				0.037	0.035	-0.000
	(0.05)	(0.05)	(0.02)				(0.05)	(0.05)	(0.02)
Experience×OLPR	-0.041						-0.034		
	(0.06)						(0.06)		
Local	0.514	0.120	-0.128				0.842**	0.193	-0.083
	(0.46)	(0.22)	(0.13)				(0.35)	(0.21)	(0.12)
Local×OLPR	-0.047						-0.074**		
	(0.04)						(0.03)		
Business	-0.085	-0.095	-0.751**				0.055	0.068	-0.764**
	(0.36)	(0.37)	(0.26)				(0.37)	(0.39)	(0.29)
Business ×OLPR	-0.648						-0.817		
	(0.47)						(0.47)		
Liberal	0.707**	0.517	0.889***				0.733**	0.589	0.896***
	(0.18)	(0.37)	(0.12)				(0.18)	(0.37)	(0.12)
Govdeps	0.289	0.282	0.977***				0.293	0.295	0.993***
	(0.31)	(0.31)	(0.13)				(0.32)	(0.32)	(0.14)
Govdeps×OLPR	0.658*						0.670*		
	(0.31)						(0.32)		

(continued on following page)

Table 6.2
(*continued from previous page*)

	(1) Interactions	(2) CLPR	(3) OLPR	(4) Interactions	(5) CLPR	(6) OLPR	(7) Interactions	(8) CLPR	(9) OLPR
Cut point 1	-7.226***	-6.388**	-3.462***	-7.820***	-6.831**	-3.789***	-5.838***	-4.801**	-2.713***
	(1.40)	(1.38)	(0.43)	(1.15)	(1.17)	(0.64)	(1.08)	(1.16)	(0.34)
Cut point 2	-6.423***	-5.576***	-0.954	-7.017***	-6.023***	-1.450**	-5.037***	-3.993***	-0.218
	(0.79)	(0.68)	(0.51)	(0.57)	(0.51)	(0.56)	(0.53)	(0.52)	(0.24)
Cut point 3	-4.020**	-3.742**		-4.640***	-4.206***		-2.642***	-2.187**	
	(1.01)	(0.90)		(0.50)	(0.39)		(0.37)	(0.42)	
Cut point 4	-1.956*	-2.173*		-2.675***	-2.659**		-0.588	-0.650	
	(1.04)	(0.92)		(0.54)	(0.51)		(0.35)	(0.34)	
N	355	173	182	355	173	182	355	173	182
Design df	13	6	7	13	6	7	13	6	7

Note: standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

pick *a great deal* as their answer. As the log of M decreases that probability decreases. When the system changes to OLPR, we see that the probability that legislators from small-M constituencies will answer *a great deal* drops in comparison to the CLPR system. Still, it is more likely that this type of deputy will choose that answer than a legislator from a larger constituency. However, as the log of M gets larger the slope for *a great deal* decreases at a much slower rate in comparison with the CLPR system.

Overall, one can conclude that Honduran legislators demonstrate a high level of commitment to pork-barrel politics. As Figure 6.1 shows, the probability that legislators will select the option *a good deal* as an answer is very low (around 20 per cent), and is practically null for options that disregard the role of pork-barrelling.

Models (2) and (3) present the results of (1) without interactions. The first of these models analyses the impact of the set of covariates on the degree of importance given to pork when the electoral system is CLPR. It is observed that *logM* is negative as expected and statistically significant at the five per cent probability value. In the OLPR system, that variable is no longer significant and its impact decreases slightly, but is still negative. Models (5) and (6) reproduce the structure of models (2) and (3), only taking into consideration the interaction between district magnitude and type of ballot and excluding the other controls. It is found that the results are still consistent with the expectations.

Regarding the analysis of the variables related to the legislators' personal attributes, in hypotheses 5 and 6 the expectations are that under CLPR the higher the number of years legislators have served in office the less likely they will be to privilege pork-barrel politics, while under OLPR they should give even higher importance to the formulation of laws than to pork-barrel politics. The results are not significant for any of the models. Interestingly, as in Chapter 5, judging by the sign of the coefficients of the variables *experience* and *experience×OLPR*, under CLPR the more experienced the legislator is, the more likely she is to privilege pork. By contrast, the interaction of the number of years of experience with *OLPR* indicates that when the ballot is open-list, senior legislators are less likely to support pork-barrel politics.

It was stated in hypotheses 7 and 8 that the local political background of a legislator is a predictor of pork-barrel politics under CLPR, whereas this is not the

case in OLPR. Despite the fact that the variable *local* is not significant, the sign of its coefficient in models (1) and (2) suggests that legislators with a local background are more likely to privilege pork-barrel politics. When *logM* is ruled out as part of the regressors, the results are statistically significant at the ten per cent probability value in model (7). Surprisingly, under OLPR there is a decrease in the coefficients for the variable *local*, which seems to imply that under OLPR legislators with a local political background are less likely to place pork at top of the list of their strategic preferences.
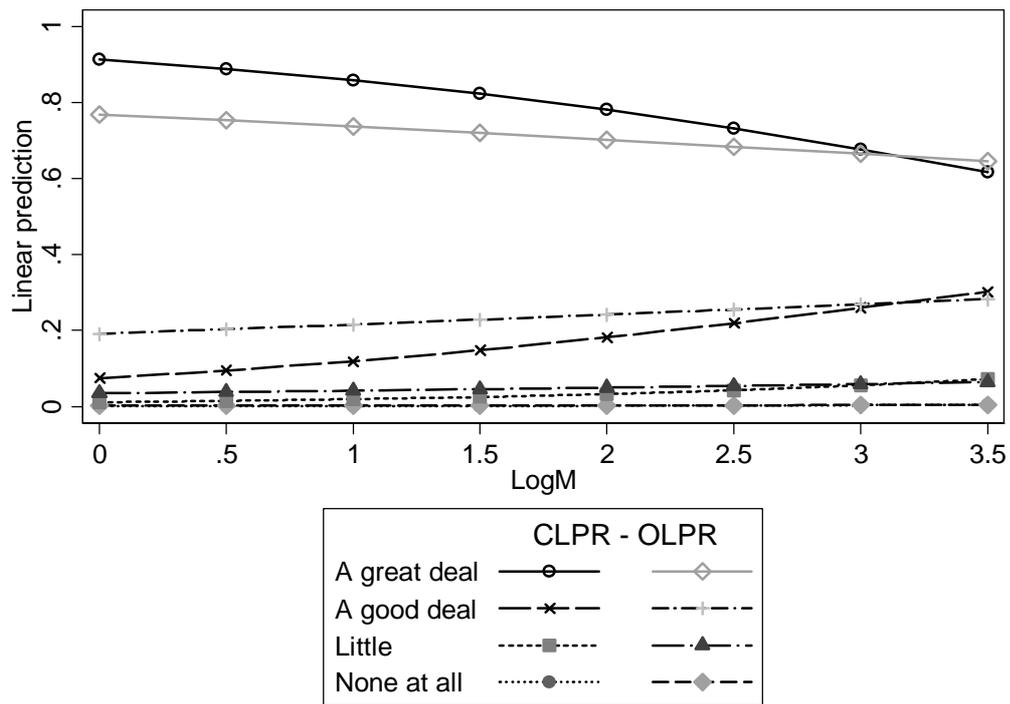
Figure 6.1. Effects of logM and OLPR on pork. This graph was calculated using an ordinal logit model; other factors were held constant at their means. The line connected by hollow circles indicates that in CLPR, the lower the district magnitude the more likely it is that a legislator will pick a great deal as her answer. As the log of district magnitude increases, the probability of choosing that answer decreases. Instead, selection of the answer a good deal is more likely the larger the district magnitude (see the black dashed line with exes). When the system changes to OLPR, as can be noticed in the solid grey line with hollow diamonds, the degree of importance that legislators attach to pork-barrelling falls in most constituencies; nevertheless, it is still more likely that legislators from small-M constituencies will pick a great deal over any other answer. The rate at which the slope decreases is much slower in comparison with the CLPR system. Something similar happens when legislators choose the option a good deal as an answer but in the opposite direction (see the dashed line with crosses).

With regard to legislators with business backgrounds, hypothesis 9 states that this type of deputy will be more likely to favour interest groups and the formulation of national laws than pork-barrel politics, and that that behaviour should be more pronounced under OLPR than CLPR. The results for the variable *business* suggest that these legislators are less likely to prioritize pork, especially under OLPR, as can be observed in models (1) to (3) and (7) to (9).

Representation of interest groups. The ordinal logit results for the extent to which legislators take into consideration the opinions of interest groups are reported in Table 6.3.[93] My expectation is that legislators will tend to attach greater importance to interest groups the larger the district magnitude, and that those preferences should be more pronounced in medium and large-M constituencies under OLPR than CLPR. Overall, by simply looking at the regression results in models (10) to (15), it is found that logM and the interaction logM×OLPR do not produce changes to legislators' estimation of the opinions of interest groups; this could be related to district magnitude and the change in the ballot type. However, the sign of the interactions suggests that it is likely that there has been a small shift in the opinions of legislators in this matter between the two types of electoral systems. Nevertheless, if that were the case, the results would belie the proposed hypotheses. Graphically, in Figure 6.1, it can be observed that the linear predictions do not significantly differ from zero, which confirms that the effects if any are very small. The interactions show that, as expected, under CLPR legislators tend to privilege interest groups more the larger the district magnitude. But, contrary to the expectations, under OLPR that pattern seems to reverse.

With regard to the personal attributes of legislators, the results are significant only for the variable *experience*. Notice in models (12) and (18) that under OLPR the results for this variable are statistically significant at the ten per cent probability value, which partially confirms my expectations. In terms of the variable *business*, the signs of the coefficients provide some support for the hypothesis that this type of legislator will privilege interest groups, particularly under OLPR. However, the results are not statistically significant.

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[93] Because these models exclude the observations of the 2010 survey, there were fewer degrees of freedom. Therefore, the controls *liberal* and *govdeps* were not included in this analysis.

Table 6.3. Ordinal logit analysis of explanatory factors for the variable *representation of interest groups*

	(10) Interactions	(11) CLPR	(12) OLPR	(13) Interactions	(14) CLPR	(15) OLPR	(16) Interactions	(17) CLPR	(18) OLPR
OLPR	-0.033 (0.92)			0.336 (0.77)			-0.255 (0.35)		
logM	0.095 (0.28)	0.071 (0.27)	-0.003 (0.22)	0.088 (0.23)	0.090 (0.24)	-0.087 (0.23)			
logM×OLPR	-0.096 (0.36)			-0.192 (0.33)					
Experience	0.017 (0.04)	0.016 (0.04)	0.049* (0.02)				0.017 (0.04)	0.017 (0.04)	0.049* (0.02)
Experience×OLPR	0.039 (0.05)						0.038 (0.05)		
Local	0.443 (0.36)	0.+191 (0.21)	0.369 (0.27)				0.378 (0.36)	0.186 (0.22)	0.369 (0.31)
Local×OLPR	-0.016 (0.03)						-0.010 (0.03)		
Business	-0.084 (0.20)	-0.098 (0.20)	0.032 (0.23)				-0.118 (0.16)	-0.124 (0.17)	0.032 (0.23)
Business×OLPR	0.098 (0.33)						0.134 (0.29)		
Cut point 1	-0.489 (0.89)	-0.609 (0.86)	-0.361 (0.46)	-0.556 (0.67)	-0.603 (0.72)	-0.765 (0.54)	-0.712* (0.34)	-0.776* (0.36)	-0.355* (0.13)
Cut point 2	0.804 (0.79)	0.741 (0.73)	0.829* (0.31)	0.732 (0.59)	0.745 (0.60)	0.411 (0.40)	0.582** (0.24)	0.575** (0.21)	0.835* (0.27)

Table 6.3
(*continued from previous page*)

	(10) Interactions	(11) CLPR	(12) OLPR	(13) Interactions	(14) CLPR	(15) OLPR	(16) Interactions	(17) CLPR	(18) OLPR
Cut point 3	2.038**	2.089**	1.861**	1.956**	2.090**	1.427*	1.815***	1.922***	1.867**
	(0.78)	(0.74)	(0.39)	(0.62)	(0.64)	(0.46)	(0.25)	(0.19)	(0.55)
N	264	173	91	264	173	91	264	173	91
Design df	9	6	3	9	6	3	9	6	3

Note: standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

The reason the results did not support the hypotheses for the analysis of interest groups could be due to the phrasing of the question used in the PELA surveys. It is possible that most legislators interpreted the term *interest group* as referring to business-related groups only, which may have negative connotations. Also, it most be borne in mind that for the present analysis the observations for the 2010 survey could not be included in the models.
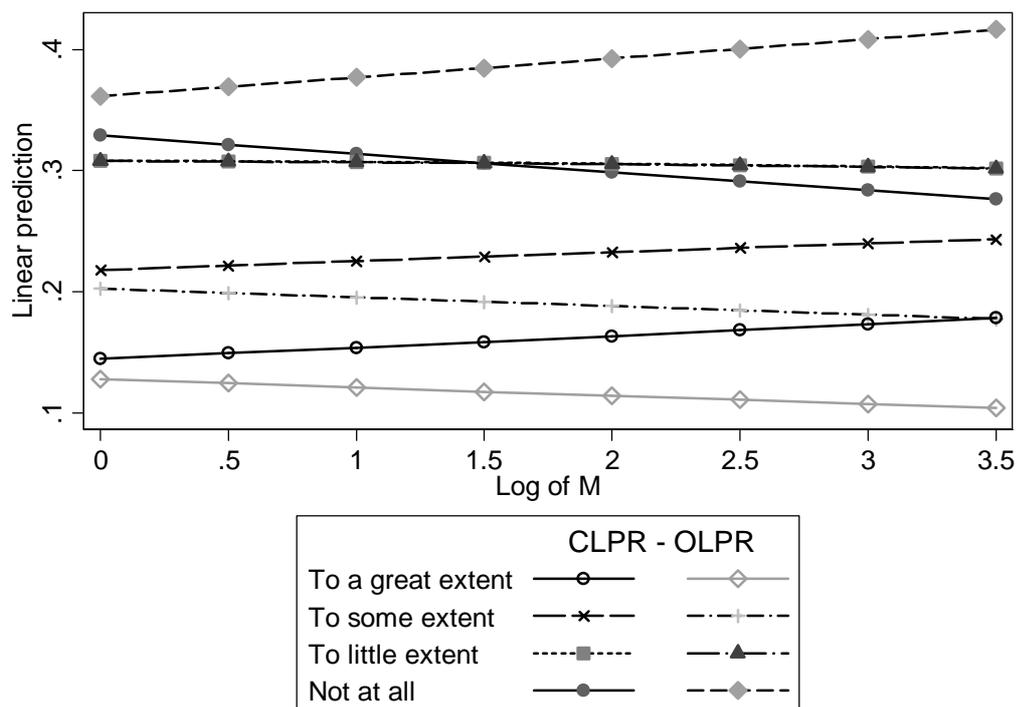
Figure 6.1. Effects of *logM* and *OLPR* on *representation of interest groups*. This graph was calculated from an ordinal logit analysis; other factors were held constant at their means. As can be noticed in the vertical scale, the linear predictions are very close to zero, which suggests that there is no significant interaction effect between the log of district magnitude and the ballot type. Still, the lines for CLPR and OLPR fork in very small magnitude constituencies and the separation between them increases as magnitude grows, both of which suggest an interaction effect. In that regard, under CLPR the larger the district magnitude the more likely it is that legislators will privilege interest groups; the effect is the opposite under OLPR. That effect is observed for all the categories of the variable except for the response *to little extent*, which does not change between the two electoral system types.

Making laws. In the remainder of this section I will analyse the influence of the predictors on the degree of importance Honduran legislators give to law creation. Consistent with the predictions, in Table 6.4 we can see that regardless of ballot structure, the larger the district magnitude the more importance legislators attach to making laws. The interaction with type of ballot is not significant (model 19); however, models (21) and (24) are statistically significant at the five per cent

Table 6.4. Ordinal logit analysis of explanatory factors for the variable *making laws*

	(19) Interactions	(20) CLPR	(21) OLPR	(22) Interactions	(23) CLPR	(24) OLPR	(25) Interactions	(26) CLPR	(27) OLPR
OLPR	-0.893**			-0.254			-0.444		
	(0.38)			(0.50)			(0.36)		
logM	0.136	0.217	0.441**	0.280	0.277	0.373**			
	(0.17)	(0.19)	(0.14)	(0.20)	(0.20)	(0.13)			
logM×OLPR	0.184			0.090					
	(0.23)			(0.23)					
Experience	0.033	0.032	0.041**				0.032	0.030	0.031*
	(0.05)	(0.04)	(0.01)				(0.04)	(0.04)	(0.02)
Experience×OLPR	0.006						-0.002		
	(0.05)						(0.05)		
Local	-0.802**	-0.382	-0.140				-1.073**	-0.415	-0.212
	(0.36)	(0.41)	(0.25)				(0.40)	(0.43)	(0.23)
Local×OLPR	0.052						0.075**		
	(0.03)						(0.03)		
Business	-0.536**	-0.504**	0.048				-0.582**	-0.584*	0.031
	(0.17)	(0.20)	(0.31)				(0.22)	(0.27)	(0.31)
Business×OLPR	0.567*						0.614*		
	(0.32)						(0.34)		
Liberal	-0.012	0.402	-0.405**				-0.024	0.375	-0.400*
	(0.29)	(0.50)	(0.16)				(0.29)	(0.47)	(0.18)
Govdeps	0.021	0.035	0.482**				0.014	0.025	0.413*
	(0.57)	(0.48)	(0.17)				(0.56)	(0.48)	(0.18)
Govdeps×OLPR	0.434						0.408		
	(0.62)						(0.62)		

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Table 6.4
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	(19) Interactions	(20) CLPR	(21) OLPR	(22) Interactions	(23) CLPR	(24) OLPR	(25) Interactions	(26) CLPR	(27) OLPR
Cut point 1	-0.130	0.251	0.910*	0.357	0.364	0.605*	-0.469	-0.291	-0.176
	(0.32)	(0.34)	(0.40)	(0.39)	(0.37)	(0.31)	(0.34)	(0.37)	(0.24)
Cut point 2	0.993**	1.345**	2.071***	1.451**	1.425**	1.733***	0.648**	0.797**	0.962**
	(0.35)	(0.48)	(0.31)	(0.45)	(0.50)	(0.25)	(0.28)	(0.30)	(0.22)
N	355	173	182	355	173	182	355	173	182
Design df	13	6	7	13	6	7	13	6	7

Note: standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

probability value. The calculation of the marginal effects of that interaction reveals that in the CLPR system legislators in small-M constituencies are very likely to assign low degrees of importance to making laws (see Figure 6.2). As district magnitude increases, the probability that legislators will pick low responses for that item substantially decreases. In OLPR there are slight changes, but overall it can be noticed that in small-M constituencies the importance legislators give to making laws is greater in the same segments of *logM* than in the CLPR system. Similarly, in large-M constituencies, the level of importance decreases when compared to the CLPR model. These results are consistent with the expectations.

The analysis of the variable *experience* is consistent with the expectations and the findings of Chapter 5, and shows that under OLPR senior legislators are more likely to ascribe higher degrees of importance to making laws than in the CLPR system. This result is only significant, though, when the constitutive term is analysed, as can be observed in model (21).

For the variable *local*, it was expected that in both electoral systems the signs of its coefficient would be negative, indicating that legislators with a local background are less likely to favour making laws. That expectation is clearly met under both types of system, as can be observed in the models with no interactions. However, it is interesting to note in the interacted models (19) and (25) that a change to OLPR causes deputies with a local background to be more inclined to favour the formulation of laws. This result is significant at a ten per cent probability value in model (25).

Finally, it is found that in the CLPR system legislators with a business-related background are less likely to regard the creation of laws as one of their most important parliamentary activities. In the OLPR system, although the effect is not significant, the positive sign suggests that they are more likely to assign greater importance to this activity. While it was not expected that legislators with a business background would be likely to disregard the creation of laws under CLPR, the behaviour in relation to this item in OLPR is consistent with the expectations.

Because the variable *making laws* was rescaled to match the different survey rounds, it is important to bear in mind that the question used in 1998 was different to the one included in the surveys of 2002 and 2006, and that in 2010 the question

changed again. These changes could induce biased results. To test for this possibility, I ran an additional set of models using these two survey rounds only. Even with this shortened dataset we are able to achieve the variation in *OLPR*, which is one of our key independent variables. However, by excluding observations there is a loss in the number of degrees of freedom, making it necessary to take some covariates out of the analysis. The results of that analysis are presented in Appendix 6.2. In those results it is found that the coefficients of *business* under CLPR are the only set of coefficients that show levels of statistical significance. The reason the other covariates are not significant might be because by excluding the surveys of 1998 and 2010, the models do not capture the influence of other factors that could have affected the attitudes of legislators. For example, the behaviour of legislators was probably more institutionalized in 2010 than it was in 2006. In all, the signs of the coefficients of *logM*, *experience*, and *business* are the same in both sets of models, and
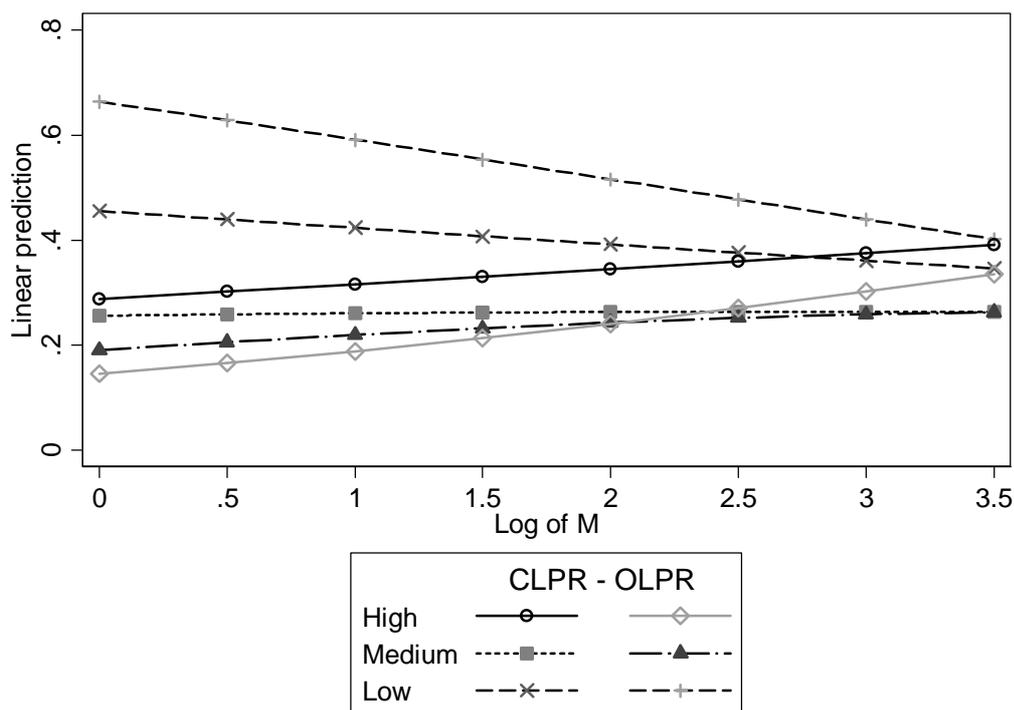
Figure 6.2. Effects of *logM* and *OLPR* on *making laws*. This graph was calculated from an ordinal logit analysis; other factors were held constant at their means. The solid lines indicate that the larger the district magnitude the more likely it is that the response of a legislator will fall into the category *high*. By looking at the light grey solid line, we can see that the curve of the predicted probability for the category *high* under OLPR is slightly lower than the equivalent curve under CLPR—see the black solid line—which indicates that under OLPR the preferences of legislators toward *making laws* decrease across all district magnitudes.

their magnitudes (smaller in CLPR and larger in OLPR) are very similar. This suggests that despite the rescaling process, the models can provide a robust test of factors that explain variation in *making laws.*

6.4 Discussion

The results in this chapter confirm those outlined in Chapter 5, namely that in the CLPR system Honduran legislators tend to privilege pork politics more the smaller the district magnitude. However, in the present analysis, with the amount of data available, it is difficult to confidently rule out endogeneity between the electoral system change and the legislators' behaviour, which might in turn have been influenced by Hurricane Mitch. This is partly because with survey data which is collected every four years, trends are not as easily observed as if they were recorded, for example, yearly. Also, taking into consideration that observations fluctuate in an ordinal scale no larger than four, and the importance that legislators in Honduras attach to pork, the skewness of the data towards responses that favour pork-barrel politics does not reveal any extraordinary patterns.

Nevertheless, the results presented in Appendix 6.3 suggest that the electoral system change in Honduras in 2004 has had an impact on the way legislators behave, which is consistent with the expectations and the results presented in this chapter. Certainly, in terms of pork-barrel politics there has been a significant change in legislators' behaviour, which is probably due to the impact Hurricane Mitch had on Honduran politics. In this regard, it was observed that in the survey conducted before Mitch, most responses from legislators indicated a tendency to privilege pork-barrelling and that in the largest constituencies there was more variation in the responses. That pattern changed in the survey of 2002, a shift that seemed to continue in the subsequent survey rounds. Still, despite the fact that the results are not significant for the survey of 2010, the coefficients are closer to zero than in the preceding years, which might be an indication that legislators from larger district magnitude constituencies are attaching greater importance to pork under OLPR.

Other indicators presented in the robustness test in Appendix 6.3 provide evidence that the changes in the behaviour of Honduran politicians, which in the present work are attributed to the electoral system reform, occurred independently of the influence of Mitch. According to this survey analysis, the local background of legislators was a strong predictor of pork in 2002, i.e. in the first legislature elected

after Hurricane Mitch. This coincides with the reconstruction period and it makes sense to think that at that time the country was still recovering from the aftereffects of that natural disaster. It should be noted, though, that in the subsequent survey rounds the local backgrounds of legislators seem to lose importance as an explanatory factor for pork, which occurs in more or less the same way as before Mitch. Similar behaviour is observed for deputies who are business people. In the aftermath of Mitch they gave relatively more importance to pork, but according to the data from the survey rounds conducted in 2006 and 2010, the significance they attach to this activity returned to practically the same levels as before Hurricane Mitch. However, this type of legislator had clearly differentiated behaviour across the two electoral systems in terms of how they valued the formulation of laws. Under CLPR, regardless of the effect of Mitch, they were less likely to prioritize law making, whereas under OLPR their position on this activity seems to be ambiguous.

The results suggest that legislators from larger magnitude constituencies are more likely to favour pork-barrel politics under OLPR, but not to the same extent as legislators from smaller magnitude constituencies. This is consistent with the theory, because it is expected that larger magnitude constituencies will generate more intraparty competition, as predicted by Carey and Shugart (1995). However, it must be borne in mind that pork is not an attractive prospect for all legislators in those constituencies, firstly because it is more difficult to claim credit for projects, and secondly because in those territories there are more likely to be considerable but disperse groups of voters who are attracted by policy rather than pork.

I expected to find stronger support for interest groups from legislators who belong to larger constituencies; however, the results contradict the hypotheses. It is not clear whether the negative results are because the dependent variable that was chosen for the analysis does not capture the phenomena that I intended to explain, or whether it is because of a lack of observations, which if present would allow for more confidence in the results.

In terms of the analysis of the importance legislators give to the formulation of laws, the regression results for the interaction *logM×OLPR* do not support the claim that under OLPR there should be a decrease in the degree of importance legislators attach to making laws during their parliamentary work. However, the analysis of marginal effects revealed that there has been a decrease which, even though it is not

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very significant, follows the predictions. It was also found that legislators' backgrounds are important when it comes to formulation of laws. As in Chapter 2, I argue that legislators with more experience in parliament can use their personal reputations to attract party votes, i.e. votes based on ideology or policy positions. In addition, legislators with a business background should be more likely to give preference to the formulation of laws under OLPR. In both cases, the explanations are similar. In the first case, these legislators are more likely to be found in medium and large magnitude districts, where pork tends to be less important. And in the case of legislators with business backgrounds, they are more likely to be connected with business elites, who might help them to gain party votes through the financing of expensive campaigns.

Appendix 6.1 Legislators' careers as reported by PELA

Table 6A.1. Legislators' past public experience by electoral system, according to the PELA surveys

	CLPR		OLPR		Total	
	N	%	N	%	N	%
Lawyer	17	9.83	25	13.74	42	11.83
Health Services	13	7.51	11	6.04	24	6.76
Farmer/cattle rancher	31	17.92	18	9.89	49	13.80
Business	33	19.08	43	23.63	76	21.41
Teacher	12	6.94	3	1.65	15	4.23
Journalist/media/entertainer	1	0.58	12	6.59	13	3.66
Merchant	20	11.56	14	7.69	34	9.58
Engineer	7	4.05	11	6.04	18	5.07
Finance services	10	5.78	1	0.55	11	3.10
Other – professional	17	9.83	23	12.64	40	11.27
Other – non-professional	4	2.31	6	3.30	10	2.82
Mayor	1	0.58	1	0.55	2	0.56
Public servant	4	2.31	3	1.65	7	1.97
Construction	3	1.73	2	1.10	5	1.41
Minister	0	0.00	1	0.55	1	0.28
Party executive	0	0.00	2	1.10	2	0.56
NGO/advocacy	0	0.00	6	3.30	6	1.69
Total	173	100.00	182	100.00	355	100.00

Source: own, based on Alcántara (1994-2010).

Appendix 6.2 Analysis of the importance of *making laws*, surveys of 2002 and 2006 only

In this robustness test I run an analysis of explanatory factors for the variable *making laws* using only the surveys of 2002 and 2006—which did not have any changes to the phrasing of the question or the answer scales. By restricting the analysis to those two survey rounds, there is a loss in the number of degrees of freedoms available for conducting inferences. Because of this, I excluded some of the variables to gain leverage. I ran different tests using the covariates *local*, *experience*, and *business* separately from the explanatory variables. Of these, the only one that provided significant results was *business* under CLPR, affecting the partial effect *logM* had on the variable *making laws*. In models (28) to (30) in Table 6A.2 it can be noticed that including the variable *business* slightly reduces the partial influence *logM* has on *making laws* under CLPR. Notice that the directions of the coefficients do not vary, in contrast with the models presented in Table 6.4, and the magnitude and levels of significance for *business* are very similar in the CLPR models.

Table 6A.2. Ordinal logit analysis of explanatory factors for the variable *making laws*, surveys of 2002 and 2006 only

	(28) Interactions	(29) CLPR	(30) OLPR	(31) Interactions	(32) CLPR	(33) OLPR	(34) Interactions	(35) CLPR	(36) OLPR
OLPR	-0.574 (0.75)			-0.066 (0.85)			-0.181 (0.27)		
logM×OLPR	0.046 (0.31) 0.178 (0.34)	0.046 (0.31)	0.222 (0.15)	0.108 (0.27) 0.096 (0.33)	0.108 (0.28)	0.203 (0.18)			
Experience							0.003 (0.04)	0.003 (0.04)	0.017 (0.02)
Experience×OLPR							0.014 (0.05)		
Business	-0.537** (0.13)	-0.540** (0.14)	0.267 (0.46)				-0.549** (0.17)	-0.552* (0.18)	0.191 (0.44)
Business×OLPR	0.806 (0.49)						0.741 (0.49)		
Cut point 1	0.318 (0.50)	0.315 (0.48)	0.583 (0.40)	0.317 (0.69)	0.313 (0.66)	0.387 (0.52)	-0.130 (0.20)	-0.138 (0.23)	0.057 (0.14)
Cut point 2	1.375* (0.62)	1.383 (0.70)	1.628** (0.15)	1.371 (0.81)	1.381 (0.89)	1.427** (0.28)	0.932*** (0.15)	0.945** (0.13)	1.098* (0.38)
N	193	102	91	193	102	91	193	102	91
Design df	6	3	3	6	3	3	6	3	3

Note: standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

Appendix 6.3 Analysis of the impact of Hurricane Mitch

The purpose of the analyses presented in this appendix is to test how robust the results are to the influence of Hurricane Mitch. The variation in the data seems to suggest that this natural disaster could have affected the way legislators answered the survey questions, especially when it comes to pork-barrel politics. As I argued in Chapter 5, Mitch could have had a particularly influential effect in terms of pork-barrel politics and the representation of interest groups. The results for interest groups do not vary significantly in a way that could be attributed to Mitch. Therefore, I decided not to report that robustness test. Instead, for the present analysis I will focus on the variable *pork*.[94]

In Table 6A.3 we see that in the survey of 1998, which was conducted in March of that year, seven months before Hurricane Mitch struck Honduras, legislators from large district magnitude constituencies were much less likely to put pork at the top of the list of their priorities. The extent to which legislators from large-M constituencies disregarded pork-barrel politics seems significantly reduced in the 2002 survey. Thereafter, with the amount of data produced, it is difficult to ascertain whether the effect of district magnitude on the attitudes of legislators towards pork shifted a result of the change of ballot type or if it was because of Mitch. Nevertheless, there are signs that might suggest that the effect of the change of ballot type on legislators' pork-barrelling preferences is not related to Hurricane Mitch. In this regard, notice how in the survey conducted in 2006 the coefficient for *logM* tends to move away from zero, which might be an indication that the legislators' behaviour was moving back towards its old equilibrium, in spite of the electoral change in 2004. Now, notice how in the survey conducted in 2010 the coefficient falls closer to zero than ever before. This result is probably an indicator of an underlying institutionalization process, in which candidates and incumbent legislators have adapted their pork-barrel practices to the new institutional circumstances imposed by the OLPR system.

The proxies for legislators' personal attributes also indicate different behaviour in the two electoral systems and are not necessarily related to Hurricane Mitch. In this regard, notice how the variable *local* is positive and statistically significant in 2002,

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[94] Note that in this set of models, because fewer degrees of freedom were available, I could not include control variables.

while in the previous survey it was not significant and its sign was negative. This is not surprising considering that in 2002 the country was still undergoing a process of recovery after Hurricane Mitch. However, in the following two survey rounds the magnitude of the coefficient for *local* decreases. In the 2010 survey the coefficient for that variable seems quite similar to that of 1998. A very similar trend is observed for the variable *business*, except that this time is not statistically significant.

Table 6A.3. Ordinal logit analysis of explanatory factors for *pork*,
by survey round

	(37)	(38)	(39)	(40)
	1998	2002	2006	2010
logM	-1.202	-0.433	-0.502	-0.305
	(0.70)	(0.21)	(0.21)	(0.35)
Experience	0.190	0.014	-0.104	0.033
	(0.20)	(0.03)	(0.05)	(0.03)
Local	-0.183	0.429**	0.150	-0.276
	(1.24)	(0.06)	(0.15)	(0.24)
Business	-0.703	0.071	-0.172	-0.757
	(1.17)	(0.22)	(0.34)	(0.40)
Cut point 1	-7.374**	-3.686**	-4.182**	-4.771**
	(1.95)	(0.30)	(0.84)	(0.63)
Cut point 2	-6.551**	-1.810**	-2.183*	-1.699
	(1.49)	(0.54)	(0.79)	(0.86)
Cut point 3	-5.478*			
	(1.96)			
Cut point 4	-4.395*			
	(1.68)			
N	71	102	91	91
Design df	3	3	3	4

Note: standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

Chapter 7

Pork-barrel politics: The case of the Honduran Social Investment Fund

The ways in which electoral systems generate incentives for vote-seeking legislators to procure projects for their constituencies, even to the detriment of the national interest, is the subject of one of the oldest debates in political science. Examples of legislators seeking benefits for their constituencies for re-election purposes. For instance, the single non-transferable vote (SNTV) system in Japan has been signalled as one of the main drivers of pork-barrel behaviour among members of the Diet (the Japanese lower house of parliament) (Hirano, 2006; McCall-Rosenbluth & Frances, 1996).[95] There are several cases in Japan where national funds were used for the construction of roads and bridges, projects that, from a technical viewpoint, could not be said to serve the common good but which are seen as being the result of pork-barrel politics (Diaz-Cayeros, McElwain & Romero, 2009; Fukui & Fukai, 1996).[96]

In the case of Honduras, qualitative evidence suggests that often political rather than technical criteria prevail in decisions related to the allocation of national public funds. I have provided several examples in the preceding chapters. I also received confirmation of this fact from a member of staff at the Department of Public Works, in the Ministry of Public Works, Transport and Housing (SOPTRAVI), which is in charge of the maintenance and construction of civil works such as bridges, buildings,

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[95] As explained by Gallagher and Mitchell (2005a), under the single SNTV system "there are several seats to be filled in each constituency, but voters are not faced with a choice among party lists. Instead, they vote for a candidate—and the seats go to the candidates with the most votes." (p. 592).

[96] For instance, Fukui and Fukai (1996) report that "if a local problem or project requires new legislation, one or more Diet members from the area takes charge of the action needed to get a law enacted or amended. A lower house member from Toyama Prefecture, Kotar Tachibana, serving on the Transportation Committee, is credited with the committee's approval of the prefecture's plan to build outer harbor docks with an 1,800-meter breakwater capable of handling four million tons of cargo per year." (p. 278).

and airports. According to this staff member, pork is the main driver behind decisions to prioritize projects in her department:

> Here [in Honduras] things are managed by zones [i.e. constituencies]. Say there is a deputy working in a particular zone; the community approaches the deputy they helped or the deputy working in the zone to 'give weight' to their application for projects. The deputy approaches the ministry with the proposal, and then the proposal comes from the minister to us… that's the way it works here: political clientelism.[97]

While qualitative evidence can lend important empirical support to the theory to be tested, it fails to provide more precise details about the impact of electoral systems on pork-barrel politics. Because budget decisions usually pass through the hands of several different decision makers before they materialize into projects, it is difficult to directly measure the pork-barrel influence of a legislator on government outcomes. However, very often political scientists and economists approximate that influence through the statistical study of aggregate data on the geographical allocation of public spending from common pool resources. For example, Ansolabehere, Gerber and Snyder (2002) study the transfers made from the state governments to counties in the United States before and after the Supreme Court ordered the redistricting of several constituencies in a series of cases in the 1960s, finding evidence of a diversion of moneys from formerly overrepresented counties to counties that were underrepresented before the Supreme Court decision. Similarly, Golden and Picci (2008) find evidence that, under OLPR in Italy, MPs' personal attributes could influence decisions on where infrastructure projects should be constructed and the amount of spending that should be assigned to them.

The present chapter utilizes data from the Honduran Social Investment Fund (FHIS) which, as noted in Chapter 4, is an institution created in the early 1990s to tackle poverty and whose main source of finance comes from international donors and lenders, but also from the national budget. FHIS is not the only institution of its kind in the world. Social investment funds (SIFs) have been implemented in the

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[97] Member of staff at the Department of Public Works, SOPTRAVI, personal interview, 2nd December 2009, own translation.

developing world since the late 1980s, aiming to mitigate the impact of structural adjustment programmes on the poorest populations in the countries involved.[98]

Projects implemented through SIFs generate short-term employment and longer-term infrastructure development in the communities where they are implemented. Projects and spending allocation are usually audited by private firms and not by the public sector. Siri (1996) speculates that, even though politicians want to give international donors the impression that their decisions in relation to spending allocation are not politicized, spending at SIFs is susceptible to political manipulation. There is evidence that this might indeed be the case in some countries. For example, Schady (2000) analyses the distribution of spending at the Peruvian Social Investment Fund (FONCODES) during the 1991–1995 period. He confirms that in this institution spending tended to increase before national elections. His findings also indicate that the geographical allocation of spending benefited municipalities where the ruling party hoped to gain more votes. Similarly, Bruhn (1996) argues that the Mexican government in the late 1980s and early 1990s used SIFs from the National Solidarity Programme (PRONASOL) to privilege those states where the Institutional Revolutionary Party was electorally strong.

In this chapter I use an original dataset on spending allocation at FHIS that covers spending from February 1990 to December 2009 in the 298 municipalities into which the country is divided. Because that time frame covers the electoral reform and the allocation of spending was made across all municipalities, I can test a set of hypotheses regarding the influence of electoral systems on pork-barrel outcomes while controlling for factors at the sub-constituency level. Because scrutiny from the international funding lenders has gradually increased, to avoid the influence of this factor I focus on national sources of spending only, which I have already proved are susceptible to the influence of legislators (see Chapter 4).

This chapter consists of four parts. In the first section I present the hypotheses to be tested. In the following part I explain the estimation strategy used and describe

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[98] Structural adjustment programmes have been implemented throughout the world since the 1980s. They were first applied in Latin American countries in order to tackle the difficult fiscal conditions governments were facing at that time and to enhance the economic growth prospects of their societies. In this regard, according to Corbo & Fischer, a series of market-oriented reforms to policies and institutions were made "with the goals of restoring a sustainable balance of payments, reducing inflation, and creating the conditions for sustainable growth in per capita income" (1995, p.2847).

the variables. Section three presents the results. I conclude this chapter with a discussion of the findings.

7.1 Hypotheses

Because the data is aggregated at the sub-constituency level—i.e. by municipality— the relationship between legislators and geographical spending allocation cannot be directly established. Thus, hypotheses that are associated with the legislators' personal attributes cannot be tested. Instead, I focus on the interaction between district magnitude and ballot type. Following Carey and Shugart's (1995) theory, under CLPR, the value of the personal reputation of legislative candidates increases as district magnitude decreases. Applying that logic to the pork-barrel behaviour of legislators, one could expect that under a closed-list PR electoral system legislators will demand more pork-barrel resources the smaller the district magnitude. In this regard, I formulate the following hypothesis:

Hypothesis 1. Holding other factors constant, under CLPR, spending per capita at FHIS will increase as district magnitude decreases.

As I have argued, despite the incentives that OLPR generates for legislators to look for personal votes, because it is more difficult to claim credit for projects in larger constituencies, pork-barrel politics will tend to be of more importance for legislators in smaller constituencies (Ashworth & Bueno de Mesquita, 2006). Practically speaking, the best way of winning elections in these constituencies is by providing favours to constituents and securing projects for the community. I have explained that this is not only because in this type of electoral district legislators are more easily identified as providers of patronage and pork. There is also a socioeconomic factor inherent to these constituencies in PR systems, which is that they tend to have more rural and perhaps poorer populations, who very often cast their vote driven by particularistic interests, such as pork for their communities. The influence of that socioeconomic factor tends to become weaker as district magnitude increases, while at the same time the number of seats increases and it becomes more difficult for legislators to claim credit for projects. Nevertheless, larger magnitude constituencies are not necessarily free of voters who are likely to be motivated by pork. This is especially the case in Honduras, where there still exist large groups of urban poor populations in medium and large magnitude constituencies, a factor which deputies use for re-election purposes (Taylor-Robinson, 2010). Incumbent

legislators, especially from the party in government, have greater access to the state's resources than challenging candidates. Therefore, under OLPR in medium and large constituencies, I expect that the provision of pork will increase in comparison with CLPR:

Hypothesis 2. Holding other factors constant, under OLPR, spending per capita at FHIS will be higher the smaller the district magnitude; however, the rate at which it decreases, as district magnitude increases, will be slower than under CLPR.

7.2 Model specification

The FHIS database has been organized by source of funding, which facilitates the identification of whether projects are funded from national sources, international sources, or a combination of both.[99] As previously mentioned, for the purposes of the present analysis I focus on projects funded from national sources. These are more likely to be subject to the influence of pork-barrel politics, as the qualitative evidence presented in Chapter 4 suggests.

The dependent variable of this study is the tenth logarithm of spending per capita at FHIS, in constant lempiras, per municipality per year.[100] Using data disaggregated at the municipality level allows me to control for socioeconomic factors. This is especially important considering that, even though some departments have higher levels of poverty than others, they all have very poor regions. Besides, in Honduras, the number of deputies representing a constituency should reflect the size of the population (Chapter 3). Even though the population may have changed, this requirement has not been revised since the 1980s, so it is expected that there will be a correlation between district magnitude and the size of population. By using data disaggregated at the municipality level that association between the two variables is avoided.

The dataset forms an unbalanced panel incorporating 298 municipalities and 20 years, from 1990 to 2009.[101] The total number of observations is 5,935. Some municipalities did not receive any funding from FHIS in certain years. The FHIS

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[99] When a project used combined sources of funding I recorded that project as being international.
[100] To get the per capita figures I divided spending by the population of the municipality as reported in the census of 2001.
[101] Seven new municipalities were created at different stages during the period of study.

database does not include observations for municipalities that did not receive any funding, making it an incomplete dataset (Hug, 2003). Most methodologists agree that in order to make reliable inferences from incomplete datasets, a Heckman model is the most suitable choice (Heckman, 1979; Sigelman & Zeng, 1999; Wooldridge, 2002). The two-step Heckman procedure (Heckit model) corrects for selection bias in linear models due to variables omitted from observations not being included in the sample (Heckman, 1979; Wooldridge, 2002). As its name suggests, this model consists of two stages. In the first stage, the inverse Mills' ratio, λ_i (*lambda*), is obtained from a probit regression, where the outcome of the dependent variable is the probability that a municipality i receives spending, given a 1×L vector x of explanatory factors and a 1×L vector of selection variables, which contribute to explaining why some municipalities get funded and others do not. The second stage consists of incorporating *lambda* into the linear model without the selection variables. As explained in Chapter 3, I use a time-series cross-section (TSCS) analysis with a random-effects method, considering that one of the key explanatory variables in this analysis, district magnitude, keeps constant over the period of study. The models are reported with robust standard errors.

7.2.1 Explanatory variables

As in the previous two chapters, I use the tenth logarithm of district magnitude (*logM*, see Chapter 3). *OLPR* is a dummy that equals one starting in the year when the open-list PR system was adopted (2004). In addition, the interaction effect between district magnitude and type of ballot, *logM×OLPR,* is added to the models.

7.2.2 Selection variables

The spending in the form of projects allocated to a municipality is a function of different factors. Apart from the political variables, whether a municipality receives funding or not and the amount it receives might depend on its level of poverty—because of policies targeting the poorest populations—and whether the municipality is in receipt of international sources of spending and the amounts it receives from this type of funding—because the government might finance projects in municipalities that are not eligible for international funds. To control for these two factors, I include the variable *extreme poor* in the first stage of the estimation model (probit model). This variable is an indicator of extreme poverty, and consists of the percentage of the constituency's population with three or more unsatisfied basic

needs.[102] I also incorporate the log of spending per capita from international sources, in constant lempiras, that FHIS allocated to each municipality during the period of study (variable *int. spending*), and its lag, considering the possibility of serial correlation.[103]

7.2.3 Controls

To control for autocorrelation I use the framework proposed by Beck and Katz (2011). In addition to a lagged dependent variable whose variation in time could be induced by an omitted variable, I include lags for other covariates that change over time and which could be correlated with the omitted variable—i.e. serial correlation.[104]

To control for the possibility that spending is targeted at core supporters of the party in government, core supporters of the opposition, or swing voters, I identified the municipalities in which the Liberal Party of Honduras (PLH) and the National Party of Honduras (PNH) won a plurality of votes in the legislative elections held between 1981 and 2005. If a party won in the same municipality in all of the seven elections held during that period, that municipality was classified as a stronghold of that party. Once the PLH and the PNH electoral strongholds were identified, a set of two dummy variables was created. *Govstrong* equals one if the municipality is an electoral stronghold of the party in government, and *oppstrong* takes a value of one if the municipality is an electoral stronghold of the main opposition party. For swing voter municipalities I created the variable *swing*, which equals one for municipalities in which the party in government lost at least one legislative election but their average of votes in the elections held between 1981 and 2005 was 50 per cent or more. These variables are interacted with type of ballot. *Govstrong×OLPR* measures the effect of government strongholds on national spending when the electoral system is OLPR and *oppstrong×OLPR* does the same for opposition strongholds;

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[102] The data for this variable was taken from the 2001 census (National Institute of Statistics of Honduras, 2002).

[103] In the following sub-section I explain in more detail why this lag was included.

[104] As explained in Chapter 3, the addition of a lag dependent variable in time-series cross-section models is controversial because the effect of the lag can suppress the influence of other factors that might be correlated with the same omitted variables that contribute to inducing autocorrelation in the dependent variable (Achen, 2000). Beck and Katz (1995; 2011) consider that argument misleading, especially in the political science field, where the data generation process produces different dynamics to the data generated in the economics field, where much of the work on time-series analysis has been produced.

swing×OLPR is used for municipalities where the vote was pivotal. Bear in mind that in Chapter 5 I used a binary outcome variable to identify core strongholds of the party in government at the constituency level. To contrast the results in that chapter with those from the present analysis, I also include the variable *strong constituency* which, as its name suggests, is a dummy for constituency strongholds. Its interaction with *OLPR* is also added into the analysis.

Two additional political controls are included in the models. To hold constant the effect of electoral business cycles I include a count variable, *cycles*, which ranges between one and four, with one being the first year of government and four an electoral year. The variable *liberal* is a dummy for years when the PLH held the presidential office. As I explained in Chapter 3, it is possible that this political party is likely to attach more importance to pork than the other party that has held the presidency, the PNH, hence the importance of including a statistical control for this potential confounding factor.

The log of gross domestic product (*GDP*), in constant lempiras, is included to hold constant the partial effect of improvements in the economy.[105] I also add a lag of GDP which, as I said, could be correlated with the same unknown factors that contribute to explaining autocorrelation in the dependent variable.

7.3 Results

The results for the TSCS regression analysis with random effects are presented in Table 7.1. In model (1), it can be observed that the key explanatory factor *logM* is negative and statistically significant at the one per cent probability value. By contrast, the interaction *logM×OLPR* is positive and statistically significant at the five per cent probability value. Therefore, this model supports the hypothesis that under CLPR, spending per capita at FHIS will increase as district magnitude gets smaller. The results for the interaction term *logM×OLPR* indicate that a change to OLPR has a major impact the larger the district magnitude in terms of the probability that a municipality will receive funding and the amount of spending it will receive. However, as in the previous two empirical chapters, the positive sign of that

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[105] The GDP figures were taken from the Ministry of Finance's annual reports, which are available at http://www.sefin.gob.hn/?page_id=1845

Table 7.1. Results of Heckman two-step estimations of the logs of spending per capita from national sources of funding at FHIS

	(1) Interactions	(2) CLPR	(3) OLPR
OLPR	-0.031		
	(0.39)		
logM	-0.665***	-0.580***	-0.214**
	(0.17)	(0.16)	(0.11)
logM×OLPR	0.391**		
	(0.16)		
Cycles	0.093	0.167*	-3.181***
	(0.06)	(0.10)	(0.78)
Liberal	0.561***	0.878***	-25.689***
	(0.13)	(0.17)	(6.55)
Govstrong	0.098	0.099	-0.277
	(0.23)	(0.21)	(0.19)
Govstrong×OLPR	-0.199		
	(0.27)		
Oppstrong	0.191	0.034	0.121
	(0.17)	(0.18)	(0.18)
Oppstrong×OLPR	-0.142		
	(0.24)		
Swing	0.047	-0.066	0.070
	(0.21)	(0.21)	(0.15)
Swing×OLPR	0.053		
	(0.26)		
Strong constituency	-0.050	-0.261**	0.040
	(0.13)	(0.13)	(0.11)
Strong const.×OLPR	-0.034		
	(0.17)		
Log of GDP	2.215**	-3.963	-4.599**
	(0.92)	(3.34)	(1.78)
Lag of log of GDP	-3.650***	6.162*	72.169***
	(0.97)	(3.71)	(18.95)
Lagged dep. variable	-0.060***	-0.067***	0.010
	(0.01)	(0.02)	(0.02)
Selection variables			
Extreme poor (%)	0.030***	0.032***	0.036***
	(0.00)	(0.00)	(0.00)
Log of int. spending	-0.074***	-0.102***	-0.011
	(0.01)	(0.01)	(0.01)
Lag of log int. spend.	0.032***	0.062***	0.063***
	(0.01)	(0.01)	(0.01)
Lambda	0.617**	0.316	1.371**
	(0.19)	(0.21)	(0.42)
Intercept	19.050**	-21.854*	-757.668***
	(6.16)	(13.11)	(197.22)
N (selection)	1191	500	691
N	5634	3846	1788
R2 within	0.05	0.17	0.08
R2 between	0.169	0.188	0.136
R2 overall	0.124	0.214	0.126

Note: robust standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

interaction does not mean that the larger the district magnitude the more spending it will get, just that there is more intraparty competition. As can be observed in models (2) and (3), only for the main components, under OLPR the coefficient of *logM* tends to get closer to zero as M gets larger, in contrast to CLPR. Nevertheless, as expected in Hypothesis 2, the closer M is to one single-member constituency the more spending it gets, even in OLPR. Graphically, that relationship can be observed in the predictive effect when other factors are held constant at their means (Figure 7.1).
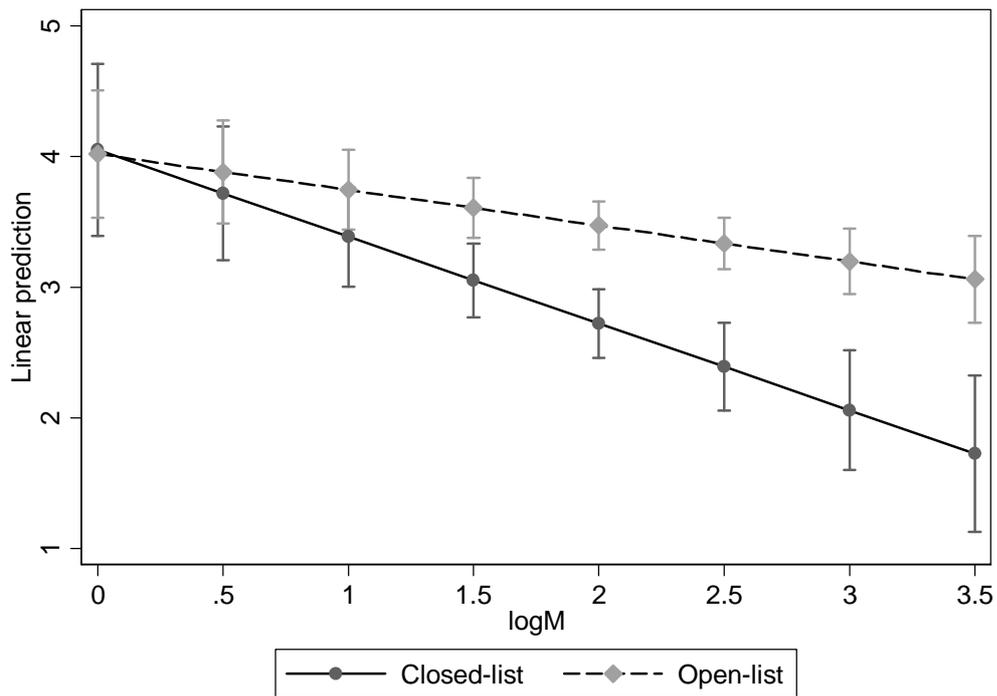
Figure 7.1. Effects of *OLPR* and *logM* on the distribution of the log of national spending per capita at FHIS. 95 per cent confidence intervals are denoted by the vertical capped lines. Other factors are held constant at their means. Notice that regardless of the electoral system, the closer logM is to zero, the more funding the municipality will get. Nevertheless, under OLPR in large-M constituencies there is an increase in the predicted probability that municipalities belonging to those electoral districts will receive spending from FHIS.

Regarding the analysis of other political controls, in spite of the fact that it is not statistically significant, the coefficient of the covariate for the party in government's core supporters, *govstrong*, is positive under CLPR and becomes negative under OLPR. The coefficient of *oppstrong* is positive under CLPR and OLPR; however, in the interacted model it becomes negative. The coefficient of *swing* is negative under CLPR but positive under OLPR. Finally, notice that *strong constituency* is negative and statistically significant in model (2), which estimates the parameters of the covariates under CLPR for the main components only. In

model (3), i.e. under OLPR, it becomes positive but is very close to zero. The *log of GDP* and its lag are statistically significant, as is the lagged dependent variable. *Lambda* is statistically significant in models (1) and (3), as are the selection variables—*extreme poverty*, the *log of international spending*, and its lag. These results suggest that the Heckman method corrects for biases due to incomplete datasets.

Table 7.2 reports the results of a TSCS analysis with random effects excluding the municipalities that reported damage after Hurricane Mitch, which is intended to reduce the influence of that competing explanatory factor (see Chapter 5). In models (4) and (5), it can be observed that the coefficient of *logM* is still negative under CLPR; however, in comparison with the results presented in Table 7.1 above, the magnitude of the coefficient is smaller and statistically significant in both (4) and (5) at a five per cent probability value. In other words, there is a loss of efficiency in the estimator parameters for *logM* under CLPR; however, the results still lend empirical support to the hypothesis that spending will increase as district magnitude decreases. Similarly, the results support the expectation that under OLPR there will be an increase in spending in larger district magnitude constituencies, but that that increase will not be as big as in the smallest constituencies. The evidence in this regard could be considered weak in the sense that the coefficient of *logM×OLPR* in (4) is positive but not statistically significant. That behaviour is better explained through the analysis of predicted probabilities, as presented graphically in Figure 7.2. Notice that

Table 7.2. Results of Heckman two-step estimations of the logs of spending per capita from national sources of funding at FHIS, municipalities unaffected by Mitch only

	(4) Interactions	(5) CLPR	(6) OLPR
OLPR	0.616		
	(0.48)		
logM	-0.317**	-0.398**	-0.198
	(0.14)	(0.13)	(0.16)
logM×OLPR	0.171		
	(0.18)		
Cycles	-0.138	-0.029	-0.816
	(0.11)	(0.15)	(1.14)
Liberal	1.229***	1.327***	-3.919
	(0.18)	(0.22)	(9.08)
Govstrong	0.354	0.078	-0.187
	(0.25)	(0.26)	(0.36)
Govstrong×OLPR	-0.599*		
	(0.34)		

Table 7.2

	(4)	(5)	(6)
	Interactions	**CLPR**	**OLPR**
Oppstrong	-0.258	-0.296	0.334
	(0.26)	(0.27)	(0.25)
Oppstrong×OLPR	0.501*		
	(0.30)		
Swing	-0.019	-0.124	0.208
	(0.30)	(0.28)	(0.26)
Swing×OLPR	0.196		
	(0.40)		
Strong constituency	-0.271	-0.185	0.048
	(0.21)	(0.21)	(0.19)
Strong const.×OLPR	0.433		
	(0.29)		
Log of GDP	0.843	1.062	-0.216
	(1.69)	(5.60)	(2.29)
Lag of log of GDP	-5.362***	0.457	8.821
	(1.56)	(6.38)	(25.64)
Lagged dep. variable	-0.074***	-0.056**	-0.081**
	(0.02)	(0.02)	(0.03)
Selection variables			
Extreme poor (%)	0.013**	0.018**	0.011
	(0.00)	(0.01)	(0.01)
Log of int. spending	-0.091***	-0.098***	-0.044**
	(0.01)	(0.02)	(0.01)
Lag of log int. spend.	0.029**	0.051**	0.081***
	(0.01)	(0.02)	(0.02)
Lambda	-0.446	-0.220	0.016
	(0.30)	(0.33)	(0.54)
Intercept	55.379***	-13.457	-91.731
	(9.60)	(23.60)	(273.37)
N (selection)	460	194	266
N	2305	1573	732
R2 within	0.08	0.16	0.18
R2 between	0.031	0.148	0.027
R2 overall	0.060	0.130	0.105

Note: robust standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

for this sample, there has been an increase in spending under OLPR that is almost proportional to district magnitude; in other words, municipalities of all district magnitudes that did not report any damage after Mitch received comparatively more spending from FHIS under OLPR than CLPR. Nevertheless, the slope is less pronounced under OLPR. Moreover, we see that there is less overlapping of the confidence intervals of both curves the larger the district magnitude, which is an indication that the change to OLPR most affected medium and large constituencies. Finally, note that the results presented in Table 7.2 and Figure 7.2 are very similar to the results from the analysis of pork-barrel bills for the same sample of municipalities

that did not report damage and that were targeted by legislators (see p. 145 in Chapter 5).

The signs of the coefficients of the control variables in Table 7.2 are similar to the signs of the coefficients for the same variables presented in the original set of models in Table 7.1. In fact, it is worth noting that in this subset of models, the coefficient for the interaction *govstrong×OLPR* is statistically significant at the ten per cent probability value and its magnitude is greater than in the original set of models. This suggests that municipalities that are strongholds of the party in government tend to receive less spending under OLPR than they do under CLPR. By contrast,
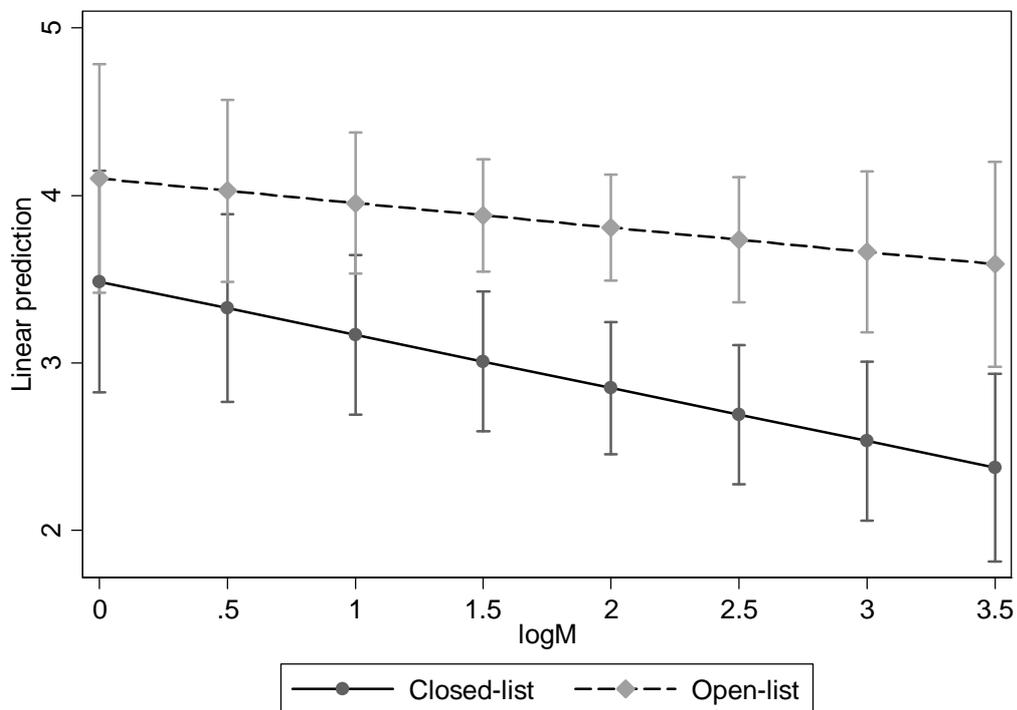
Figure 7.2. Effects of *OLPR* and *logM* on the distribution of the log of national spending per capita at FHIS, municipalities that did not report damage after Hurricane Mitch only. 95 per cent confidence intervals (CI) are denoted by the vertical capped lines. Other factors are held constant at their means. Notice that regardless of the electoral system, the closer *logM* is to zero, the more spending a municipality will get. However, under OLPR the slope tends to be less inclined towards small-M constituencies than under CLPR. It can be observed that there is less overlapping of CI in medium and large constituencies, which suggests that the change to OLPR affects how municipalities in medium and large constituencies in particular receive spending.

the interaction *oppstrong×OLPR* was negative in Table 7.1 but this time it is positive and statistically significant at the ten per cent probability value. In the case of swing voter municipalities, like in the original set of models, neither of the results is statistically significant, but the signs are the same and the magnitudes of the

coefficients are slightly bigger. The coefficient of *strong constituency* is not statistically significant in any of the models but, contrary to the models presented above, the interaction *strong constituency×OLPR* is positive, which suggests that a change to OLPR probably leads to an increase in spending allocated to constituencies where the party in government is electorally strong, something already observed in Chapter 5 in relation to pork-barrel bills initiation. *Lambda* is not statistically significant in this subset of models, which suggests that the selection problem might be not very harmful and a linear regression model can be performed.[106]

7.4 Discussion

This chapter has provided evidence that supports the hypothesis that, regardless of the ballot type, spending per capita tends to be greater the smaller the district magnitude. It was found that, after controlling for different factors, a change to OLPR is associated with increases in spending, particularly in medium and large district magnitude constituencies, as was expected. After excluding from the analysis municipalities that were more likely to have received spending after Hurricane Mitch, it was found that there was a decrease in the magnitude of the coefficients of the variables of interest and the predicted probabilities in the post-estimation tests. Overall, however, the results from the analyses that excluded those observations still supported the hypotheses. These results are robust to a series of tests, including the exclusion of political control variables and the removal of lags. Generally, the same patterns emerged, i.e. that spending tends to be greater the smaller the district magnitude but spending in larger magnitude constituencies is more sensitive to a change to OLPR (see Appendix 7.2). In a different vein, it is worth noting the similarities in the coefficients of the log of district magnitude in the regression outputs in all three empirical chapters, and especially in the marginal effects presented in this chapter and in Chapter 5. I will broadly discuss these findings in Chapter 8, which is dedicated to the conclusions of this dissertation.

It is worth commenting on the findings in relation to the controls *govstrong, oppstrong* and *swing.* Evidence was found that might be an indication that the

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[106] In Appendix 7.1 I present the results for this same set of models using a TSCS with random-effects model, i.e. excluding the selection equation from the analysis. In Table 7A.1 it can be observed that the signs of the coefficients of *logM*, as well as *logM×OLPR*, are the same. Notice also that the magnitude of these coefficients is almost the same, even in the main component models. Similar results to those presented in Table 7.2 can be observed for the control variables.

government's municipal strongholds are likely to receive less spending under OLPR than CLPR. By contrast, the opposition's strongholds are likely to receive more spending under OLPR than in CLPR. In addition, municipalities where the vote tends to be pivotal will probably receive less spending under CLPR than OLPR. Furthermore, swing voter municipalities seem to attract more attention under OLPR, and the opposition's municipality strongholds are more likely to receive spending in OLPR than in CLPR. While more research is needed before reaching any conclusion, these results might suggest that the electoral system affects the way the Honduran government allocates spending to the municipalities. One explanation of the fact that the coefficients for government strongholds are positive in CLPR and then turn negative in OLPR could be related to the intraparty fragmentation that OLPR produces and the difficulties in reaching to agreements that derive of this system. In chapters 4 (see pp. 96–96), we observed that it is more difficult to pass bills under OLPR than in CLPR. It was also noted that legislators from the opposition seem to be more proactive under OLPR. In Chapter 5, I presented evidence that this is the case, when it was observed that a change to OLPR led to an increase in the number of pork-barrel bills introduced by legislators from the opposition, which could make sense of the finding that under OLPR opposition strongholds are more likely to receive spending.

In terms of swing voter municipalities, the results are consistent with the theory put forward by Taylor-Robinson (2010, p. 117), who suggests that when the closed-list PR system was used in Honduras, municipalities where the party in government lost the election were punished through pork-spending deprivation. However, in an OLPR context, the logic of punishing a municipality by depriving it of pork is probably less appealing to personal vote-seeking legislators. They would be more likely to look for personal votes firstly, and primarily, in the party's core-voter municipalities, provided these are not the territory of party leaders competing for legislative seats (Ames, 1995), and secondly where the vote is pivotal, rather than in core voter constituencies of the opposition.

It was not the objective of this chapter to analyse the allocation of spending to party strongholds; instead, this was used as a control variable. Nevertheless, these results must raise awareness of the need to investigate the impact electoral systems have on this issue, a topic rather neglected in the electoral systems literature.

Appendix 7.1 TSCS random-effects analysis of spending allocated to municipalities that did not report damage after Hurricane Mitch

The models presented in Table 7A.1 are exactly the same as those from the second stage of the Heckman two-step procedure presented in Table 7.2 above, i.e. they were calculated using a TSCS analysis with a random-effects estimation method, ruling out the selection variables and focusing only on the selection dataset. Bear in mind that these models exclude observations for municipalities where there were reports of damage after Hurricane Mitch. It can be noticed that the results do not differ significantly to those presented in Table 7.2. There is an increase in statistical significance for the variable *logM* and the coefficients in both models are very similar. In addition, the magnitude of the coefficient for the interaction *govstrong×OLPR* is almost the same as in Table 7.2, but it is not statistically significant.

Table 7A.1. Results of TSCS random-effects estimations of the logs of spending per capita from national sources of funding at FHIS, municipalities unaffected by Mitch only

	(7) Interactions	(8) CLPR	(9) OLPR
OLPR	0.567		
	(0.49)		
logM	-0.341**	-0.422***	-0.196
	(0.13)	(0.12)	(0.16)
logM×OLPR	0.177		
	(0.18)		
Cycles	-0.067	0.033	-0.792
	(0.10)	(0.14)	(0.62)
Liberal	1.113***	1.327***	-3.724
	(0.17)	(0.22)	(4.19)
Govstrong	0.307	0.055	-0.185
	(0.25)	(0.25)	(0.36)
Govstrong×OLPR	-0.537		
	(0.33)		
Oppstrong	-0.220	-0.288	0.332
	(0.26)	(0.27)	(0.25)
Oppstrong×OLPR	0.518*		
	(0.30)		
Swing	-0.011	-0.118	0.208
	(0.29)	(0.28)	(0.26)
Swing×OLPR	0.223		
	(0.40)		
Strong constituency	-0.211	-0.158	0.048
	(0.20)	(0.20)	(0.19)
Strong const.×OLPR	0.323		
	(0.29)		

(continued from previous page)

	(7) Interactions	(8) CLPR	(9) OLPR
Log of GDP	1.385	1.452	-0.172
	(1.66)	(5.52)	(1.56)
Lag of log of GDP	-5.215***	1.247	8.257
	(1.55)	(6.38)	(11.00)
Lagged dep. variable	-0.073***	-0.058**	-0.081**
	(0.02)	(0.02)	(0.03)
Intercept	46.837***	-27.243**	-85.858
	(7.60)	(13.53)	(126.63)
N	460	194	266
R2 within	0.17	0.34	0.19
R2 between	0.060	0.201	0.022
R2 overall	0.121	0.257	0.108

Note: robust standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

Appendix 7.2 Robustness checks

Because the key independent variables *OLPR*, *logM*, and *logM×OLPR* can be correlated with other explanatory factors included in the models presented in tables 7.1 and 7.2, these models are reproduced in Table 7A.2 excluding the political control covariates. The selection variables as well as the *log of GDP* and the lagged variables have been kept, considering that they explain to a great extent the variation in spending per capita and whether a municipality is likely to receive spending. Models (10) to (12) in the table below include all observations for municipalities *i* in the selected sample and for those that did not receive spending in year *t*. Models (13) to (15) exclude the municipalities that reported damage after Hurricane Mitch in both the selected sample and the *N* dataset.

According to Brambor, Clark and Golder (2006), main terms usually do not require interpretation in interacted models. That is why I have avoided making reference to the independent variable *OLPR* in the interacted models. However, in the present case it is worth mentioning that with political controls *OLPR* reports a coefficient of -.031, and without them the coefficient is -.431. The difference between both coefficients seems to be big but in neither case is the result statistically significant. This result might suggest that a change to OLPR produces different political dynamics that are not necessarily related to district magnitude but rather to the change in ballot type. The coefficients for the key independent variables in models (10) and (12) report very small differences. However, in model (13), which

Table 7A.2. Results of Heckman two-step estimations of the logs of spending per capita from national sources of funding at FHIS, with no political statistical controls

	All observations			Did not report damage		
	(10)	(11)	(12)	(13)	(14)	(15)
	Interactions	CLPR	OLPR	Interactions	CLPR	OLPR
OLPR	-0.461			-0.068		
	(0.35)			(0.47)		
logM	-0.692***	-0.657***	-0.247**	-0.329**	-0.301**	-0.193
	(0.17)	(0.16)	(0.11)	(0.15)	(0.15)	(0.17)
logM×OLPR	0.409**			0.153		
	(0.16)			(0.20)		
Log of GDP	1.488*	-7.613**	0.097	-1.506	-9.347	-1.092
	(0.86)	(2.89)	(0.87)	(1.56)	(6.22)	(1.50)
Lag of log of GDP	-1.906**	7.346**	-1.931**	-0.023	5.839	-0.708
	(0.71)	(2.63)	(0.71)	(1.22)	(6.09)	(1.20)
Lagged dep. variable	-0.048***	-0.039**	-0.066***	-0.066**	-0.036	-0.096**
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Selection variables						
Extreme poor (%)	0.030***	0.031***	0.032***	0.013**	0.018***	0.008
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Log of int. spending	-0.079***	-0.106***	-0.002	-0.093***	-0.103***	-0.019
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Lag of log int. spend.	0.015**	0.044***	0.072***	0.018**	0.045***	0.098***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Lambda	0.584**	-0.098	1.071**	-0.340	-0.990**	0.138
	(0.19)	(0.25)	(0.34)	(0.30)	(0.38)	(0.47)
Intercept	8.324*	7.807	23.850***	21.839**	45.304	24.416**

Table 7A.2

(continued from previous page)

	All observations			Did not report damage		
	(10)	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**
	Interactions	**CLPR**	**OLPR**	**Interactions**	**CLPR**	**OLPR**
	(4.39)	(16.55)	(4.98)	(7.42)	(29.45)	(8.55)
N (selection)	1191	500	691	460	194	266
N	5634	3846	1788	2305	1573	732
R2 within	0.02	0.04	0.06	0.08	0.16	0.16
R2 between	0.127	0.079	0.106	0.010	0.038	0.003
R2 overall	0.095	0.097	0.097	0.051	0.061	0.066

Note: robust standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

reports the results for the main components of CLPR with no interactions, the coefficient for *logM* in Table 7.1 is -.580 and in Table 7A.2 it is -.657. In both cases the results have the same levels of statistical significance. Likewise, models (13) to (15) show very similar results to their counterparts in Table 7.1 for the coefficients of *logM* and *logM×OLPR* and their levels of significance. Again, the main difference seems to occur in *OLPR* in model (13). In the original set of models the coefficient of this variable, despite the fact that it is not significant, is positive and its value is .616. In model (13) below its value is -.068.

The predicted probabilities for both the interacted models (10) and (13) above are displayed in Figure 7A.1. The slopes in Figure 7A.1(a) suggest a decline in the spending received in smaller magnitude constituencies after the change to OLPR, whereas spending allocated to larger magnitude districts increased at a comparative rate. As in the original set of models, the small overlaps in the confidence intervals as *logM* gets larger suggest that the change is significant in larger magnitude constituencies. Figure 7A.1(b) also indicates a decline in the predicted probability
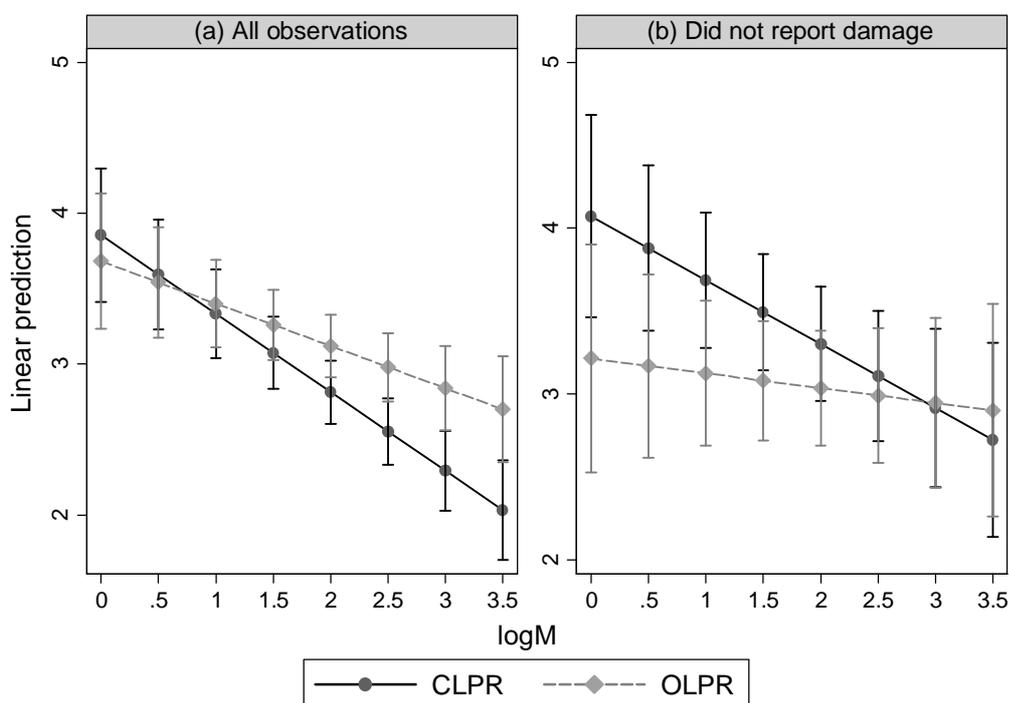
Figure 7A.1. Effects of *OLPR* and *logM* on the distribution of the log of national spending per capita at FHIS, with no political controls. 95 per cent confidence intervals (CI) are denoted by the vertical capped lines. Other factors are held constant at their means. Figure (a) illustrates the marginal effects results using all observations in the selected sample. Figure (b) uses observations only for municipalities that did not report damage after Hurricane Mitch.

that small-M constituencies will receive more spending after a change to OLPR. This differs from the results shown in the model presented in Figure 7.2 above, an important difference since the original model predicted increases in moneys allocated to small-M constituencies. Nevertheless, in spite of the fact that the overlapping of the confidence intervals in (b) below warns us that the results are not statistically significant and that we cannot have confidence in these results, the slopes of the curves seem to confirm the expectation that a change to OLPR will lead to an increase in spending in larger magnitude constituencies in particular.

As I previously mentioned, the inclusion of lagged dependent variables in panel data models is a controversial and unresolved issue in the political science methodology literature. In the following robustness tests I present two sets of results. In Table 7A.3 the results for Heckman two-step estimations without lagged variables of any kind are reported. As in the previous robustness tests, the first three models in this table include all observations, whereas the second set of models excludes municipalities that reported damage after Hurricane Mitch. Because researchers who include lagged variables in panel data models commonly incorporate lagged dependent variables only, this subset of models is reported in Table 7A.4. In Figure 7A.2 the predicted probabilities graphs for the interaction terms of these models are presented.

The results presented in Table 7A.3 suggest that leaving out lagged dependent variables and lagged independent variables from other time-variant factors changes the magnitude and significance of the coefficients, especially in the OLPR model with no interaction terms for all observations, model (18). Nevertheless, the variation is in line with the expectations. As a matter of fact, with a coefficient of -.096 (even though it is not significant) that result suggests that spending in larger-M constituencies increased to a point where the differences across district magnitude almost cancel each other out. In terms of the models that exclude municipalities that received spending after Mitch, the coefficient of *OLPR* becomes negative and statistically significant, indicating a general reduction in spending after the electoral system change. The coefficients of *logM* do not undergo any major variations in comparison with the original set of models. The coefficient of *logM×OLPR* is not statistically significant in either of the models; however, in Table 7.2 its value is .171 and in model (19), with no lags, it is .296, which indicates that ruling out lags actually increases the magnitude of the coefficient.

Table 7A.3. Results of Heckman two-step estimations of the logs of spending per capita from national sources of funding at FHIS, with no lagged variables

	All observations			Did not report damage		
	(16)	(17)	(18)	(19)	(20)	(21)
	Interactions	CLPR	OLPR	Interactions	CLPR	OLPR
OLPR	-0.174			-0.859*		
	(0.34)			(0.52)		
logM	-0.521***	-0.421***	-0.096	-0.386**	-0.310**	-0.256
	(0.09)	(0.09)	(0.10)	(0.14)	(0.12)	(0.19)
logM×OLPR	0.240*			0.296		
	(0.13)			(0.22)		
Cycles	0.279***	0.014	-0.045	0.224**	-0.116	-0.375**
	(0.04)	(0.07)	(0.09)	(0.07)	(0.11)	(0.16)
Liberal	0.217*	0.978***	-1.372***	0.794***	1.460***	-1.230**
	(0.11)	(0.13)	(0.28)	(0.18)	(0.20)	(0.63)
Govstrong	0.000	0.092	-0.365**	0.131	0.178	-0.272
	(0.18)	(0.17)	(0.19)	(0.28)	(0.22)	(0.29)
Govstrong×OLPR	-0.014			-0.259		
	(0.25)			(0.39)		
Oppstrong	0.078	-0.053	0.170	-0.114	-0.247	0.523*
	(0.18)	(0.17)	(0.16)	(0.26)	(0.20)	(0.32)
Oppstrong×OLPR	-0.050			0.249		
	(0.24)			(0.34)		
Swing	0.072	0.059	0.131	-0.255	-0.088	0.254
	(0.17)	(0.15)	(0.17)	(0.25)	(0.19)	(0.29)
Swing×OLPR	0.060			0.441		
	(0.24)			(0.36)		
Strong constituency	0.055	-0.192*	0.012	0.015	-0.039	-0.084

Table 7A.3
(continued from page)

	All observations			Did not report damage		
	(16)	(17)	(18)	(19)	(20)	(21)
	Interactions	CLPR	OLPR	Interactions	CLPR	OLPR
	(0.12)	(0.10)	(0.12)	(0.20)	(0.15)	(0.23)
Strong const.×OLPR	-0.223			0.249		
	(0.16)			(0.28)		
Log of GDP	0.257	2.276***	1.375	-0.078	3.248***	0.535
	(0.39)	(0.41)	(0.90)	(0.62)	(0.61)	(1.52)
Selection variables						
Extreme poor (%)	0.028***	0.029***	0.033***	0.012**	0.015**	0.009
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Log of int. spending	-0.078***	-0.149***	-0.005	-0.092***	-0.155***	-0.030**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Lambda	0.587***	0.541***	2.196***	-0.518**	-0.012	1.323
	(0.16)	(0.13)	(0.32)	(0.26)	(0.20)	(1.13)
Intercept	-0.591	-23.065***	-13.884	4.518	-33.304***	-1.998
	(4.34)	(4.56)	(10.25)	(6.88)	(6.78)	(17.45)
N (selection)	1381	690	691	536	270	266
N	5634	3846	1788	2305	1573	732
R2 within	0.08	0.38	0.04	0.14	0.60	0.08
R2 between	0.165	0.248	0.144	0.090	0.294	0.033
R2 overall	0.121	0.305	0.112	0.124	0.443	0.074

Note: robust standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

With the inclusion of only one lagged dependent variable, the most noticeable differences between the models with no lags presented in Table 7A.3 above are observed in municipalities that did not report damage as a result of Hurricane Mitch. While in the previous models *OLPR* is negative and statistically significant, in model (25) in Table 7A.4 it is positive and not statistically significant. In spite of that result, the differences between the coefficients of *logM* and *logM×OLPR* are minimal. In other words, the evidence still suggests the effects of a ballot change are greater the larger the district magnitude. While there was evidence of a change in the levels of statistical significance of the variables related to the party in government's strongholds and the opposition's strongholds in both sets of models presented in tables 7A.3 and 7A.4, the magnitudes and directions of the coefficients do not vary significantly.

In Figure 7A.2 it can be observed that the exclusion of a lagged dependent variable affects in particular those municipalities in smaller magnitude constituencies that did not report any damage after Mitch, where it seems that a change to OLPR
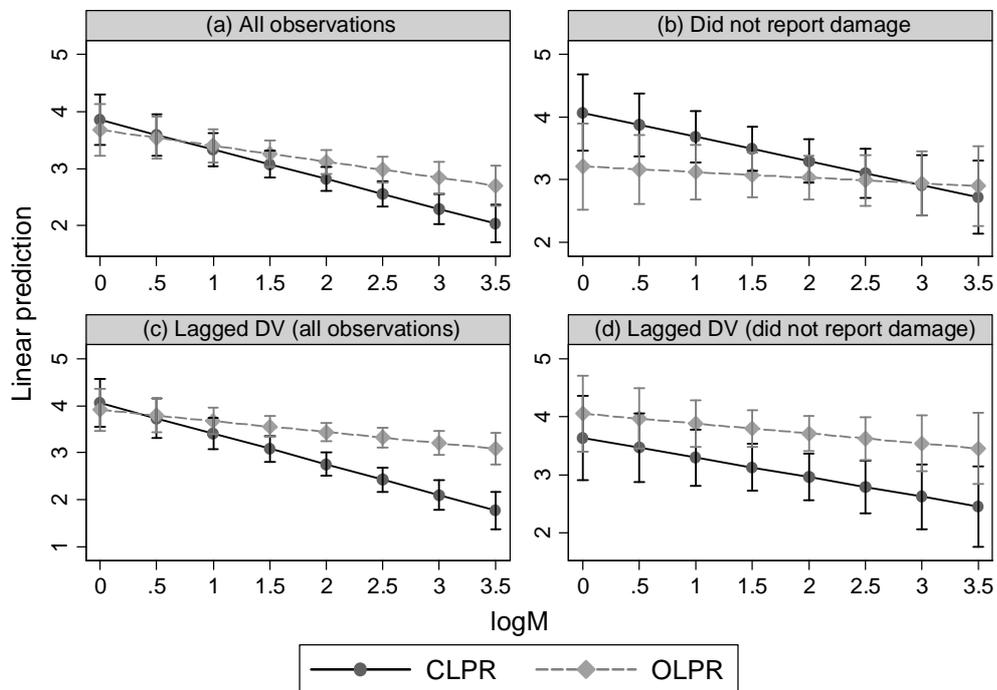

Figure 7A.2. Predictive marginal effects of *OLPR* and *logM* on the distribution of the log of national spending per capita at FHIS, with no political controls. 95 per cent confidence intervals (CI) are denoted by the vertical capped lines. Other factors are held constant at their means.

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Table 7A.4. Results of Heckman two-step estimations of the logs of spending per capita from national sources of funding at FHIS, with a lagged dependent variable

	All observations			Did not report damage		
	(22)	**(23)**	**(24)**	**(25)**	**(26)**	**(27)**
	Interactions	**CLPR**	**OLPR**	**Interactions**	**CLPR**	**OLPR**
OLPR	-0.151			0.417		
	(0.36)			(0.54)		
logM	-0.654***	-0.510***	-0.116	-0.337**	-0.484**	-0.257
	(0.11)	(0.12)	(0.10)	(0.17)	(0.15)	(0.20)
logM×OLPR	0.419**			0.167		
	(0.14)			(0.23)		
Cycles	0.206***	0.252**	-0.039	0.005	0.197	-0.343**
	(0.05)	(0.09)	(0.09)	(0.09)	(0.17)	(0.16)
Liberal	0.163	0.974***	-1.355***	0.751***	1.374***	-1.177*
	(0.11)	(0.13)	(0.28)	(0.17)	(0.21)	(0.60)
Govstrong	0.026	0.059	-0.338*	0.218	-0.013	-0.177
	(0.20)	(0.20)	(0.18)	(0.31)	(0.26)	(0.29)
Govstrong×OLPR	-0.119			-0.336		
	(0.27)			(0.40)		
Oppstrong	0.219	-0.053	0.148	-0.164	-0.274	0.515
	(0.21)	(0.21)	(0.16)	(0.29)	(0.24)	(0.32)
Oppstrong×OLPR	-0.159			0.457		
	(0.26)			(0.36)		
Swing	0.053	-0.079	0.100	-0.060	-0.117	0.273
	(0.20)	(0.18)	(0.17)	(0.29)	(0.24)	(0.28)
Swing×OLPR	0.062			0.245		
	(0.26)			(0.39)		

Table 7A.4

(continued from previous page)

	All observations			Did not report damage		
	(22)	(23)	(24)	(25)	(26)	(27)
	Interactions	**CLPR**	**OLPR**	**Interactions**	**CLPR**	**OLPR**
Strong constituency	0.019	-0.258**	0.039	-0.220	-0.083	-0.030
	(0.14)	(0.12)	(0.11)	(0.23)	(0.19)	(0.22)
Strong const.×OLPR	-0.171			0.396		
	(0.18)			(0.30)		
Log of GDP	-0.603	6.603***	1.432	-3.425***	6.517**	0.447
	(0.51)	(1.40)	(0.89)	(0.79)	(2.85)	(1.46)
Lagged dep. variable	-0.054***	-0.052**	-0.070***	-0.067***	-0.063**	-0.099***
	(0.01)	(0.02)	(0.01)	(0.02)	(0.03)	(0.03)
Selection variables						
Extreme poor (%)	0.030***	0.032***	0.033***	0.013**	0.018***	0.009
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
Log of int. spending	-0.067***	-0.090***	-0.005	-0.084***	-0.090***	-0.030**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Lambda	0.910***	1.306***	1.919***	-0.264	0.696	1.008
	(0.17)	(0.25)	(0.32)	(0.29)	(0.45)	(1.10)
Intercept	9.222	-73.637***	-14.350	42.827***	-71.895**	-0.921
	(5.95)	(16.34)	(10.17)	(9.10)	(33.08)	(16.70)
N(selection)	1381	690	691	536	270	266
N	5634	3846	1788	2305	1573	732
R2within	0.03	0.15	0.08	0.14	0.32	0.18
R2between	0.178	0.258	0.146	0.042	0.224	0.029
R2overall	0.118	0.272	0.127	0.095	0.269	0.112

Note: robust standard errors in parentheses. * significant at 0.1; **significant at 0.05; ***significant at 0.01.

led to a decrease in the log of spending per capita. However, we can also see that there has been an increase in spending in municipalities in the largest magnitude constituencies since the change from CLPR to OLPR.

Chapter 8

Conclusions

One of the main objectives of this dissertation was to test Carey and Shugart's (1995) theory on the effects on legislators' behaviour of the interaction between ballot type and district magnitude. Assuming that legislators seek re-election, these scholars expect that under CLPR the incentives to seek personal votes are greater the smaller the district magnitude, whereas under OLPR there should be greater incentives for legislators to seek those votes the larger the district magnitude. Given the level of attention paid by the scholarly community to pork-barrel politics as the main re-election strategy of incumbents in presidential systems, one obvious way to begin a test of this theory was to measure the impact of electoral systems on pork-barrel behaviour. However, one of the first findings of this dissertation is that while pork is a very important strategy, it is not the only possible approach to personal-vote seeking. The provision of private and non-targetable goods are two other personal-vote seeking strategies that legislators can use. Thus, it was necessary to create a more comprehensive framework to study the influence of electoral systems on different aspects of legislators' behaviour.

Cox and McCubbins (2001) suggest that, holding other factors constant, under party-centred electoral systems there will be fewer incentives for legislators to provide targetable local and private goods, whereas the incentives to supply those types of goods should be greater under candidate-centred systems. The work by Crisp et al. (2004) constitutes a first approach to investigating how district magnitude interacts with ballot type to influence legislators' choices to provide targetable goods or non-targetable public goods. That interaction between ballot type and district magnitude is based on Carey and Shugart's (1995) idea that the incentives to seek personal votes are greater the smaller the district magnitude in closed-list PR systems, whereas in preferential list systems the larger the district magnitude the greater the incentives will be for this kind of behaviour. In line with these scholars, I set expectations about the different ways legislators might target voters and private

groups depending on the electoral system in use. However, I have shown that how legislators actually generate targetable public and private goods and non-targetable public goods under different electoral formulas is more complex than the arguments of these scholars suggest. In this regard, I aimed to trace the causal mechanism that binds electoral systems to personal vote seeking incentives and the provision of public and private goods. To this end I used the case study of Honduras, which provides quasi-experimental conditions to test the empirical implications of the theory that I developed in this thesis.

8.1 Main findings

In general, the results presented in this dissertation are not statistically significant as to allow for a confident conclusion that a change to OLPR generates incentives for legislators to seek personal votes, in the way suggested by Carey and Shugart (1995) and later examined by Crisp et al. (2004) in a cross-country comparison. The results revealed that under CLPR legislators are more likely to provide targetable local and private goods the smaller the district magnitude. Under OLPR legislators across all constituencies tend to attach more importance to pork-barrel politics and to the provision of private goods. However, while larger magnitude constituencies seem to have been more sensitive to the ballot type change, no significant cross-sectional variation was found that could lead to the conclusion that OLPR increased intraparty competition in larger magnitude districts, or that, as a consequence, the provision of private and local public goods increased in line with the number of seats per constituency.

As mentioned, the results show that the effects of the change to OLPR were more significant in larger magnitude constituencies. This was particularly the case with regard to pork-barrel politics (chapters 5 and 7). As explained, in this case my expectation was that the amount of pork-related outcomes, regardless of the dependent variable used, was going to be always higher the smaller the district magnitude. This is because it is more difficult to claim credit for projects in larger magnitude districts and because in this type of constituency voters tend to be more heterogeneous, giving some legislators the opportunity to target voters who vote on the basis of policy and ideology. In this regard, the expectations were confirmed: the evidence presented in the three empirical chapters demonstrates that after the change to OLPR in Honduras there has been a significant increase in pork-related outcomes,

particularly among legislators from medium and large magnitude constituencies. However, the importance attached to pork remains greater in small-M constituencies. The results were noteworthy for two of the proxies of pork-barrel behaviour that I used in the present work: the number of bills aimed at generating benefits for constituencies introduced by each legislator in the Honduran National Congress and the geographical distribution of social spending by the Honduran Social Investment Fund. Despite the fact that these are two different sources of data, the evidence presented for both indicators of personal vote-seeking behaviour shows very similar patterns. Even though the results are not as similar in the case of bill initiation and the geographical allocation of spending, the evidence on survey data supports the theorized expectations.

As predicted, regardless of the ballot type used, in Chapter 5 I found that legislators will provide more non-targetable public goods as district magnitude increases. The explanation of this behaviour is that, in proportional representation systems, the larger the district magnitude the more heterogeneous voters are likely to be. This relationship is more prominent in CLPR, where legislators do not have to compete against one another and use their personal reputations to attract votes for their party. The basis for competition is different: in CLPR, legislators have to be accountable to their party leaders and there might be internal arrangements within the party to designate which legislators will focus on legislation and which should concentrate on providing constituency service. I have argued that, under CLPR in larger magnitude constituencies, what makes party leaders and legislators decide who will focus on constituency service and who will work on legislation depends on the legislators' personal attributes. I will discuss this particular issue towards the end of this section.

Considering that larger magnitude constituencies tend to be more varied, the preferences of the electorate will be more heterogeneous. Because under OLPR intraparty competition increases, some legislators will specialize in pork-barrel politics while others will be more likely to appeal to the provision of broader public goods. But, overall, I put forward that under OLPR the provision of non-targetable public goods should be smaller than under CLPR. The findings presented in this dissertation are not very strong, but they are sufficient to support the theory. Two proxies for non-targetable goods were used. One was the number of national bills that legislators introduced in the Honduran Congress and the other was the survey

data on the attitudes of legislators towards making laws. In both cases it was found that legislators are more likely to support non-targetable goods the larger the district magnitude. In terms of national bills, there was a decrease in the number of national bills presented by legislators from larger district magnitude constituencies. In the survey data, the finding was not as expected in my theory, since the legislators registered more positive attitudes towards making laws under OLPR.

Assuming that interest groups want to see their interests represented in parliament and that legislators will seek the financial support of these groups for their electoral campaigns, it was hypothesized that once in office, legislators would be more likely to favour interest groups the larger the district magnitude. This is because legislators from small-M constituencies are more likely to be accountable to their constituents than legislators from larger magnitude constituencies. In contrast, as district magnitude grows the greater the need legislators will have to reach heterogeneous electorates, some of whom are interested not in pork or private favours but in policy and party ideology. Because reaching such publics requires more expensive campaigns, alliances between legislators and interest groups can be beneficial to both parties since, once elected, the deputies can represent the interests of such groups in congress. In this regard, the evidence compiled for the present analysis is not very strong. The analysis of the initiation of bills revealed that legislators are more likely to introduce bills with the potential to benefit interest groups the larger the district magnitude. A change to OLPR is not statistically significant, but the results suggest that there could have been a small increase in this type of bill among deputies from larger magnitude constituencies under this electoral system. The analysis of the survey data, however, was contrary to the expectations. In this latter case, as I explained, the negative finding could have been due to the phrasing of the question included in the questionnaire created by the team of researchers at the University of Salamanca, which could have induced biased responses from the legislators surveyed. Unfortunately, in the survey conducted in 2010 the question was considerably rephrased and the observations collected in that survey round could not be used in this work. Nevertheless, I remain agnostic about the effects and further studies are needed.

The final aspect related to the relationship between electoral systems and legislators' personal vote-seeking behaviour that was examined in this dissertation is the ways in which the personal attributes of legislators interact with the two types of

electoral systems under consideration. I proposed that under OLPR the influence of the personal attributes of legislators should outweigh that of the party or institutional features. In this regard, I focused on three personal attributes: (1) the seniority of the legislators, (2) whether they had previous experience in local elections, and (3) whether they had a background in business. Contrary to the expectations put forward in the theory, it was found that under CLPR senior legislators are more likely to procure pork for their constituencies than junior legislators. According to Taylor-Robinson (2006), who achieved similar results in a previous analysis of bill initiation in the Honduran Congress, this might be because senior legislators sometimes sponsor bills for backbenchers. However, I believe that the provision of pork is important for senior legislators to maintain their leadership within congress and within their party (see section 8.3 below).

The evidence from the analysis of the survey data showed that the local experience of legislators was strongly associated with pork-barrel politics in CLPR, but under OLPR, contrary to the expectations, there is not a strong association and in some cases legislators with a local background seem to disregard the role of pork. The reasons for this behaviour require further investigation; however, a potential explanation is that under CLPR legislators with local background have defined roles established by the party leadership. These roles coincide with district magnitude; i.e. smaller district magnitude constituencies are more likely to have legislators with a local background. In contrast, under OLPR legislators with a local background are not as common in small-M constituencies as they were under the previous system, but tend to get elected more frequently in medium and large district magnitude constituencies.

Finally, findings from the survey data revealed a positive correlation between legislators with a business background and their preferences towards the representation of business groups and the formulation of laws. That relationship was stronger under OLPR than in CLPR.

8.2 The case of Honduras

As I have shown, despite the fact that most studies of the consequences of electoral reforms are presented as natural experiments, they are rarely able to meet the criteria that one would desire of this kind of research design. In controlled experiment conditions, the researcher can randomly select control and treatment groups and

isolate the explanatory variable from other confounding factors. The problem lies in the potential for endogeneity that exists between the causes that led to a change of electoral system and its derived consequences. For example, in a candidate-centred system there could be an underlying process that has made legislators more particularistic; this in turn could create conditions that would facilitate an electoral system reform. As such, the particularistic behaviour of legislators is the result not of the electoral system itself, but of the underlying process. Advocates of the study of the consequences of electoral reforms suggest that the endogeneity problem is inherent to virtually any study of the effects of electoral systems, and that in spite of that shortcoming this kind of study offers better possibilities to control for different factors that cannot be accounted for in small-N and large-N studies.

The case of Honduras, I have argued, provides unique quasi-experimental conditions to test the argument of this dissertation. I have explained that Hurricane Mitch, which caused terrible damage in Honduras in October 1998, is a variable that contributes to explaining the change to OLPR six years later. However, the linkage between both events is not direct. I showed that the hurricane and its after-effects generated increased demand from civil society groups for transparency from the government and political parties. It was a result of these appeals from civil society, rather than from the politicians, that discussion began in the political system about changing the closed-list ballot system for a nominal system, where legislative candidates would be identifiable by voters. In fact, it has been shown that in the beginning the political parties were reluctant to change the electoral system and that it was the proximity of the general elections and the constant advocacy work of non-political party actors that recast electoral system reform as a presidential rather than legislative campaign issue. Also, considering that with competitive elections, incumbent politicians would have to face a randomization of the election process, by adopting the OLPR, they were assuming the risk of losing their re-election bids. Therefore, it can neither be claimed that there was a self-selection process at work in this case study, nor that politicians changed the system expecting benefits in the ways predicted by the theory that is proposed here. In this regard, the case study of Honduras resembles very much the *as-if* random conditions of natural experiments endorsed by Dunning (2012).

There were challenges to the present research design as elaborated throughout the thesis. Given the magnitude of the damage caused by Hurricane Mitch in 1998,

the years that followed saw important recovery actions undertaken by different actors in Honduran society, including politicians. This certainly creates non-random conditions that sceptics could argue threaten the validity of the results of this dissertation. Nevertheless, there are several factors that minimize the potential for Mitch as an explanatory factor. One is that there was a gap between both events; while Mitch hit Honduras in 1998, the electoral system change took place in 2004. Moreover, as I demonstrated, the effects of the change to OLPR are discernible from 2006, i.e. when the first legislature elected under the new electoral system was inaugurated. Another reason I argue Mitch does not sufficiently account for a change of behaviour in Honduran politicians is that the areas affected by the hurricane and the distribution of district magnitude are independent. In other words, some areas in small, medium and large district magnitude constituencies were affected and others not. Thus, one could expect that pork-barrel patterns should vary across time, but that the variation across district magnitude should keep constant. I provided evidence that that is the case. Furthermore, in two of the three empirical chapters, I was able to control for municipalities that reported damage after the hurricane. After ruling these municipalities out of the analysis, it was demonstrated that most of the hypotheses related to the electoral system held true.

In summary, I believe that Honduras provides very particular conditions which researchers can take advantage of to test relevant theories. The Honduran case is particularly suitable for testing Carey and Shugart's (1995) theory. In this regard, closed-list PR and open-list PR systems constitute ideal types of party-centred systems and candidate-centred systems respectively (Carey, 2009; Shugart, Valdini & Suominen, 2005; Shugart, 2005). In all, confirming the reliability of the conclusions of the empirical analyses will require more maturity in the electoral system and the legislators' actions, i.e. it will necessary to observe how fixed these institutions and practices are over time and the extent to which they differ from the old practices and institutions. Overall, the value of quasi-experiments such as the one I presented in this dissertation cannot be denied: in the social sciences sometimes they are the best if not the only type of research through which we can establish causal relations with confidence, considering that attaining the conditions required in randomized experiments is simply not feasible. As different scholars have recommended, in studies of this nature, while their value cannot be neglected, one should ideally conduct time-series analyses in order to have greater confidence in the explanatory

potential of a theory (Campbell & Stanley, 1966; Diamond & Robinson, 2010; Norris, 2004).

Despite their great potential for establishing causal relationships, experiments as well as quasi-experiments face a significant challenge, namely the external validity of the results. In other words, they have to answer the question *how generalizable are the results of the experiment?* In the social sciences replication is perhaps the most important tool that can be used to achieve greater confidence in the validity of the results and in turn in the strength of a theory. As I previously mentioned, Crisp et al.'s (2004) cross-national comparison that utilizes records of bill initiation in six presidential democracies in Latin America—i.e. almost the same proxy as used in Chapter 5—achieved similar results to those obtained in this dissertation. However, that sample of countries cannot control for other factors. For instance, could we get similar results in parliamentary regimes? Does political culture have an influence? Could we reach similar conclusions in rich economies? Those answers require more large-N and small-N investigation, and ideally time-series data analysis of natural and quasi-experiments.

8.3 Recommendations for future research

Some of the findings in this dissertation go beyond the scope of the research question, but deserve more attention. As I observed in the literature review, since the mid-1980s political scientists and economists have been debating how members of parliament and governments target constituencies. Some argue that these actors are most likely to target core supporters (Cox & McCubbins, 1986), while others believe that it is more rational for them to target swing voters (Dixit & Londregan, 1996; Lindbeck & Weibull, 1987). McGillivray (2004) and Golden and Picci (2008) added the electoral system variable to the discussion. But there are other factors that merit deeper investigation and the case of Honduras could provide good test conditions for conducting such analyses.

In Chapter 7 I used statistical controls which held constant the effects of core voters for the party in government, the opposition's strongholds, and swing voters. Although they were not part of the main analysis, it is worth noting that the partial effects for these variables in the regression coefficients revealed that strongholds of the opposition were particularly likely to receive increased spending under OLPR. Swing voters were also likely to receive more spending under this method of election

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than under CLPR. This pattern requires further research before any firm conclusions can be reached. However, considering that in this dissertation it was found that legislators from the opposition are more likely to appeal to pork-barrel politics under OLPR than CLPR, it should not be surprising that opposition strongholds receive more spending from the government under OLPR than CLPR. Moreover, as I put forward, the president probably has more difficulty getting legislation of interest for the government passed under the open-list system, as well as encountering more obstacles to setting the parliamentary agenda. Therefore, it is possible that she would be willing to negotiate with legislators from the opposition, and offer them access to perks such as pork in exchange for more cooperation in congress.

Another aspect of the debate that deserves more attention is the way in which the electoral systems interact with the form of government and the levels of fragmentation of the political parties. As I put forward at the beginning of this study, there are two factors that have remained relatively constant throughout the period of study in Honduras. One is the presidential form of government which consists of an elected head of the executive who serves for a single term of four years. The other is the high levels of fragmentation in the two main political parties. Even years before the country's transition to democracy, that combination and the closed-list PR system contributed to the maintaining of a system of rewards and punishments for politicians (Taylor-Robinson, 2010). This could contribute to explaining the high turnover rates in the Honduran Congress among legislators from small district magnitude constituencies, which, even nowadays under OLPR, remain very high. However, some legislators from these constituencies have managed to get re-elected under the new system while incumbents from larger-M constituencies did not achieve re-election. Under CLPR, the support of the presidential candidate and the form in which primary elections were conducted were seen as determining factors in the selection of candidates, especially in small magnitude constituencies.[107] OLPR limits the influence of party leaders, even the presidential candidate; it is possible then that legislators from small-M constituencies will see their chances of being re-elected increase.

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[107] Deputy of the National Party, personal interview, 15th February 2012.

8.4 Policy implications

Countries such as Nicaragua in the 1990s and Iraq and Afghanistan in the 2000s, among many other nations in the developing world, have been the recipients of electoral engineering advice. Such advice has been provided by non-governmental and intergovernmental international organizations, with the sponsorship of governments in developed countries (Carothers, 1999; IFES, 2012; International IDEA, 2005; NDI, 2012). Parallel to this, a growing number of societies across the world, regardless of their level of socioeconomic development, have been discussing and adopting candidate-centred electoral systems. This phenomenon seems to be associated with a gradual process of voter disengagement and a growing distrust of political parties (Renwick & Pilet, 2011). Therefore, understanding the effects of electoral systems and their interactions with all aspects of a given society has become very relevant for the development of contemporary democracies. Those involved in the policy making process—from advocacy groups to advisers and policy makers—can benefit from studies such as the one presented in this thesis.

The results presented in this dissertation show that electoral systems have a significant effect on legislators' behaviour. In particular, it seems that in Honduras a change from the party-centred closed-list PR electoral system to the candidate-centred open-list PR generated incentives for deputies to seek personal votes. This has a variety of implications. First, it increases intraparty competition and it also seems to raise the likelihood of conflicts between parliamentarians from the same party (see Chapter 1). Second, a change to OLPR increases the provision of private goods, particularly in large magnitude districts. And third, it leads to a reduction in the provision of general public goods from legislators in larger magnitude districts. Interestingly, and perhaps related to the form of ballot used in OLPR—which includes photographs of the candidates—legislators from small district magnitude constituencies tend to engage more in the generation of public goods under this system than in CLPR. This can have a number of societal implications. For instance, increased pork-barrel demands under a candidate-centred system can bring more infrastructure projects to places that are often neglected. Conversely, pork-barrelling reduces the incentives to provide national public goods. Legislators will also tend to pay greater attention to private interests when accountability mechanisms are weak, as seems to be the case more often in PR than in majoritarian systems; this could potentially culminate in corruption (Chang & Golden, 2007). This is not to say that

one system is better than the other, but rather to emphasize that the adoption of a given system requires an examination of the conditions in the country which is to adopt the new electoral rules.

References

Abel, A. B., Bernanke, B. S., & Croushore, D. (2008). *Macroeconomics.* Addison-Wesley Series in Economics. Boston; London: Pearson/Addison Wesley.

Achen, C. H. (2000). Why lagged dependent variables can suppress the explanatory power of other independent variables. Paper presented at the *Annual Meeting of the Political Methodology Section of the American Political Science Association,* California. Retrieved 25th September 2012, from http://www.polmeth.wustl.edu/media/Paper/achen00.pdf

Agresti, A. (2007). *An introduction to categorical data analysis.* New York: Wiley.

Ajenjo, N. (2001). Honduras. In M. Alcántara, & F. Freidenberg (Eds.), *Partidos políticos de América Latina: Centroamérica, México y República Dominicana* (pp. 181-273). Salamanca, Spain: Ediciones Universidad de Salamanca.

Alcántara, M. (1994-2010). *Proyecto de élites parlamentarias latinoamericanas (PELA).* Salamanca: Universidad de Salamanca.

Ames, B. (1995). Electoral strategy under open-list proportional representation. *American Journal of Political Science, 39*(2), 406-433.

André, A., & Depauw, S. (2012). District magnitude and the personal vote. Paper presented at the conference *Parliaments in changing times: The Inaugural General Conference of the ECPR Standing Group on Parliaments,* Dublin.

Ansolabehere, S., Gerber, A., & Snyder, J. (2002). Equal votes, equal money: Court-ordered redistricting and public expenditures in the American states. *American Political Science Review, 96*(4), 767-777.

Ashworth, S., & Bueno de Mesquita, E. (2006). Delivering the goods: Legislative particularism in different electoral and institutional settings. *Journal of Politics, 68*(1), 168-179.

Austen-Smith, D. (2000). Redistributing income under proportional representation. *Journal of Political Economy, 108*(6), 1235-1269.

Backer, L. C., & Molina, A. (2010). Cuba and the construction of alternative global trade systems: Alba and free trade in the Americas. *University of Pennsylvania Journal of International Law, 31*(3), 679-752.

Banegas-Lazo, C. (2009). *Ejecución FHIS*. Tegucigalpa, Honduras: Fondo Hondureño de Inversión Social.

Barahona, M. (2005). *Honduras en el siglo XX: Una síntesis histórica.* Tegucigalpa, Honduras: Editorial Guaymuras.

Baum, C. F. (2006). *An introduction to modern econometrics using Stata.* College Station, Texas: Stata.

Bawn, K., & Thies, M. F. (2003). A comparative theory of electoral incentives. *Journal of Theoretical Politics, 15*(1), 5-32.

Beck, N., Katz, J.,N., & Tucker, R. (1998). Taking time seriously: Time-series cross-section analysis with a binary dependent variable. *American Journal of Political Science, 42*(4), 1260-1288.

Beck, N., & Katz, J.,N. (1995). What to do (and Not to do) with Time-series cross-section data. *American Political Science Review, 89*(3), 634-647.

Beck, N., & Katz, J. N. (2011). Modeling dynamics in time-series cross-section political economy data. *Annual Review of Political Science, 14*(1), 331-352.

Benoit, K. (2004). Models of electoral system change. *Electoral Studies, 23*(3), 363-389.

Benoit, K. (2007). Electoral laws as political consequences: Explaining the origins and change of electoral institutions. *Annual Review of Political Science, 10*, 363-390.

Bernhagen, P., & Bräuninger, T. (2005). Structural power and public policy: A signaling model of business lobbying in democratic capitalism. *Political Studies, 53*(1), 43-64.

Boix, C. (1998). *Political parties, growth and equality: conservative and social democratic economic strategies in the world economy.* Cambridge; New York: Cambridge University Press.

Boix, C. (1999). Setting the rules of the game: the choice of electoral systems in advanced democracies. *American Political Science Review, 93*(3), 609-624.

Bowler, S., Donovan, T., & van Heerde, J. (2005). The United States of America: Perpetual campaigning in the absence of competition. In M. Gallagher, & P. Mitchell (Eds.), *The politics of electoral systems* (pp. 186-205). Oxford: Oxford University Press.

Brady, H. E., Collier, D., & Seawright, J. (2004). Sources of leverage in causal inference: Toward an alternative view of methodology. In H. E. Brady, & D. Collier (Eds.), *Rethinking social inquiry: Diverse tools, shared standards* (pp. 229-266). Lanham, Md.; Oxford: Rowman & Littlefield.

Brambor, T., Clark, W. R., & Golder, M. (2006). Understanding interaction models: Improving empirical analyses. *Political Analysis, 14*(1), 63-82.

Bruhn, K. (1996). Social spending and political support: The "Lessons" of the national solidarity program in Mexico. *Comparative Politics, 28*(2), pp. 151-177.

Bulmer-Thomas, V. (1990). Honduras. In L. Bethell (Ed.), *The Cambridge History of Latin America. Latin America since 1930: Mexico, Central America and the Caribbean* (pp. 283-316). Cambridge: Cambridge University Press.

Cain, B. E., Ferejohn, J. A., & Fiorina, M. P. (1987). *The personal vote: Constituency service and electoral independence.* Cambridge, Mass.: Harvard University Press.

Calvo, E., & Murillo, M. V. (2004). Who delivers? Partisan clients in the Argentine electoral market. *American Journal of Political Science, 48*(4), 742-757.

Campbell, D. T., & Stanley, J. C. (1966). *Experimental and quasi-experimental designs for research.* Dallas, TX: Houghton Mifflin.

Carey, J. M. (1996). *Term limits and legislative representation.* New York: Cambridge University Press.

Carey, J. M. (2007). Competing principals, political institutions, and party unity in legislative voting. *American Journal of Political Science, 51*(1), 92-107.

Carey, J. M. (2009). *Legislative voting and accountability.* Cambridge: Cambridge University Press.

Carey, J. M., & Hix, S. (2011). The electoral sweet spot: Low-magnitude proportional electoral systems. *American Journal of Political Science*, *55*(2), 383-397.

Carey, J. M., & Reynolds, A. (2007). Parties and accountable government in new democracies. *Party Politics, 13*(2), 255-274.

Carey, J. M., & Shugart, M. S. (1995). Incentives to cultivate a personal vote: A rank ordering of electoral formulas. *Electoral Studies, 14*(4), 417-439.

Carothers, T. (1999). *Aiding democracy abroad: The learning curve.* Washington, D.C.: Carnegie Endowment for International Peace.

Central American Parliament. (2011). *República de Honduras: Datos básicos.* Retrieved 27th December 2011, from http://www.parlacen.org.gt/vinculo-1-parlacen-v-013.htm

Central Bank of Honduras. (2012). *Producto interno bruto enfoque de la producción en valores corrientes y constantes, 2000-2011.* Retrieved 7th August 2012, from http://www.bch.hn/esteco/sector_real/pib/pibenfoque_produccion.xls

Chang, E. C. C., & Golden, M. A. (2007). Electoral systems, district magnitude and corruption. *British Journal of Political Science, 37*, 115-137.

Chang, E. C. C., Kayser, M. A., Linzer, D. A., & Rogowski, R. (2011). *Electoral systems and the balance of consumer-producer power.* New York: Cambridge University Press.

Colomer, J. M. (2004). The Strategy and history of electoral system choice. In J. M. Colomer (Ed.), *Handbook of electoral system choice* (pp. 3-78). Hampshire, UK; New York: Palgrave Macmillan.

Colomer, J. M. (2011). Introduction: personal and party representation. In J. M. Colomer (Ed.), *Personal representation: The neglected dimension of electoral systems* (pp. 1-20). Colchester, United Kingdom: ECPR Press.

Comisión Política de los Partidos Políticos. (2005). *Honduras: Los acuerdos son posibles. la experiencia de la Comisión Política de los Partidos Políticos.* Tegucigalpa, Honduras: Programa de las Naciones Unidas para el Desarrollo/Editorial Guaymuras.

Congreso Nacional. (1990). Ley del Fondo Hondureño de Inversión Social, 12-90.

Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: design & analysis issues for field settings.* Boston; London: Houghton Mifflin.

Corbo, V., & Fischer, S. (1995). Structural adjustment, stabilization and policy reform: Domestic and international finance. In J. Behrman, & T. N. Srinivasan (Eds.), *Handbook of development economics* (pp. 2845-2924). Amsterdam: North-Holland.

Cox, G. W. (1987). *The efficient secret: The cabinet and the development of political parties in Victorian England.* Cambridge; New York: Cambridge University Press.

Cox, G. W. (1997). *Making votes count: Strategic coordination in the world's electoral systems.* Cambridge, U.K.; New York: Cambridge University Press.

Cox, G. W. (2006). The organization of democratic legislatures. In B. R. Weingast, & D. A. Wittman (Eds.), *The Oxford handbook of political economy* (pp. 141-161). Oxford; New York: Oxford University Press.

Cox, G. W., & McCubbins, M. D. (1986). Electoral politics as a redistributive game. *Journal of Politics, 48*(2), 370-389.

Cox, G. W., & McCubbins, M. D. (2001). The institutional determinants of economic policy outcomes. In S. Haggard, & M. D. McCubbins (Eds.), *Presidents, parliaments, and policy* (pp. 21-63). Cambridge; New York: Cambridge University Press.

Cox, G. W., & McCubbins, M. D. (2007). *Legislative leviathan: Party government in the House.* Cambridge: Cambridge University Press.

Crisp, B. F., Escobar-Lemmon, M. C., Jones, B. S., Jones, M. P., & Taylor-Robinson, M. M. (2004). Vote-seeking incentives and legislative representation in six presidential democracies. *Journal of Politics, 66*(3), 823-846.

Crisp, B. F., Jensen, K. M., & Shomer, Y. (2007). Magnitude and vote seeking. *Electoral Studies, 26*(4), 727-734.

de Vaus, D. A. (1991). *Surveys in social research.* London; North Sydney, NSW, Australia: UCL Press; Allen & Unwin.

della Porta, D. (2008). Comparative analysis: Case-oriented versus variable-oriented research. In D. della Porta, & M. Keating (Eds.), *Approaches and methodologies in the social sciences: A pluralist perspective* (pp. 198-222). Cambridge, New York: Cambridge University Press.

della Porta, D., & Keating, M. (2008). How Many Approaches in the Social Sciences? an Epistemological Introduction. In D. della Porta, & M. Keating (Eds.), *Approaches and methodologies in the social sciences: A pluralist perspective* (pp. 19-39). Cambridge, New York: Cambridge University Press.

Denemark, D. (2000). Partisan pork barrel in parliamentary systems: Australian constituency-level grants. *Journal of Politics, 62*(3), 896-915.

Denzau, A. T., & Munger, M. C. (1986). Legislators and interest groups: How unorganized interests get represented. *American Political Science Review, 80*(1), 89-106.

Desposato, S. W. (2006). Parties for rent? ambition, ideology, and party switching in Brazil's Chamber of Deputies. *American Journal of Political Science, 50*(1), 62-80.

Diamond, J., & Robinson, J. A. (2010). Afterword: Using comparative methods in studies of human history. In J. Diamond, & J. A. Robinson (Eds.), *Natural experiments of history* (pp. 256-275). Cambridge, Mass.: The Belknapp Press of Harvard University Press.

Diaz-Cayeros, A., McElwain, K., & Romero, V. (2009). *Fiscal disconnect and particularistic spending across countries.* Unpublished manuscript.

Dixit, A., & Londregan, J. (1996). The determinants of success of special interests in redistributive politics. *Journal of Politics, 58*(4), 1132-1155.

Dole-Duron, B. E. (2004). *Estrategia para viabilizar la participación política de las mujeres hondureñas.* Tegucigalpa, Honduras: INAM and CEPAL. Retrieved 11th February 2013, from http://www.cepal.org/mujer/proyectos/gobernabilidad/documentos/Informe_Blanca_Dole.pdf

Downs, A. (1957). *An economic theory of democracy.* New York: Harper.

Dunning, T. (2008). Improving causal inference: Strengths and limitations of natural experiments. *Political Research Quarterly, 61*(2), 282-293.

Dunning, T. (2012). *Natural experiments in the social sciences: A design-based approach.* New York: Cambridge University Press.

ECLAC. (1999). *Honduras: Assessment of the damage caused by Hurricane Mitch, 1998. Implications for economic and social development and for the environment.* (No. LC/MEX/L.367), United Nations Economic Commission for Latin America and the Caribbean. Retrieved 7th August 2012, from http://www.eclac.org/publicaciones/xml/6/15506/L367-1-EN.pdf

ECLAC. (2005). *The Millennium Development Goals: A Latin American and Caribbean perspective.* Santiago: United Nations Economic Commission for Latin America and the Caribbean. Retrieved 7th August 2012, from http://www.eclac.org/publicaciones/xml/0/21540/lcg2331.pdf

ECLAC. (2009). *Social panorama of Latin America.* Santiago: United Nations Economic Commission for Latin America and the Caribbean. http://www.eclac.org/publicaciones/xml/0/21540/lcg2331.pdf

El Heraldo. (1996, 2nd July). Voto separado es invariable, dice comisión política azul. *El Heraldo,* p.11.

El Heraldo. (2003a, 10th September). PN a internas con fotos. *El Heraldo,* p.10.

El Heraldo. (2003b, 25th September). Ratificadas las reformas políticas. *El Heraldo,* p.4.

El Heraldo. (2008a, 28th October). "No hay excusas... lo que busca Zelaya es beneficiar a Micheletti". *El Heraldo,* Retrieved 1st November 2012, from http://archivo.elheraldo.hn/Ediciones/2008/10/29/Noticias/No-hay-excusas-lo-que-busca-Zelaya-es-beneficiar-a-Micheletti

El Heraldo. (2008b, 10th October). ALBA desata pasiones políticas entre liberales. *El Heraldo,* Retrieved 3rd November 2012, from http://archivo.elheraldo.hn /Pa%C3%ADs/Ediciones/2008/10/11/Noticias/Alba-desata-pasiones-politicas-entre-liberales

El Heraldo. (2012a, 5th February). Futbolistas, nuevo botín electoral para políticos. *El Heraldo,* Retrieved 4th March, 2012, from http://www.elheraldo.hn/Secciones-Principales/Pais/Futbolistas-nuevo-botin-electoral-para-politicos

El Heraldo. (2012b, 12th July). Futbolistas, periodistas y actores entre candidatos del Partido Nacional de Honduras. *El Heraldo,* Retrieved 12th July 2012, from http://www.elheraldo.hn/content/view/full/64551?utm_source_=feedburner& utm_medium=feed&utm_campaign=Feed:+elheraldo_pais+(El+Heraldo+-+País)

Elster, J. (1988). Consequences of constitutional choice: Reflections on Toqueville. In J. Elster, & R. Slagstad (Eds.), *Constitutionalism and democracy* (pp. 81-102). Cambridge: Cambridge University Press in collaboration with Maison des Sciences de l'Homme, Paris.

Envío. (1996, July). The middle classes: Violent and organized *Revista Envío,* Retrieved 30th April 2012, from http://www.envio.org.ni/articulo/3020

ESA Consultores. (1999). *Informe final: Evaluación ex-post del Fondo Hondureño de Inversión Social (FHIS 2). Cliente Banco Mundial.* Tegucigalpa, Honduras: ESA Consultores.

ESA Consultores. (2005). *Informe Final: Evaluación ex-post del Fondo Hondureño de Inversión Social (FHIS 3). Cliente FHIS (Borrador)* . Tegucigalpa, Honduras: ESA Consultores.

Farrell, D. M. (2011). *Electoral systems: A Comparative introduction.* Houndmills, Basingstoke, Hampshire, UK; New York: Palgrave Macmillan.

Fenno, R. F. (1978). *Home style: House members in their districts*. Boston: Harper Collins Publishing.

Ferejohn, J. A. (1974). *Pork barrel politics: Rivers and harbors legislation, 1947-1968*. California: Stanford University Press.

FHIS. (2005). *Manual de operaciones*. Tegucigalpa, M.D.C.: Fondo Hondureño de Inversión Social.

FHIS. (2009). *Database of projects: 1990 - 2009* (Muñoz-Portillo, Juan Manuel ed.). Tegucigalpa, Honduras: Fondo Hondureño de Inversión Social.

Flores, M., Lovo, H., Reyes, W., & Campos, M. (2009). Cambios en la pobreza y concentración del ingreso en los municipios de Honduras: Desde 1988 a 2001. *Documento de trabajo n.º 50*. Santiago, Chile: Programa Dinámicas Territoriales Rurales.

Fukui, H., & Fukai, S. N. (1996). Pork barrel politics, networks, and local economic development in contemporary Japan. *Asian Survey, 36*(3, Informal Politics in East Asia), 268-286.

Gallagher, M. (1980). Candidate selection in Ireland: The impact of localism and the electoral system. *British Journal of Political Science, 10*(4), 489-503.

Gallagher, M. (1988a). Conclusion. In M. Gallagher, & M. Marsh (Eds.), *Candidate selection in comparative perspective: The secret garden of politics* (pp. 236-283). London: Sage.

Gallagher, M. (1988b). Introduction. In M. Gallagher, & M. Marsh (Eds.), *Candidate selection in comparative perspective: The secret garden of politics* (pp. 1-19). London: Sage.

Gallagher, M. (1991). Proportionality, disproportionality and electoral systems. *Electoral Studies, 10*(1), 33-51.

Gallagher, M. (2005a). Conclusion. In M. Gallagher, & P. Mitchell (Eds.), *The politics of electoral systems* (pp. 535-578). Oxford: Oxford University Press.

Gallagher, M. (2005b). Ireland: The discreet charm of PR-STV. In M. Gallagher, & P. Mitchell (Eds.), *The politics of electoral systems* (pp. 511-532). Oxford: Oxford University Press.

Gallagher, M., & Komito, L. (2009). The constituency role of Dáil deputies. In J. Coakley, & M. Gallagher (Eds.), *Politics in the Republic of Ireland* (pp. 230-262). London: Routledge in association with PSAI Press.

Gallagher, M., & Mitchell, P. (2005a). Appendix A: The mechanics of electoral systems. In M. Gallagher, & P. Mitchell (Eds.), *The politics of electoral systems* (pp. 579-597). Oxford: Oxford University Press.

Gallagher, M., & Mitchell, P. (2005b). Introduction to electoral systems. In M. Gallagher, & P. Mitchell (Eds.), *The politics of electoral systems* (pp. 3-23). Oxford: Oxford University Press.

Gamm, G., & Kousser, T. (2010). Broad bills or particularistic policy? Historical patterns in American state legislatures. *American Political Science Review, 104*(01), 151-170.

Gassner, M., Ugarte, D., & Verardi, V. (2006). Human development and electoral systems. *Journal of Human Development, 7*(1), 43-57.

Giannetti, D., & Grofman, B. (Eds.). (2011). *A natural experiment on electoral law reform: Evaluating the long run consequences of 1990s electoral reform in Italy and Japan.* New York, Dordrecht, Heidelberg, London: Springer.

Golden, M. A. (2003). Electoral Connections: The effects of the personal vote on political patronage, bureaucracy and legislation in postwar Italy. *British Journal of Political Science, 33*(02), 189-212.

Golden, M. A., & Picci, L. (2008). Pork-barrel politics in postwar Italy, 1953-94. *American Journal of Political Science, 52*(2), 268-289.

Gordin, J. P. (2002). The political and partisan determinants of patronage in Latin America 1960-1994: A comparative perspective. *European Journal of Political Research, 41*(4), 513-549.

Government of Honduras. (2001). *Estrategia para la reducción de la pobreza: Un compromiso de todos por Honduras*. Retrieved 11/24, 2010, from http://undp.un.hn/documentos/ERPCompleto.pdf

Grimmer, J., Messing, S., & Westwood, S. J. (2012). How words and money cultivate a personal vote: The effect of legislator credit claiming on constituent credit allocation. *American Political Science Review, 106*(04), 703-719.

Grofman, B. (1999). SNTV, STV, and single-member-district systems: Theoretical comparisons and contrasts. In B. Grofman, S. Lee, E. Winckler & B. Woodall (Eds.), *Elections in Japan, Korea, and Taiwan under the single non-transferable vote: The comparative study of an embedded institution* (pp. 317-333). Ann Arbor: University of Michigan Press.

Grofman, B., & Fraenkel, J. (2008). Electoral engineering, social cleavages and democracy. In P. Nardulli (Ed.), *Democracy in the twenty-first century II: Domestic perspectives* (pp. 71-101). Urbana-Champaign, IL: University of Illinois Press.

Hagopian, F., Gervasoni, C., & Moraes, J. A. (2009). From Patronage to program the emergence of party-oriented legislators in Brazil. *Comparative Political Studies, 42*(3), 360-391.

Hall, P. A., & Taylor, R. C. R. (1996). Political science and the three new institutionalisms. *Political Studies, 44*(4), 936-957.

Hallerberg, M., & Marier, P. (2004). Executive authority, the personal vote, and budget discipline in Latin American and Caribbean Countries. *American Journal of Political Science, 48*(3), 571-587.

Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica, 47*(1), 153-161.

Hellinger, D. (2011). Obama and the Bolivarian agenda for the Americas. *Latin American Perspectives, 38*(4), 46-62.

Helmke, G., & Levitsky, S. (2006). Introduction. In G. Helmke, & S. Levitsky (Eds.), *Informal institutions and democracy: Lessons from Latin America* (pp. 1-30). Baltimore: The John Hopkins University Press.

Hicken, A., & Simmons, J. W. (2008). The personal vote and the efficacy of education spending. *American Journal of Political Science, 52*(1), 109-124.

Hirano, S. (2006). Electoral institutions, hometowns, and favored minorities.Evidence from Japanese electoral reforms. *World Politics, 59*(1)

Hix, Simon. (2002). Parliamentary behavior with two principals: Preferences, parties, and voting in the European Parliament. *American Journal of Political Science, 46*(3), 688-698.

Hix, S. (2004). Electoral institutions and legislative behaviour: explaining voting defection in the European parliament. *World Politics, 56*(2), 194-223.

Hug, S. (2003). Selection bias in comparative research: the case of incomplete data sets. *Political Analysis, 11*(3), 255-274.

Inter-American Development Bank [IADB]. (1999). *Stockholm Declaration.* Retrieved 17th May 2012, from http://www.iadb.org/regions/re2/consultative_group/declaration.htm

International Foundation for Electoral Systems [IFES]. (2012). *Electoral technical assistance to the IHEC of Iraq.* Retrieved 4th November 2012, from http://www.ifes.org/Content/Projects/Middle-East-and-North-Africa/Iraq/Electoral-Technical-Assistance-to-the-IHEC-of-Iraq.aspx

Inglehart, R. (1997). *Modernization and postmodernization: Cultural, economic, and political change in 43 societies.* Princeton, N.J.: Princeton University Press.

Inglehart, R., & Carballo, M. (1997). Does Latin America exist? (and is there a Confucian culture?): A global analysis of cross-cultural differences. *PS: Political Science and Politics, 30*(1), 34-47.

Inglehart, R., & Welzel, C. (2005). *Modernization, cultural change, and democracy: The Human development sequence.* Cambridge; New York: Cambridge University Press.

Instituto Nacional de Estadística. (2001). *Base cartográfica Censo 2001.* Retrieved 27th December 2011, from http://www.ine.gob.hn/drupal/sites/default/files/node72.jpg

International IDEA. (2005). *Electoral system design: The new International IDEA handbook.* Stockholm: International IDEA. Retrieved 4th November 2012, from http://www.idea.int/publications/esd/upload/ESD_Handb_low.pdf

Iversen, T., & Soskice, D. (2006). Electoral institutions and the politics of coalitions: why some democracies redistribute more than others. *American Political Science Review, 100*(2), 165-181.

Kam, C. D., & Franzese, R. J. (2007). *Modelling and interpreting interactive hypotheses in regression analysis.* Ann Arbor: University of Michigan Press.

Katz, R. S. (1980). *A theory of parties and electoral systems.* Baltimore: John Hopkins University Press.

Keefer, P., & Khemani, S. (2009). When do legislators pass on pork? The role of political parties in determining legislator effort. *American Political Science Review, 103*(1), 99-112.

Keefer, P., & Vlaicu, R. (2008). Democracy, credibility, and clientelism. *Journal of Law, Economics, and Organization, 24*(2), 371-406.

King, G., Keohane, R. O., & Verba, S. (1994). *Designing social inquiry: Scientific inference in qualitative research.* Princeton, N.J.: Princeton University Press.

Kitschelt, H., Hawkins, K. A., Luna, J. P., Rosas, G., & Zechmeister, E. J. (2010). *Latin American party systems.* Cambridge: Cambridge University Press.

Kitschelt, H., & Wilkinson, S.,I. (2007). Introduction. In H. Kitschelt, & S. Wilkinson I (Eds.), *Patrons, clients, and policies: patterns of democratic accountability and political competition* (pp.1-49). New York: Cambridge University Press.

La Prensa. (2008a, 11th October). Indignacion contra diputados por la ALBA. *La Prensa,* Retrieved 1st November 2012, from http://archivo.laprensa.hn/Ediciones/2008/10/11/Noticias/Indignacion-contra-diputados-por-la-Alba/(offset)/5

La Prensa. (2008b, 21st November). Mel propone plebiscito para instalar constituyente. *La Prensa,* Retrieved 26th December 2011, from

http://archivo.laprensa.hn/Apertura/Ediciones/2008/11/22/Noticias/Mel-propone-plebiscito-para-instalar-Constituyente

La Prensa. (2012, 13th July). Futbolistas llenan las planillas a cargos de elección popular. *La Prensa,* Retrieved 4th February 2013, from http://laprensa.hn/Secciones-Principales/Honduras/Tegucigalpa/Futbolistas-llenan-las-planillas-a-cargos-de-eleccion-popular#.URATNh3CnyQ

La Prensa. (2012b, 8th March). Otro afín a Juan Orlando se suma al gobierno. *La Prensa,* Retrieved 1st November 2012, from http://www.laprensa.hn/Secciones-Principales/Honduras/Tegucigalpa/Otro-afin-a-Juan-Orlando-se-suma-al-gobierno#.UJVFfG85ZJ4

La Tribuna. (1993, 1st October). Esta será la papeleta electoral. *La Tribuna,* p. 1.

La Tribuna. (1997, 3rd November). Producidas seis millones de papeletas electorales. *La Tribuna,* p. 1.

La Tribuna. (2003a, 30th December). Ministros no renunciaron a sus puestos ni por cortesía. *La Tribuna,* p. 8.

La Tribuna. (2003b, 4th September). Plantean elección de diputados por separado y con fotografía. *La Tribuna,* p. 14.

La Tribuna. (2004a, 19th March). Es decisión de liberales usar o no la fotografía. *La Tribuna,* p. 18.

La Tribuna. (2004b, 31st March). Precandidatos dispuestos a fortalecer la unidad pero ninguno depone. *La Tribuna,* p. 8.

La Tribuna. (2006, 20th December). Aprobado el presupuesto general de 93,102 millones. *La Tribuna,* Retrieved 1st November 2012 from http://old.latribuna.hn/2006/12/20/post10002498/

La Tribuna. (2007a, 16th July). "Mel" zelaya: Políticos no pueded estar con 2 sombreros. *La Tribuna,* Retrieved 1st November 2012, from http://old.latribuna.hn/2007/07/16/post10013630/

La Tribuna. (2007b, 2nd January). Diputados piden a "Mel" desengavete 60 leyes. *La Tribuna,* Retrieved 1st November 2012, from http://old.latribuna.hn/2008/01/02/post10024647/

La Tribuna. (2007c, 12th August). Utilizar sindicalistas para amedrentar a diputados puede derivar en ingobernabilidad. *La Tribuna,* Retrieved 1st November of 2012, from http://old.latribuna.hn/2007/08/12/post10015454/

La Tribuna. (2008, 22nd May). Diputados se reunirán con "Mel" para limar asperezas. *La Tribuna,* Retrieved 1st November 2012, from http://old.latribuna.hn/2008/05/22/post10034426/

La Tribuna. (2012, 1st November). Candidatos a diputado buscan crear los distritos electorales. *La Tribuna,* Retrieved 4th February, 2013, from http://www.latribuna.hn/2012/11/01/candidatos-a-diputados-buscan-crear-los-distritos-electorales/

Laakso, M., & Taagepera, R. (1979). The "effective" number of parties: A measure with application to West Europe. *Comparative Political Studies, 12*(1), 3-27.

Lancaster, T. D. (1986). Electoral structures and pork barrel politics. *International Political Science Review / Revue Internationale De Science Politique, 7*(1, Public Policy and Government Structures), 67-81.

Lancaster, T. D., & Patterson, W. D. (1990). Comparative pork barrel politics. *Comparative Political Studies, 22*(4), 458-477.

Lanza, G. (2004, May). Reafirmando nuestra ciudadanía en la nueva ley electoral. *Incidencia Ciudadana,* pp. 10-11. Retrieved 11 February 2013, from http://fosdeh.com/archivos/documentos/Publicaciones/Suplementos/incidencia_ciudadana/incidencia_ciudadana4.pdf

Leys, C. (1959). Models, Theories, and the theory of political parties. *Political Studies, 7*(2), 127-146.

Legislative Decree 44-2004. Ley Electoral y de las Organizaciones Políticas de Honduras.

Lijphart, A. (1971). Comparative politics and the comparative method. *American Political Science Review, 65*(3), 682-693.

Lijphart, A. (1990). The political consequences of electoral laws, 1945-85. *American Political Science Review, 84*(2), 481-496.

Lindbeck, A., & Weibull, J. W. (1987). Balanced-budget redistribution as the outcome of political competition. *Public Choice, 52*(3), 273-297.

Lizzeri, A., & Persico, N. (2001). The provision of public goods under alternative electoral incentives. *American Economic Review, 91*(1), 225-239.

Lyne, M. M. (2008). Proffering pork: How party leaders build party reputations in Brazil. *American Journal of Political Science, 52*(2), 290-303.

Madison, J. (2003[1788]). The same subject continued. In C. Rossiter (Ed.), *The Federalist Papers* (pp. 71-79). New York: Signet Classic.

Mainwaring, S. (1991). Politicians, parties, and electoral systems: Brazil in comparative perspective. *Comparative Politics, 24*(1), 21-43.

Martin, S. (2011). Electoral institutions, the personal vote, and legislative organization. *Legislative Studies Quarterly, 36*(3), 339-361.

Martin, S. (2012). Why electoral systems don't always matter: The impact of 'mega-seats' on legislative behaviour in Ireland. *Party Politics,*

Mayhew, D. R. (1974). *Congress: The electoral connection.* Yale Studies in Political Science. New Haven: Yale University Press.

McCall-Rosenbluth, & Frances. (1996). Internationalization and electoral politics in Japan. In R. Keohane, & H. V. Milner (Eds.), *Internationalization and domestic politics* (pp. 137-156). Cambridge; New York: Cambridge University Press.

McGillivray, F. (2004). *Privileging industry: The comparative politics of trade and industrial policy.* Princeton, N.J.: Princeton University Press.

MDC. (2003). *Propuestas para una reforma política democrática*. Tegucigalpa, Honduras: Movimiento Cívico por la Democracia. Retrieved 11th February 2013, from http://www.cepal.org/mujer/proyectos/gobernabilidad/documentos/propuestas.pdf

Meyer, B. D. (1995). Natural and quasi-experiments in economics. *Journal of Business & Economic Statistics, 13*(2, JBES Symposium on Program and Policy Evaluation), 151-161.

Meza, V., Salomón, L., Romero, R., & Torres-Calderón,Manuel,Illescas-Oliva, Jorge. (2007). *Honduras: Poderes fácticos y sistema político*. Tegucigalpa, Honduras: Centro de Documentación de Honduras.

Milesi-Ferretti, G. M., Perotti, R., & Rostagno, M. (2002). Electoral systems and public spending. *The Quarterly Journal of Economics, 117*(2), 609-657.

Monroe, B. L., & Rose, A. G. (2002). Electoral systems and unimagined consequences: Partisan effects of districted proportional representation. *American Journal of Political Science, 46*(1), 67-89.

National Hurricane Center. (1999). *Hurricane Mitch 22 October-05 November 1998*. Retrieved 27th November 2010, from http://www.nhc.noaa.gov/1998mitch.html

National Institute of Statistics of Honduras. (2002). *Censo nacional de población y vivienda de 2001*. Retrieved 19th November 2010, from http://www.ine.gob.hn/public_html/censo2001/indexcenso2001.html

National Institute of Statistics of Honduras. (2009). *Anuario estadístico 2009: Período 2005-2009*. Tegucigalpa, Honduras: Instituto Nacional de Estadística.

National Democratic Institute [NDI]. (2012). *Afghanistan*. Retrieved 4th November 2012, from http://www.ndi.org/afghanistan

Norris, P. (2004). *Electoral engineering: Voting rules and political behavior*. Cambridge; New York: Cambridge University Press.

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Norsworthy, K., & Barry, T. (1994). *Inside Honduras.* Albuquerque, N.M: Inter-Hemispheric Education Resource Center.

North, D. C. (1990). *Institutions, institutional change, and economic performance.* The political economy of institutions and decisions. Cambridge; New York: Cambridge University Press.

Patrick, J. J., Pious, R. M., & Ritchie, D. A. (2001). *Pork barrel politics* [The Oxford Guide to the United States Government] Oxford University Press. Retrieved from http://www.oxfordreference.com/views/ENTRY.html?subview= Main&entry=t89.e671

Payne-Iglesias, E. (2009). Honduras en la ruta trans-ístmica (Análisis de la propuesta de Juan García de Hermosilla de mudar Nombre de Dios por Puerto Caballos) 1556-1570. *Memorias. Revista digital de historia y arqueología desde El Caribe, 6*(10), 1-31.

Paz-Aguilar, E. (2008). La reforma política electoral en Honduras. In D. Zovatto, & J. Orozco-Henríquez (Eds.), *La reforma política y electoral en América Latina: 1978-2007* Universidad Nacional Autónoma de México.

Proyecto de Élites Parlamentarias [PELA]. (2011). *Honduras: fichas técnicas.* Retrieved 12th October 2011, from http://americo.usal.es/oir/elites/honduras1.htm

Persson, T., & Tabellini, G. E. (2000). *Political economics: explaining economic policy.* Cambridge, Mass.: London: MIT Press.

Persson, T., & Tabellini, G. E. (2003). *The economic effects of constitutions.* Cambridge, Mass.; London: MIT Press.

Posas, M. (1992). El proceso de democratización en Honduras. In Centro de Documentación de Honduras (Ed.), *Puntos de vista. Temas políticos* (pp. 1-37). Tegucigalpa, M.D.C.: Centro de Documentación de Honduras.

Przeworski, A., & Teune, H. (1970). *The logic of comparative social inquiry.* New York: Wiley-Interscience.

Raunio, T. (2005). Finland: One hundred years of quietude. In M. Gallagher, & P. Mitchell (Eds.), *The politics of electoral systems* (pp. 473-489). Oxford: Oxford University Press.

Renwick, A., & Pilet, J. (2011). The personalization of electoral systems: Theory and european evidence. *ECPR General Conference,* University of Reykjavik, Iceland. Retrieved 4th November 2012, from http://www.ecprnet.eu/MyECPR/proposals/reykjavik/uploads/papers/3348.pdf

Reyes-Avelar, D. (2010). *Liquidación de gastos por subsidio.* Retrieved 24th March 2012, from http://www.congresonacional.hn/donaldoreyes/index.php?option= com_phocadownload&view=section&id=1&Itemid=151

Robinson, G., McNulty, J. E., & Krasno, J. S. (2009). Observing the counterfactual? The search for political experiments in nature. *Political Analysis, 17*(4), 341-357.

Rodríguez, C. (2011). Volver a empezar. Análisis de las elecciones hondureñas tras el golpe de estado. In M. Alcántara, & M. L. Tagina (Eds.), *América Latina: Política y elecciones del bicentenario (2009-2010)* (pp. 213-241). Madrid: Centro de Estudios Políticos y Constitucionales.

Ruhl, J.,Mark. (2010). Honduras unravels. *Journal of Democracy, 21*(2), 93-107.

Saiegh, S. M. (2009). Recovering a basic space from elite surveys: Evidence from Latin America. *Legislative Studies Quarterly, 34*(1), 117-145.

Salomon, L., Meza, V., & Flores, M. (2004). *Democracia y partidos políticos en Honduras.* Tegucigalpa, M.D.C: Centro de Documentación de Honduras.

Samuels, D. J. (1999). Incentives to cultivate a party vote in candidate-centric electoral systems: Evidence from Brazil. *Comparative Political Studies, 32*(4), 487-518.

Sartori, G. (1968). Political development and political engineering. In J. D. Montgomery, & A. O. Hirschman (Eds.), (pp. 261-298). Cambridge, MA: Harvard University Press.

Sartori, G. (1997). *Comparative constitutional engineering: An inquiry into structures, incentives, and outcomes.* New York: New York University Press.

Schady, N. R. (2000). The political economy of expenditures by the Peruvian Social Fund (FONCODES), 1991-95. *American Political Science Review, 94*(2), 289-304.

Searing, D. (1994). *Westminster's world: Understanding political roles.* Cambridge, Mass; London: Harvard University Press.

Sekhon, J. S., & Titiunik, R. (2012). When natural experiments are neither natural nor experiments. *American Political Science Review, 106*(1), 35-57.

Shugart, M. S. (2005). Comparative electoral systems research: The maturation of a field and new challenges ahead. In M. Gallagher, & P. Mitchell (Eds.), *The politics of electoral systems* (pp. 25-55). Oxford: Oxford University Press.

Shugart, M. S., Valdini, M. E., & Suominen, K. (2005). Looking for locals: Voter information demands and personal vote-earning attributes of legislators under proportional representation. *American Journal of Political Science, 49*(2), 437-449.

Shvetsova, O. (2003). Endogenous selection of institutions and their exogenous effects. *Constitutional Political Economy, 14*(3), 191-212.

Siavelis, P. M., & Morgenstern, S. (2008a). Candidate recruitment and selection in Latin America: A framework for analysis. *Latin American Politics and Society, 50*(4), 27-58.

Siavelis, P. M., & Morgenstern, S. (2008b). Political recruitment and candidate selection in Latin America: A framework for analysis. In P. M. Siavelis, & S. Morgenstern (Eds.), *Pathways to power: Political recruitment and candidate selection in Latin America* (pp. 3-37). University Park, Pa.: Pennsylvania State University Press.

Sieberer, U. (2010). Behavioral consequences of mixed electoral systems: Deviating voting behavior of district and list MPs in the German Bundestag. *Electoral Studies, 29*(3), 484-496.

Sieder, R. (1996). Elections and democratization in Honduras since 1980. *Democratization, 3*(2), 17-40.

Sigelman, L., & Zeng, L. (1999). Analyzing censored and sample-selected data with tobit and heckit models. *Political Analysis, 8*(2), 167-182.

Siri, G. (1996). Social investment funds in Latin America. *CEPAL Review,* (59), 73-82.

Smith, V. L. (1991). Rational choice: The contrast between economics and psychology. *Journal of Political Economy, 99*(4), 877-897.

Stratmann, T., & Baur, M. (2002). Plurality rule, proportional representation, and the German Bundestag: How incentives to pork-barrel differ across electoral systems. *American Journal of Political Science, 46*(3), 506-514.

Strøm, K. (1997). Rules, reasons and routines: legislative roles in parliamentary democracies. *The Journal of Legislative Studies, 3*(1), 155-174.

Suiter, J., & O'Malley, E. (2012). Yes, minister: The impact of decision-making rules on geographically targeted particularistic spending (Paper no. 2012-1). Paper presented at the *Working Papers in International Studies. Dublin City University,* Dublin City University.

Taagepera, R. (2007). *Predicting party sizes: The logic of simple electoral systems.* Oxford: Oxford University Press.

Taagepera, R., & Shugart, M. S. (1989). *Seats and votes: The effects and determinants of electoral systems.* New Haven: Yale University Press.

Taylor, M. M. (1996). When electoral and party institutions interact to produce caudillo politics: The case of Honduras. *Electoral Studies, 15*(3), 327-337.

Taylor-Robinson, M. M. (2006). The difficult road from caudillismo to democracy: The impact of clientelism in Honduras. In G. Helmke, & S. Levitsky (Eds.), *Informal institutions and democracy: Lessons from Latin America* (pp. 106-124). Baltimore: The John Hopkins University Press.

Taylor-Robinson, M. M. (2007). Presidential and congressional elections in Honduras, November 2005. *Electoral Studies, 26*(2), 521-524.

Taylor-Robinson, M. M. (2009). Selección de candidatos al Congreso Nacional de Honduras por los partidos tradicionales. In F. Freidenberg, & M. Alcántara (Eds.), *Selección de candidatos, política partidista y rendimiento democrático* (pp. 325-359). México City: Tribunal Electoral del Distrito Federal.

Taylor-Robinson, M. M. (2009b). Honduras: A mix of change and continuity. *Revista de Ciencia Política, 29*(2), 471-489.

Taylor-Robinson, M. M. (2010). *Do the poor count?: Democratic institutions and accountability in a context of poverty.* Pennsylvania: Pennsylvania State University Press.

Taylor-Robinson, M. M., & Díaz, C. (1999). Who gets legislation passed in a marginal legislature and is the label marginal legislature still appropriate? A study of the Honduran Congress. *Comparative Political Studies, 32*(5), 589-625.

Taylor-Robinson, M. M., & Ura, J. D. (2013). Public Opinion and Conflict in the Separation of Powers: Understanding the Honduran Coup of 2009. *Journal of Theoretical Politics, 25*(1), 105-127.

Tribunal Supremo Electoral de Honduras. (2009). *Papeletas para diputados.* Retrieved 30th April 2012, from http://www.tse.hn/web/documentos/papeletas/Diputados.pdf

Tucker, R. (1999). *BTSCS: A binary time-series cross-section data analysis utility.* 4.0.4. Cambridge, MA: Harvard University.http://www.fas.harvard.edu/~rtucker/programs/btscs/btscs.html

United Nations Development Programme [UNDP]. (2006). *Informe sobre desarrollo humano Honduras 2006.* San José, Costa Rica: UNDP.

United Nations Development Programme [UNDP]. (2009). *Informe sobre desarrollo humano Honduras 2008/2009: De la exclusión social a la ciudadanía juvenil.* San José, Costa Rica: UNDP.

Vargas-Aguilar, J. C. (2006). Etno-demografía de la etnia *pech*, Honduras. *Revista Electrónica de Población y Salud en Mesoamérica, 3*(2), 1-22.

Weisberg, H. F., Krosnick, J. A., Bowen, B. D., & Weisberg, H. F. (1996). *An introduction to survey research, polling, and data analysis.* Thousand Oaks, Calif: Sage Publications.

Weyland, K. (2002). Limitations of rational-choice institutionalism for the study of Latin American politics. *Studies in Comparative International Development, 37*(1), 57.

Wikileaks. (2011). *Possible cabinet shakeup in Honduras as Maduro looks to recapture momentum.* Retrieved 13th February 2012, from http://wikileaks.org/cable/2002/12/02TEGUCIGALPA3407.html#

Wooldridge, J. M. (2002). *Econometric analysis of cross section and panel data.* Cambridge, Mass.: MIT Press.

Wooldridge, J. M. (2009). *Introductory econometrics: A modern approach.* Mason, Ohio: Thomson South-Western.

World Bank. (1994). *Project completion report. social investment fund project (Credit 2212-HO).* No. (13573) World Bank/Human Resources Operations Division. Retrieved 11th June 2012, from http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/1994/09/30/000009265_3961007083831/Rendered/INDEX/multi_page.txt

World Bank. (1996). *Implementation completion report. Second Social Investment Fund Project. Credit 2401-HO.* No. (15755) World Bank/Human Resources Operations Division. Retrieved 11th June 2012, from http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/1998/11/17/000009265_3961214165916/Rendered/INDEX/multi_page.txt

World Bank. (2005). *Map of Honduras.* Retrieved 28th November 2010, from http://siteresources.worldbank.org/INTLAC/Images/HON30435.jpg

World Bank. (2006). *Project performance assessment report: Honduras. Third Social Investment Fund Project (Credit 2766-HO) and Fourth Social Investment Fund Project (CREDITS 31180-HO and 31181-HO).* No. (36592). Washington: World Bank. (Assesment

Report) Retrieved 14th February 2012, from
http://lnweb90.worldbank.org.remote.library.dcu.ie/oed/oeddoclib.nsf/DocU
NIDViewForJavaSearch/4E05C6A07F1007758525719B007AEFA8/$file/ppar
_36592.pdf;

Yeager, T. J. (1995). *Encomienda* or slavery? The Spanish crown's choice of labor organization in sixteenth-century Spanish America. *The Journal of Economic History, 55*(04), 842-859.