Presidentialism and Coalition Governments: on the influence of cabinet ministers in the decision-making process

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Abstract

Do cabinet ministers influence government decisions in presidential coalition governments? Coalitions in presidential systems imply a principal-agent problem: ministers are both agents of the president and of their own party. The difficulty the president faces is to reduce policy drift, while ministers act to maximize electoral returns of government participation. Based on a formal model, the hypothesis is that the greater the ideological distance between the president and the minister, the lower the influence of the minister over Executive decisions. Statistical analysis of original data on ministerial influence over legislative agenda and budget allocation in Brazil (1995-2010) supports the hypothesis. Main results are that ideological distance reduces ministerial influence and, that the president concentrates legislative decisions in her party while shares budget allocation with coalition partners.

Key Words: presidentialism, ministers, coalition governments, influence, legislative agenda, budget allocation.

1 Introduction

Presidentialism is commonly associated with concentration of powers in the president's hands. However, coalitions have become common, especially in Latin America where the Executive Branch has a preeminent role in building the legislative agenda and allocating the budget. In a context of separation of powers and party fragmentation, coalitions appear as the answer to foreseen governability problems, providing legislative support for an otherwise minority party president.

Coalition formation is based on an exchange: the parties support the president's legislative agenda in Congress and the agreement is formalized with the distribution of cabinet positions. The president is benefited by the enlarged legislative support provided by this multiparty government. Coalition parties vote cohesively and the president is able to approve her legislative agenda (Figueiredo & Limongi, 2001). The question becomes what do coalition partners gain? What do they seek in government?

The argument here is that in exchange for the support of her party in Congress, the minister seeks influence in government. Thus, president and ministers are involved in an exchange: legislative support for influence in government. Thereby, the minister cannot be seen as a regular employee of the president. As a party representative, a party with an agenda of their own, the minister has ideology, policy preferences, and electoral projects (Martin & Vanberg, 2011). Given that parties seek to influence governmental decisions, the objective of this paper consists of identifying if and when cabinet ministers influence government decisions in presidential coalition governments. In short, the focus here is coalition governance in a presidential system.

For this purpose, a model identifying the influence of coalition parties in government decisions is presented. Coalition governance is analyzed based on the president-ministers relationship and the bargaining to influence decisions. Two moments are identified: the ministerial decision moment and the presidential scrutiny moment. Ministerial influence is identified as the result of participation in decision-making and control by the president. I.e. decision minus control equals influence. According to the game of incomplete information between the president and the minister's party, the greater the preference distance between the president and the minister, the smaller the influence over executive decision.

Influence over decisions is specified as the major Executive decisions: decisions on policy formulation or building the legislative agenda and decisions on policy implementation or budget allocation. Data on ministerial influence over legislative agenda and budget allocation from Brazilian governments in the period 1995-2010 is used to test the hypothesis presented by the formal model. Influence over legislative agenda is observed as participation of cabinet ministers in the authorship of all 1.779 Executive's legislative initiatives. Influence over budget allocation is observed as the proportion of the budget controlled by the parties.

Methodologically I use a negative binomial model for the legislative initiatives analysis and a gamma regression with log link for the budget allocation analysis. Results indicate that ideological distance reduces ministerial influence and that the president concentrates legislative decisions in her own party while shares budget allocation with coalition partners.

This paper is organized as follows: next section presents Brazilian political system main features. Third section discusses the theoretical foundation and the formal model. In the fourth section the methodology is explained, followed by the empirical results in the fifth section. Lastly, I summarize the results and discuss implications.

2 Brazilian Political System: coalitional presidentialism

Brazilian political system is a multiparty presidential democracy with open list proportional representation, bicameralism and federalism. After long discussion on the risks of the "difficult combination" between presidentialism and a multiparty system (Mainwaring, 1993), Brazilian political system currently presents stable bargaining between Executive and Legislative in what has been called as "coalitional presidentialism" (Abranches, 1988).

In this institutional setting, the Executive dominates the political scene, constituting the gravity center in Brazilian political system (Neto, 2004). In fact, Brazilian president is directly associated with the major policy decisions in the country.

Currently the Executive has the leadership in most part of the legislative agenda [1]. Over 75% of the legislative initiatives that are approved by Congress originate in the Executive Branch, establishing the legislative dominance of the Executive (Figueiredo & Limongi, 2001). Once in Congress, lawmakers have the power to amend such initiatives. However, this means that over 75% of legislative initiatives − rules establishing public policies, organizing political process, distributing resources and organizing social life - have its initial formulation outside Congress.

In addition to this legislative leadership, Brazilian Executive is responsible for the formulation of the budgetary law, meaning that the Executive sets the spending priorities. Once formulated, the law is sent to scrutiny and approval by the Legislature, that has the authority to amend it. However, parliament's powers to amend the budget are fairly limited (Figueiredo

[1] The Brazilian president has constitutional prerogatives to initiate legislation and exclusive initiative in administrative and budgetary issues.

& Limongi, 2008). In addition, the budgetary law in Brazil is not mandatory. This means that after sanction, the president has the prerogative to decide whether specific expenditures will actually be executed. The president may "impound" the budget and make significant reallocations even after parliamentary approval.

How is this dominance possible in an institutional context of separation of powers and multiparty system? The answer is that the president, as much as implicitly stated, does not govern alone. Presidentialism is commonly associated with concentration of powers in the president's hands. However, since redemocratization, coalition governments have become the rule in the country. Due to a fragmented party system, the president is usually elected with a minority party in Congress. To achieve majority support and thus pass the government's legislative agenda, the president forms governments with other parties than her own. Thus, the president reaches legislative success and parliamentary support for expressive part of her decisions based on a common denominator: coalition governments.

Coalition formation is based on a exchange: the parties support the legislative agenda of the president in Congress and the formalization of the agreement is with the distribution of ministries in the structure of the Executive Branch. One side of this discussion is sufficiently emphasized in the literature. Forming a coalition generates reasonably stable support to the Executive's agenda (Figueiredo & Limongi, 2001). However, what are the effects of government sharing between multiple parties? Much has been said on the centrality of coalitions in Brazilian political system. However, to speak about coalition government involves abandoning the idea that the Executive is the president. In addition to emphasizing the legislative dominance of the Executive and control of budget allocation, the question becomes to understand exactly how these decisions are made and what is the participation of coalition parties in this process. Coalition parties occupy ministries in the structure of the Executive. This structure establishes division of labor and specialization. Thus, what is the influence of coalition parties in the Executive's decisions in Brazilian presidentialism?

3 Coalition Politics in Presidential Systems

Presidential systems are focused on the president. Because of the clear hierarchy with the president at the top, it is commonly assumed that Executives' decisions are a somewhat direct application of the president's preferences. On the contrary, sharing of power and responsibility in government is the main characteristic of multiparty parliamentary systems. Stability and existence of government depends on agreement between its parts. No absolute hierarchy exists and proportionality is the rule.

Coalitional presidentialism is somewhat in between those two ideal types. In presidential systems presidents are elected independently from legislators and government survives regardless of its composition or legislative support. Coalition governments are associated with power sharing, multiple preferences, negotiated decisions and joint responsibility for government.

Executive Decision-making process in presidential systems is normally analyzed with the "American presidency" perspective, while coalition governments refer to the European parliamentarism literature.

Analyzes on the role of the president and the presidency constitute one of the most widespread topics of American political science (King, 1993). The initial element of the debate is the question: given that in presidential systems the president is the absolute head of the Executive Branch, personality and individual style determines the results or institutions − rules and procedures − constrain and guide behavior generating regularities? Based on the answer two main streams of study can be observed: the focus on personality or personal leadership skills of the president (Hargrove, 1993; Neustadt, 1961) and analyzes on the institutional presidency (Howell, 2003; Mayer, 2001; Moe, 1982, 1985; Rudalevige, 2002).

Coalition theories formulated to explain European parliamentary systems are rationalistic in its core. Executive's composition and functioning is the result of a bargain between rational actors maximizing participation in some kind of prize. The literature can be divided in two main approaches: the coalition formation approach (Austen-Smith & Banks, 1988; Axelrod, 1970; Baron & Ferejohn, 1989; Bassi, 2013; DeSwaan, 1970; Gamson, 1961; Laver & Shepsle, 1990, 1996; Riker, 2010; Rubinstein, 1982; Warwich & Druckman, 2001) and the coalition governance approach (Carroll & Cox, 2012; Laver & Shepsle, 1990, 1996; Martin & Vanberg, 2011; Muller & Strom, 2000; Muller *et al.* , 2010; Thies, 2001).

Coalition formation is about sharing a prize: government. The prize can be divided into smaller units - portfolios - and parties' main goal is to maximize its share of this prize, controlling a set of ministries (Gamson, 1961). However, what parties do with its share of the prize also matter and coalition governance, meaning how coalitions actually govern, became the emerging topic. The point is to identify who decides in coalition governments. Two arguments are dominant: the ministerial government argument (Laver & Shepsle, 1990) and the mutual control argument (Carroll & Cox, 2012; Martin & Vanberg, 2011; Muller & Strom, 2000; Thies, 2001).

From the American presidentialism approach we learn that the president is at the center of the decision-making process. Rules and procedures matter to constrain behavior and may also be used by the president to keep control over government's decisions. The coalition government in parliamentary systems approach contributes to the understanding of the bargain between coalition partners in the decision-making process. Ministerial government is to be expected if monitoring and control mechanisms are not in place.

The goal here is to understand coalition governance in presidential systems, focusing on the coalitional presidentialism delegation dilemma. In a presidential system the president is directly elected and therefore concentrates control and responsibility for Executive's decisions. However, by sharing the Executive Branch with coalition partners, the president is including in the decision-making process actors with policy preferences, interests and a political agenda of their own (Martin & Vanberg, 2011).

Therefore, coalition politics in a presidential system involves bargain between the president and the cabinet ministers. What are the goals of the actors? What are their objectives? The president's goal in forming a coalition is quite emphasized in the literature. Since the president's party does not reach majority status, she needs the support of other parties to have her agenda approved in Congress. That said, with the formation of coalition governments the president seeks political support.

The other side, however, is not usually explained. What do coalition parties gain by joining government? If parties value portfolios, the question becomes what kind of benefit a portfolio can bring to the party. Figueiredo and Limongi argue that "politicians do not seek only jobs, but also to influence policy, and with this to win votes"[2](Figueiredo & Limongi, 2008):23. So the minister's interest in controlling a portfolio may be greater than just jobs, including policy formulation and implementation in electorally relevant areas. Summarizing, "parties join governments to influence policy formulation and control its implementation" (Meneguello, 1998):52 [3].

This exchange is relevant to understand the increased complexity of coalitional presidentialism, in which a delegation dilemma is established. The president – principal - delegates decisions to her ministers – agent. The problem is that the ministers are also agents of their own political parties. While ministers attempt to make use of the position to influence decisions, maximizing electoral return of government participation, the president tries to reduce

[2] Authors translation from the original in Portuguese.

[3] Author's translation from the original in Portuguese.

policy drift by keeping control over the decision-making process. So the question is if cabinet ministers do influence decisions, which decisions and how. The model presented here attempts to provide an answer to this question.

Suppose a game between two players previously selected to form a coalition $-$ P and M. In presidentialism player P (president) is exogenously determined and is necessarily included in any coalition formed. Once formed the coalition, the president distributes ministries to coalition parties' ministers, player M (minister). Preference distance between president and party is ≥ 0, assuming value 0 when the party is the president's party or non-partisans and > 0 when a coalition partner.

The model presented here of the president-ministers relationship in the Executive decision-making process is an adaptation of the model built by Martin and Vanberg (Martin & Vanberg, 2011) to analyze the role of Parliament in monitoring coalition partners in parliamentary democracies. The minimal changes in the original model refer to adjustments to the institutional environment of presidentialism and do not affect the main predictions proposed by Martin and Vanberg (Martin & Vanberg, 2011). The goal here is just to extend a formal argument already established to the specific relationship between president and ministers.

The game can be modeled as a sequential game of incomplete information [4]. Thus, capturing the idea of asymmetric information in the president's delegation to the ministers, indicating the informational advantage of ministers in the decision-making process. That is, when making a decision on her ministry the minister has more information than the president, and she may use this advantageous position to collect benefits at the expense of the president's preferences.

The decision process is established as follows: 1) nature determines the decision environment. Normally, ministers are called to decide in response to a demand. Nature determines the social environment, demands, and constraints to the ministry's response capacity. The

[4]"Games in which the players face uncertainty about preferences of other players. Games of this form involve incomplete information. () Uncertainty about the payoffs of other players is modeled as a game in which players are uncertain about which node of the game they are located on. This trick involves the use of a fictitious player Nature who randomly selects players types from a known probability distribution. Not all players, however, observe the realization of Nature's draw. To model a situation in which player i does not know players js preferences, we assume that Nature chooses player js payoffs (type) prior to agent is decision, and player i as facing an information set with multiple nodes because she does not observe the choice by Nature. This trick converts games of incomplete information agents do not know the game to games of imperfect information agents know the game but not exactly where they are in the game" (McCarty & Meirowitz, 2007).

environment can be open, in which all options are available for the minister to choose; or the environment can be limited, and only a restricted set of options are available. The environment is limited with probability $Pr(limited) = p$, where $p \in (0, 1)$. The probability of open environment is $Pr(open) = 1 - p$. 2) The minister observes the environment and establishes the decision $\in \{R, M\}$, where R is a radical decision and M is a moderate decision. The qualification of the decision as radical or moderate concerns the translation of party preferences in the decision. A radical decision directly reflects the minister's preference and a moderate decision reflects a balancing of the minister's and the president's preferences. 3) The president observes the decision and forms beliefs on the decision environment. The president can accept $\{A\}$ or scrutinize $\{S\}$ the minister's decision through the use of control mechanisms. This is $p \in \{A, S\}$. 4) If the president accepts the minister's decision, this decision is implemented and the game ends. 5) If the president decides to scrutinize the minister's decision, she learns the decision environment. In the limited environment, the radical decision is implemented because it is the only one possible. In the open environment the president can reverse the distant decisions bringing them closer to her preferences.

The actors' preferences capture the previous discussion on coalition governance. It is assumed that both actors care about the policies implemented by the government. Preference divergence among actors is established in the payoffs. The utility of each decision to the minister is:

$$U_M^{Decision}(R) = X \tag{1}$$

$$U_M^{Decision}(M) = 0 \tag{2}$$

The utility of each decision to the president is as follows:

$$U_P^{Decision}(R) = -X \tag{3}$$

$$U_P^{Decision}(M) = 0 \tag{4}$$

The equations above show the utility of each option to the players. The structure indicates that when the minister prints her preferences in the decision R there is a positive gain and a corresponding loss for the president. That is, the gain of a player indicates the loss of the other in the decision-making. Thus, the larger the value of X, the greater the preference divergence between the minister and the president.

Because it is assumed here that parties care about policies instrumentally, aiming at its electoral returns, it was included a parameter β that means the electoral return for the party when the decision is closer to their preferences (and by definition closer to the preferences of their constituency). Let $d \in \{R, M\}$ be a decision taken by the minister. So $U_M^{Return}(d) = \beta U_M^{Decision}, where \beta > 0$. When β increases, electoral incentives to make the decision that benefits the electorate and thus claim the credit increases.

Once established the utility and benefit associated with the electoral return of the minister's decisions it is necessary to identify incentives for the president to control the minister's decision. Presidential control over ministerial decisions is often taken as certain and obvious [5]. Since the president concentrates responsibility for government and has constitutional prerogatives of control, and as she is the absolute head of the Executive Branch, it is expected that the president observes everything and controls all decisions in her government. However, there is a cost associated with the control activity and this cost refers to the cost of obtaining information on the environment and on the decision, information that is usually specialized and not available to the president. The cost of this activity also relates to the cost of going against the decision of a coalition partner, who contributes to the maintenance of government delivering support in the legislative arena. There is also an opportunity cost since allocating personnel and resources to review a ministerial decision, means that such resources will not be available for other activities. Thus, it is associated a cost $c > 0$ to presidential control.

Likewise, "pulling" decisions closer to her preferences, contradicting the preferences of the president, is an action that imposes costs to the minister. These costs are associated with the risk of getting caught taking advantage of the informational advantage to impose her preferences, causing possible punishments for breaking the president's trust. Thus, the cost of ministerial deviation is $d > 0$.

Given this description of the actors' preferences and the structure of the game, the minister has the following strategy set, indicating the decision options given the environment:

$$S_M(R\backslash O\backslash; R\backslash L;), (R\backslash O; M\backslash L), (M\backslash O; R\backslash L), (M\backslash O; M\backslash L) \tag{5}$$

[5] Unlike the literature on coalition governments in parliamentary systems, in which the ministerial autonomy model of (Laver & Shepsle, 1990) is typically assumed.

The president has the following strategy set:

$$S_P(S\backslash R\backslash; S\backslash M;), (S\backslash R; A\backslash M), (A\backslash R; S\backslash M), (A\backslash R; A\backslash M) \tag{6}$$

The strategy set of the minister (M) presents the decisions available given the environment. Only 2 of 4 options are actually possible: radical decision in open environment and radical decision in limited environment; moderate decision in open environment and radical decision in limited environment. This means that in the limited environment only the radical decision is observed. It is a dominant strategy in which the party seeks to claim credit for relevant decisions.

As the radical decision is always observed when the environment is limited, the minister's move reveals information to the president. I.e. when the moderate decision is introduced the president knows that the environment is open. Thus, only 2 of 4 strategies are relevant: scrutinize the radical decision, accept the moderate decision; accept the radical decision and accept the moderate decision. Thus, the president only scrutinizes the radical decision. The president accepts the moderate since the result cannot be improved.

The decision tree for this game is the following. It shows ministerial influence over Executive decisions, based on the relationship between ministerial introduction of decision and presidential control in the decision-making process.

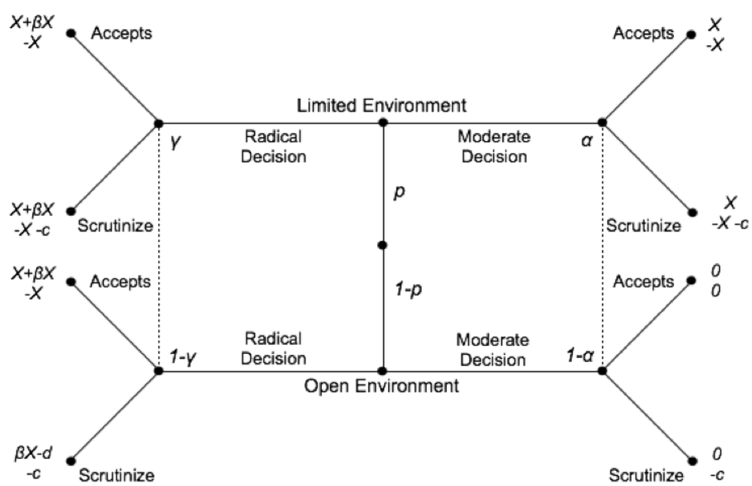

Figure 1: Decision X Control: coalition influence in presidentialism

For the president the information is imperfect, so there is uncertainty as to the environment in which the minister is deciding. The president has to form beliefs about the probability that the minister is deciding in the limited environment in which only the radical decision is possible or if the minister is deciding in the open environment and the moderate decision is feasible [6].

The equilibrium is the solution of the game. I.e., situations that the players are simultaneously playing the best response to the other player, given their beliefs about the decision environment, and therefore have no incentive to deviate. Specifically, the minister's decision is optimal given her preferences and expectations about presidential control. The president uses the decision as an indicator of the decision environment and sets the optimal use of control mechanisms. As the minister only takes the moderate decision when the environment is open, the president knows that the environment is open when the moderate decision is observed. The president's beliefs that the environment is limited when the radical decision is observed is given by $\gamma = (L\backslash R)$.

In the specific case of limited information, Perfect Bayesian Equilibrium (PBE) is the game solution. PBE is an adaptation of the Nash equilibrium for sequential games with incomplete information. In PBE the players' strategies are sequentially rational given their beliefs (McCarty & Meirowitz, 2007). The game presented above has three equilibria.

Equilibrium 1 *For* $X \leq \frac{c}{1-p}$ *. Strategy* $s^* = (R\backslash O; R\backslash L), (A\backslash R; A\backslash M)$ *constitutes a PBE in the game. The president's belief that the environment is limited when the minister introduces the radical decision is* $\gamma = p$*. The minister always introduces the radical decision and the president accepts the decision without imposing scrutiny.*

Equilibrium 2 *For* $\frac{c}{1-p} < X > \frac{d}{\beta}$ *. PBE based on the following mixed strategy: the minister always introduces the radical decision in the limited environment. In the open environment, the minister introduces the radical decision with probability* $\pi = \frac{p}{(1-p)(x-c)}$*. The president always accepts the moderate decision. The radical decision is scrutinized with probability* $\mu = \frac{(1+\beta)X}{d+X}$*. In this equilibrium, the president beliefs that the environment is limited when the radical decision is observed is* $\gamma = \frac{p}{p+(1-p)\mu}$*.*

[6] One way to illustrate this incomplete information problem of the president is as follows: imagine that the minister manages resources to recover municipalities affected by natural disasters. The minister transfers these resources to a municipality controlled by her own party. Given this decision the president has to form beliefs about the decision environment, i.e., in fact the transfer to this municipality is necessary (limited environment) or these resources could be transferred to another municipality (open environment).

Equilibrium 3 *For* $X \geq max[\frac{c}{1-p}; \frac{d}{\beta}]$. *Strategy* $s^* = (R\backslash O; R\backslash L), (S\backslash R; A\backslash M)$ *constitutes a PBE of the game. The president's belief that the environment is limited when the minister introduces the radical decision is* $\gamma = p$. *The minister always introduces the radical decision and the president always scrutinizes. In the open environment the decision is reversed and the moderate decision is implemented.*

The three equilibria of the game indicate a continuum of possibilities in which the distance of preference (the magnitude of X) plays a fundamental role. The first equilibrium, in which the preference distance is minimal, ministerial autonomy is observed. When the preference distance increases the president alternates between autonomy and scrutiny. When the preference distance reaches its maximum the president scrutinizes decisions, reversing those too distant from her preferences [7].

The model presented above seeks to systematize and illustrate a specific argument about the influence of actors in the Executive's decision-making in coalition presidentialism. The main objective of the model is to translate the relationship in terms of goals and strategies, identifying equilibrium situations as a basis for explicit and precisely formulated hypothesis (Morton, 1994)). Based on the model above, the central hypothesis to be tested empirically in this paper is: *the greater the preference distance between the president and the minister's party, the lower the party's influence in the Executive's decisions.* The next sections present the methodology and the results.

4 Variables and Methods

To test the hypothesis, data on Brazilian governments between 1995 and 2010 is used. Brazil is an important case to study due to the longevity and persistence of coalition governments and presidentialism. Since re-democratization in 1985 all presidents formed coalitions. The analysis is restricted to the 1995-2010 period, including all four terms of presidents Fernando Henrique Cardoso (FHC, $1995-2002$) and Luiz Inácio Lula da Silva (Lula, $2003-2010$).

The first step for the analysis of ministerial influence is to look at the rules and procedures organizing the decision-making process. This means to understand the institutional design of the Executive Branch. The focus is in the actors' possibilities of influence and how the

[7] For proves see (Martin & Vanberg, 2011)

president exercises control. Documental analysis is used to identify constrains on parties' influence.

Influence is observed as ministerial participation in executive decisions. This participation is the end product of the decision-making process initiated in the decision introduction by the minister followed by presidential scrutiny. The decisions considered here are policy formulation or legislative agenda and policy implementation or budget allocation.

Ministerial influence over policy formulation is observed as the minister's participation in the construction of the Executive's legislative agenda. For this analysis I built an original dataset on the participation of ministers in legislative initiatives made by the Executive Branch. The dataset includes all ordinary laws (PL), constitutional amendments (PEC), provisional measures (MP) and complementary laws (PLP), a total of 1.779 legislative initiatives being 823 PLs, 54 PECs, 784 MPs and 54 PLPs in the $1995 - 2010$ period. This total considers all legislative initiatives submitted by the Executive Branch to Congress, including bills approved, rejected or still under consideration.

The analysis is based on the authorship of bills to identify the contribution of each minister to the legislative activity of the Executive Branch [8]. Therefore, we identified the authorship of all legislative initiatives based on an internal document to the Executive that is attached to each and every normative instrument called *"exposição de motivos"*. Based on this document it is possible to identify the ministers that formulated the legislative initiative. These documents were collected from the Civil House (*Casa Civil/Chief of Staff*) and from the Chamber of Deputies systems.

Ministerial influence over policy implementation is observed as the participation of the minister in the Executive's budget allocation. For this analysis I built an original dataset with information on the budget allocation of each ministry in the Annual Budgetary Law (*Lei Orçamentária Anual LOA*), specifying authorized values. Brazilian budget is somewhat rigid in the sense that most of its expenses are fixed, such as payments with the external debt and social security. The part of the budget that is most prone to "variable" expenses is the "investments" part. This part of the budget can be used to construct roads, schools, sports centers and other types of "visible" expenses. Because of the possible electoral relevance of this part of the budget I also analyze its distribution among ministries. All the data came

[8]For further analysis of the authorship of bills and participation of ministers see (Rennó & Gaylord, 2012). To an analysis of the centralization in the presidency see (Batista, 2013).

from the House of Representatives budgetary data system. [9].

4.1 Measuring Dependent Variables

Specific measurement of the variables to be included in the regression models is:

Policy Formulation/Legislative Agenda: number of legislative initiatives by party i in year t.

Policy Implementation/Budget Allocation: proportion of the total amount of the budget controlled by party i in year t. An alternative measure is the proportion of the investment budget amount controlled by party i in year t.

4.2 Measuring Independent Variables

The main independent variable refers to preference distance between the president and the minister. As a proxy for preference distance the ideological distance between parties is used. Ideology allows approximating in general lines the points of agreement and conflict between the actors and for this reason I use it in this paper. It is expected that the greater the ideological distance, the smaller the influence over Executive's decisions.

I also include a series of control variables. Based on the argument that the president exchanges cabinet positions, and therefore influence over decisions, for support in Congress, the legislative strength of these parties becomes a relevant factor. It is expected that the greater the party strength, the greater the party's bargaining power in the Executive's decision-making process. Party experience in government may be relevant since parties that have more time in government may be more capable to influence decisions than parties that just joined government. As controls we also include a set of dummy variables for the president, electoral cycle (first or last year of the term), and for the first mandate of every president. We also include a measure of Civil House (presidency) institutionalization in the legislative initiatives analysis. It is expected that the institutionalization of the Civil House reduces the influence of ministers, considering the option of centralized formulation of legislative initiatives.

The specific measurement of the variables to be included in the regression models and the expected signal are as follows:

[9] Amounts in reais deflated using IGP−DI (General Price Index - Internal Availability) base year 2010.

Preference distance: ideological distance between president and party i in year t. Source: (Zucco & Lauderdale, 2011) [10] $(-)$

Legislative strength: percentage of seats in the Chamber of Deputies held by party i in year t. Two specifications are used: the first identifies ministers without party affiliation as members of the president's party, and attributes the same legislative strength. In the second measure ministers without party affiliation are not identified with the president's party and its legislative strength is 0. Source: Cebrap Legislative Database (+)

Experience in government: number of days in government of party i. Source: Figueiredo (2007) (+)

President dummy: assumes value 1 if president Luiz Inácio Lula da Silva

Electoral cycle: assumes value 1 if first or the last year of the presidential term

First term: assumes value 1 if the president is in the first term

Presidency institutionalization: number of employees allocated in the Civil House in the year j. Source: Civil House $(-)$

4.3 Methods

Because influence over decisions is measured in two different ways I present two sets of regressions employing two different methods. The data is aggregated in parties so as to avoid that the error terms of individuals in the same party are correlated, braking the assumption of an independently distributed error term. (Duncan *et al.* , 1998):98.

Considering the policy formulation variable, it consists in the number of legislative initiatives by party i in year t. The dependent variable assumes only positive integer values and does not show a normal distribution. Thus, ordinary least squares models are not suitable . The class of models is a count model, built to take into consideration the data structure. The model used here is a negative binomial, appropriated for count data with observed overdispersion, as is the case here in consideration (Freese & Long, 2001).

$$Y_i \sim NegativeBinomial(exp(X_i\beta)w) \tag{7}$$

Where, w = overdispersion parameter. For $Y \geq 0$.

[10] Data available at (Cesar Zucco Dataverse)

The policy implementation variable consists in the proportion of the budget controlled by party i in year t. In this case the variable presents only positive values and is highly skewed. Several common options can be considered such as log-linearized OLS regression (to deal with the distribution of the variable) or a Tobit regression (to deal with limitation in the variable). OLS is not used due to the problems associated with the log-linearization, especially in variables that assumes zeros or in the presence of heterocedasticity (Silva & Tenreyro, 2006). Tobit regression is a common recommendation for proportions. However, the data here in discussion is bounded, but not censored in a way that Tobit does not censor any observation. A Generalized Linear Model is the option. Specifically Gamma regression with a log link appeared as appropriate for the data, dealing with its structure that is highly skewed and presents only positive values (Manning *et al.* , 2002).

$$Y_i \sim Gamma(exp(X_i\beta), 1/\sigma^2) \tag{8}$$

For $Y \geq 0$.

Finally, we compare coalition parties' influence in both kinds of decisions. The results are presented in the next sections.

5 Institutional Design, Party Influence and Presidential Control

Coalition governments impose costs of negotiation between parties in the decision-making and, as stated by North, "when is costly to transact, institutions matter" (North, 1990). For this reason, the first step of the analysis is a description of the decision-making process to formulate the legislative agenda and to allocate the budget in the Executive Branch.

The legislative agenda formulation is composed mainly of three stages: bill drafting, presidency scrutiny and submission to Congress. Ministries and departments are responsible for bill drafting meaning that they have the power to initiate the process. However, the presidency and outside agencies such as Attorney General and Prosecutors Office also have the prerogative to initiate normative acts. Once formulated, the bill draft is sent to the Civil House, that holds the prerogative to monitor the decisions of the Executive, acting as a filter on the propositions of the various actors. Received the initiative, the Civil House distributes it among its *subchefias* for legal analysis (legality and constitutionality) and merit analysis (adequacy to general government guidelines), held respectively by SAJ *(Subchefia para assuntos Jurídcos)* and SAG *(Subchefia de Análise e Acompanhamento de Políticas Governamentais)*. Based on these analyzes, the Civil House has the power to request modifications to the proponent or to reject the bill entirely. If approved, the bill is sent to the president for submission to Congress [11].

The budgetary allocation process follows similar structure of ministerial decision and centralized control. However, the centralized control is not exercised by the presidency, but by the ministers of planning (MP/SOF) and finance (MF/STN). First, the ministries of planning and finance define a global spending limit. Then, the line minsters stipulate expenditures in programs and localities considering this limit. The expenditures proposal is submitted to the ministers of planning and finance who have the prerogative to propose modifications. The budgetary law is then sent to Congress. After approval by Congress and presidential sanction, the budget is up for implementation. Again, the centralized ministers (MP and MF) control the process, establishing monthly expenditures limits for the ministries. Inside this limit, the ministries have autonomy to allocate the resources, choosing programs and localities to be benefited [12].

The point is that the decision-making process, whether the legislative agenda formulation or budget allocation, follows the dynamics presented in the game: introduction of decisions by the ministers and control by the president. This presidential control is exercised by centralizing the decision-making process and filtering the demands of coalition parties in government Inacio (2006). The result of decision introduction and presidential scrutiny is identified here as influence of ministers over government decisions. In brief, the end product of the decision-making process initiated in the decision introduction by the minister followed by presidential scrutiny is precisely the measure of influence proposed here. First, the influence of ministers in the legislative agenda formulation is presented. Followed by the influence over budget allocation. Figure 2 presents the influence of coalition parties in the legislative agenda formulation. Circles indicate means and dashed lines 95% confidence intervals.

[11] Description of the legislative agenda formulation process based on decree n 4.176/02.

[12] Description of the legislative agenda formulation process based on the technical manual of the budget – Secretariat of the Federal Budget.

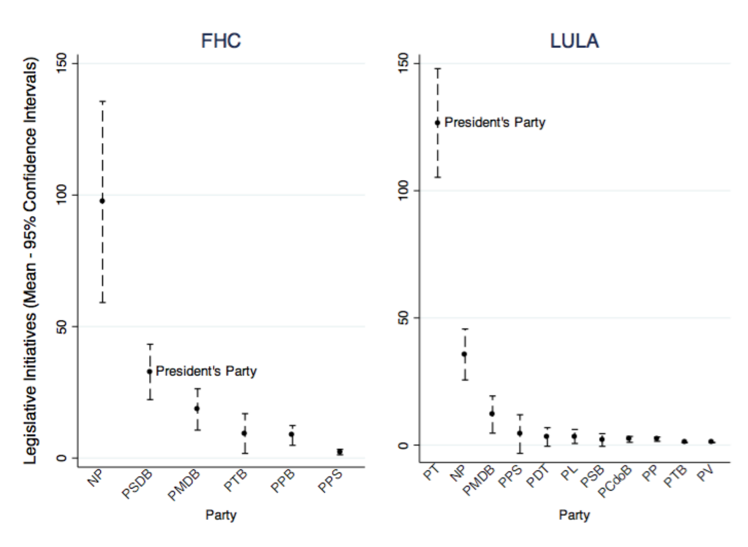

Figure 2: Coalition Parties Influence in Policy Formulation − Legislative Agenda

Figure 2 shows the unequal participation of parties in the legislative agenda of the Executive. Comparing FHC and Lula administrations one can notice that the first two lines stand out, concentrating most of the bills formulated. These two lines represent ministers that are members of the president's party and non-partisan ministers. The only difference between presidents is that during the administrations of FHC non-partisan ministers was the most influential group while during Lula it was the president's party. Influence decreases dramatically when it comes to the other coalition parties, especially during Lula's administrations in which it is close to zero. Figure 3 shows influence of coalition parties in budget allocation.

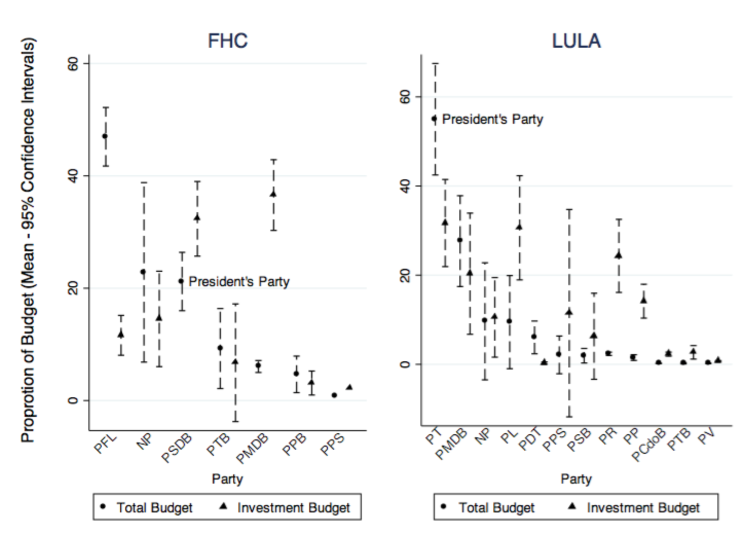

Figure 3: Coalition Parties Influence in Policy Implementation – Budget Allocation

Circles indicate total budget and triangles indicate investment budget, the part that can be more autonomously and "visibly" allocated by parties. Looking at FHC's distributions, it can be seen that the other coalition parties have substantial influence over budget allocation. The most influential party is a coalition partner, in both types of budget (total and investments), followed by the president's party and non-partisan ministers.

Considering Lula's distributions, the concentration in the president's party persists. However, there is substantially more influence of the other coalition parties, especially in the investment budget. The total budget is somewhat concentrated in the president's party that controls around half of the total budget (65% considering the non-partisan ministers) and distributes the other half with coalition partners. The investment budget is more dispersed, with the president's party controlling around 30% (45% with the non-partisan ministers) and the remainder controlled by the other coalition parties.

One aspect of this distribution is worth emphasizing: the reduced concentration of the influence in the ministers of the president's party and greater influence of the coalition partners, when compared with influence over legislative agenda.

Does preference distance matter to explain this variation in influence over the legislative agenda formulation and budget allocation? Next section presents the results of the regression models.

6 Model Estimation and Interpretation

Why some ministers influence legislative decisions more than others? What are the factors that explain this differential influence of coalition partners? The main hypothesis here is that preference distance affects negatively influence of coalition parties over decisions. Table 1 presents the estimates of the negative binomial model to explain influence of coalition parties in policy formulation decisions.

Table 1: Coalition Parties Influence in Legislative Agenda Formulation

	Negative Binomial			
	DV= Number of Legislative Initiatives by Party			
Variable	Model 1	Model 2	Model 3	Model 4
Constant	17.460***	41.758***	34.606***	54.526***
	(7.788)	(15.133)	(12.623)	(31.037)
IdeologicalDistance	.123***	-	-	.030***
	(.042)			(.011)
Presidents Party	-	-	1.502**	-
			(.294)	
Coalition Partner	-	.156***	.192***	-
		(.022)	(.032)	
Inst. Civil House	1.000	1.000*	1.000*	1.000
	(.000)	(.000)	(.000)	(.000)
Legislative Strength	1.169***	1.109***	1.107***	-
	(.017)	(.012)	(.012)	
Legislative Strength 2	-	-	-	1.048***
				(.014)
Experience	.999***	.999***	.999***	.999
	(.000)	(.000)	(.000)	(.000)
Year 1 Mandate	.618**	.651**	.655**	.854
	(.145)	(.117)	(.115)	(.252)
Year 4 Mandate	1.492*	1.161	1.176	1.235
	(.329)	(.197)	(.195)	(.347)
President Lula	.443**	.354***	.337***	.711
	(.156)	(.098)	(.092)	(.325)
First Term	.631**	.800	.797	.586*
	(.142)	(.137)	(.134)	(.175)
Log Likelihood	-401.6716	-369.77869	-367.67768	-437.14177
LR chi^2	142.57***	206.35***	210.56***	71.63***
Pseudo R^2	0.150	0.218	0.222	0.075
N	112	112	112	112

Exponentials reported. Standard error in parenthesis.

* sig 0.10; ** sig 0.05; *** sig 0.01.

Four models are presented, including different independent variables as a way to test the robustness of the results. As can be seen, the ideological distance does affect the ability of the party to influence decisions. The greater the ideological distance between the president and the party of the minister, the lower the influence of the minister in the Executive's legislative agenda. The relationship is negative and the result is significant in both models in which the variable was included. In order to test the robustness of this result the measurement of the variable was changed. In place of the ideological distance it was included a dummy variable assuming value 0 when the president's party or non-partisan ministers and value 1 when the other coalition parties. As can be seen, the other coalition parties have less influence in legislative decisions, taking as reference ministers of the president's party and non-partisans. A question can be raised regarding these results: differences between the ministers of the president's party and those with no party affiliation that are being ignored. To identify if indeed there is a difference in the ability to influence decisions between the non-partisan ministers and the partisan ministers, two dummy variables that represent the type of minister were included in model 3. One assumes value 1 if the president's party and the other assumes value 1 if the other coalition parties. So the reference is non-partisan ministers. The result is that member of the presidents party have more influence than the non-partisan ministers and members of the other coalition parties have comparatively less influence than these ministers with no party affiliation. In brief, even changing the variable specification the results indicate that preferences matter and more distant partners have less influence in the policy formulation process.

Considering the control variables, the legislative strength presents the expected result. I.e., keeping everything else constant, the greater the legislative strength, the greater the influence on the legislative agenda. A change of one unit in the legislative strength of the party would change the mean of the influence in the legislative agenda by a factor of 1.169. The positive and significant relationship holds even when a different specification of the independent variable is included, assigning value 0 to the legislative strength of ministers with no party affiliation.

Civil House institutionalization shows no relevant significant results, indicating that the strengthening of the direct support of the president does not interfere in the overall participation of ministries in legislative formulation. Controls that represent the electoral cycle did not show stable results, changing signs when model specification is changed. The first presidential term is associated with lower legislative output of the ministries (0.618), as well as Lula's administration (0.443). Figure 4 shows the relationship between ideological distance and influence in legislative decisions of the Executive.

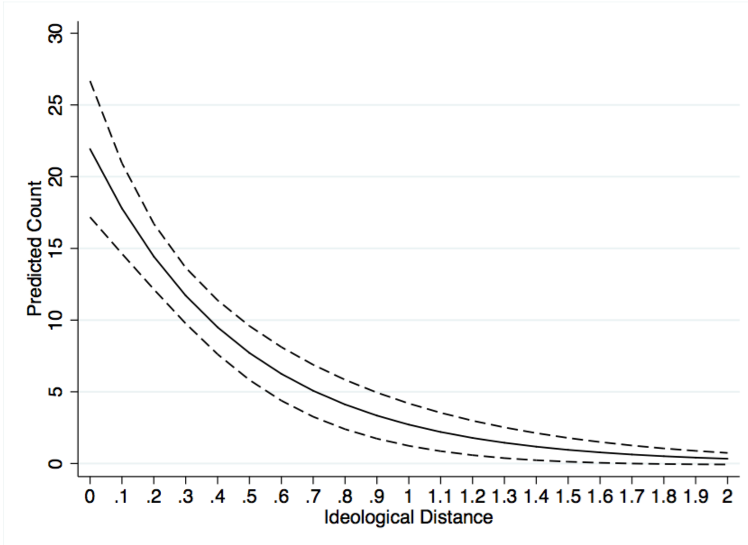

Figure 4: Ideological Distance and Predicted Count of Legislative Initiatives (CI 95%)

Figure 4 shows that when the ideological distance is 0, i.e., the minister is a member of the president's party or non-partisan, the predicted number of legislative initiatives is 23, keeping everything else constant. This number decreases when the ideological distance increases and reaches 0 when the ideological distance assumes the maximum value. This result indicates that in fact preference distance is an important aspect. Ideologically close parties do influence more the legislative agenda formulation, while more distant parties, despite being part of government, controlling ministries in the Executive's structure, have little access to the policy formulation process. Thus, there is a differential aspect to be considered. To be included in the cabinet does not translate automatically into access or influence over decisions.

Does this result hold in policy implementation decisions? Table two presents the results of the OLS models to explain this influence over budget allocation between coalition parties.

Table 2: Coalition Parties Influence in Budget Allocation

	Gamma Regression (Log Link) DV= Proportion Budget by Party		Gamma Regression (Log Link) DV= Proportion Investment Budget by Party	
Variable	Model 1	Model 2	Model 3	Model 4
Constant	18.158***	27.516***	5.447***	5.847***
	(10.505)	(15.180)	(3.496)	(3.398)
IdeologicalDistance	.184***	-	.844	-
	(.055)		(.213)	
Coalition Partner	-	.203***	-	.438***
		(.045)		(.075)
Legislative Strength	1.107***	1.127***	1.072***	1.087***
	(.016)	(.016)	(.011)	(.011)
Experience	.999	.999*	1.000	1.000
	(.000)	(.000)	(.000)	(.000)
Year 1 Mandate	.719	.674*	1.118	1.155
	(.178)	(.162)	(.277)	(.293)
Year 4 Mandate	1.812*	1.454	1.235	1.142
	(.643)	(.452)	(.330)	(.293)
President Lula	.567*	.519**	.916	1.130
	(.179)	(.145)	(.230)	(.272)
First Term	.746	.884	1.173	1.304
	(.229)	(.260)	(.390)	(.418)
Log Pseudolikelihood	-341.0324096	-327.5003714	-351.8161259	-347.3806164
AIC	7.12311	6.777785	7.343186	7.179406
BIC	-264.0416	-298.4538	-303.2459	-321.1827
N	98	99	98	99

Exponentials reported. Robust standard error in parenthesis.

* sig 0.10; ** sig 0.05; *** sig 0.01.

Table 2 shows the results of the influence of parties over budget allocation. The first two models use total budget as measure of influence and the last two models use investments budget. Starting with the main hypothesis, ideological distance presents the expected negative sign in both specifications of the dependent variable. This means that the greater the preference distance, the less influence over budget allocation. However, this variable is statistically significant only in the first model. The alternative measurement of this variable is to divide the ministers of the president's party and non-partisans in a group and ministers members of the other coalition parties in another. The result is the expected negative sing and statistical significance in both models, meaning that coalition partners do have less influence over budget, total or investments, than ministers of the president's party and non-partisans. Figure 5 shows the relationship between ideological distance and budget allocation (model 1).

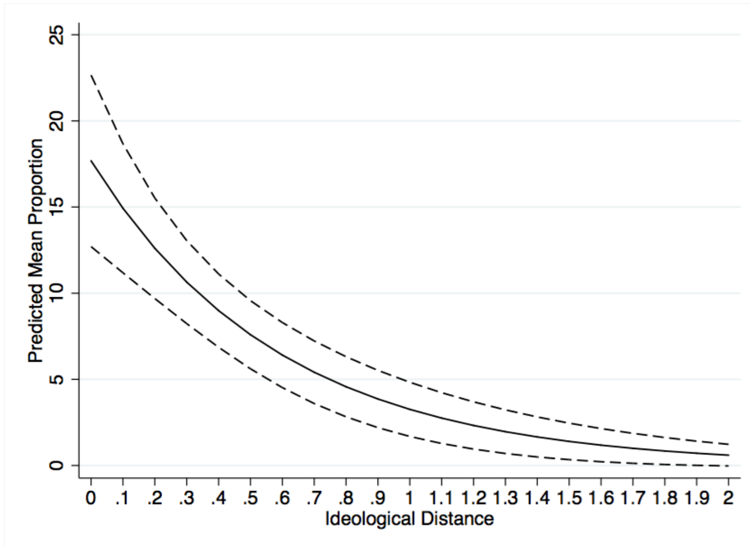

Figure 5: Ideological Distance and Predicted Budget Allocation (CI 95%)

Figure 5 shows that when the ideological distance is 0, the predicted proportion of the total budget controlled is 19%. This amount decreases when the ideological distance increases and reaches 0 when the ideological distance assumes the maximum value.

Legislative strength also matters to explain influence over budget allocation. The positive and significant results indicate that the greater the party legislative strength, i.e. the greater the size of the party in Congress, the greater the influence over budget allocation. The remaining control variables do not show stable significant results. Figure 5 shows the differential influence over budget comparing the types of party (president's party/non-partisans or coalition partners) and legislative strength (model 4).

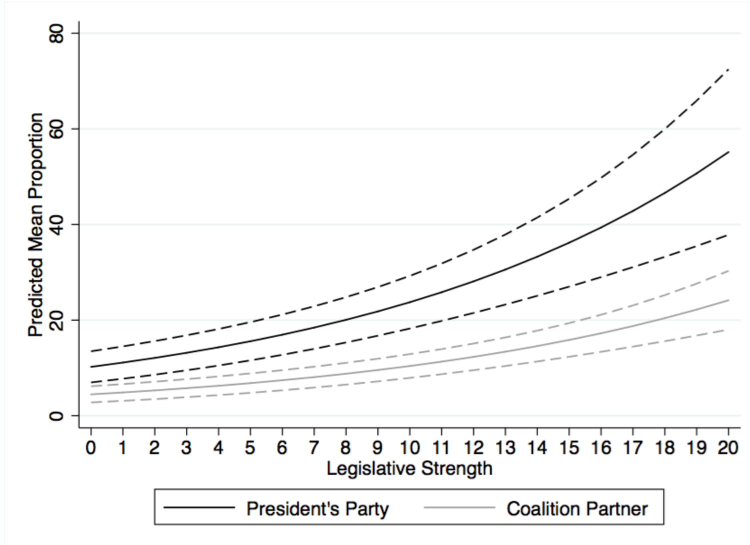

Figure 6: Type of Party, Legislative Strength and Predicted Investment Budget Allocation (CI 95%)

Figure 6 shows that ministers of the president's party do influence more policy implementation decisions than coalition partners and the stronger the legislative support that the party can provide in the Legislative arena, the grater the influence over budget. These two results combined show us that the size of the party and whether or not the minister is a member of the president's party (or non-partisan) are important factor when analyzing the influence over investment budget allocation.

These results indicate that the distribution of strategic resources among coalition members obey a party criteria. This distribution can be seen as the result of bargaining between the ministries that formulate the initial decision and the centralized control by the president, exercising scrutiny over the ministries. Even considering that ideological distance showed reduced explanatory power on investment budget allocation, preference divergence remains relevant since it is observed a clear division in government among members of the president's party and ministers of the other coalition parties.

Summarizing, preferences matter and distant parties have less influence over Executive's decisions, considering here both policy formulation decisions or the construction of the legislative agenda and policy implementation decision or budget allocation. This means that in comparison with the president's party, the other coalition partners have less influence in both kinds of decision. However, do coalition partners influence one kind of decision more than the other? Figure 7 compares president's party and coalition partners influence over both kinds of decision as a proportion of total.

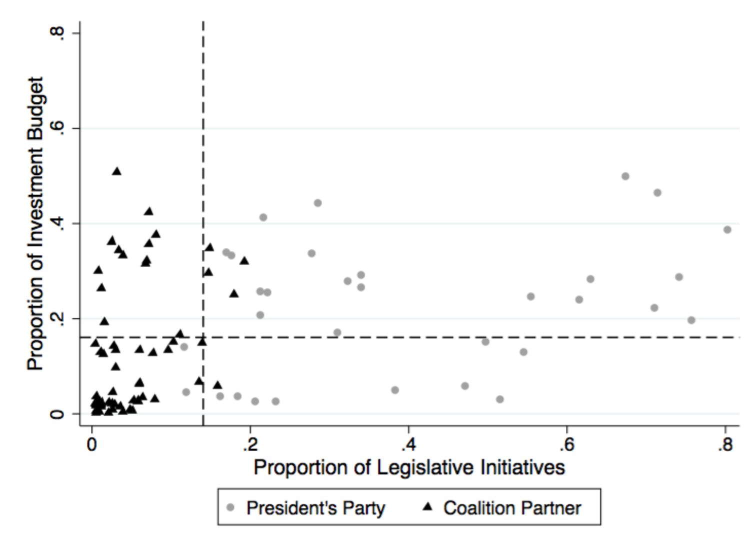

Figure 7: Comparing Coalition Partners Influence in the Legislative Agenda and Budget Allocation

It is interesting to note that even considering the differentiated status in government, in which the influence of parties is contingent to the preferences of the president, there are different dynamics describe legislative decisions and budget decisions. The legislative agenda seems to be concentrated in the president's party while the division of the budget between the president's party and the other parties in the coalition is more equitable. Coalition partners differ in influencing policy implementation decisions, from 0 to a maximum of 55%, while influence over policy formulation decisions is restricted to a maximum of 20%.

The analysis presented here shows that government is shared between the president and the parties that form the coalition by controlling ministries. This privileged position can be analyzed not only as job, but also as an opportunity to influence decisions. The parties that form the government influence decisions by printing their preferences in the Executive arena. However, influence over decisions is not indistinct and the president retains control over government by delegating decisions to partners with similar preferences.

By comparison, the influence of the other coalition parties is greater in budget decisions than in legislative agenda decisions, which may indicate an effect of the specific dynamics of coalition presidentialism in which the president's party and the other parties coalition have different status and responsibilities: legislative decisions are concentrated in the president's party and the allocation of budget is more shared with other coalition partners.

7 Conclusion

Coalition governments imply the sharing of government with different parties with ideology, electoral goals and a political agenda of their own. This inclusion in government has the distribution of ministries in the center of the bargain. But why these ministerial positions are so valued, what benefits can bring to the party occupying? The argument presented here is that the president and the parties forming the coalition establish an exchange of political support for influence in government, and portfolios distribution plays a key role in this transaction.

The specific topic is influence of coalition parties over major decisions of the Executive. Here we examined whether the parties influence the decisions of the Executive and under what conditions. The starting point was the adaptation of a model of coalition governance in parliamentary systems, to explain the relationship between ministers and the president. The decision process is based on the introduction of the decision by the minister and scrutiny by the president. The influence on decisions is identified as the participation in decision discounted the control exercised by the president. The main conclusion of the model is that the preference distance is fundamental to explaining who influences Executive's decisions.

Influence was analyzed in terms of policy formulation or the legislative agenda and policy implementation or budget allocation. From the connection between the theoretical model and empirical tests, three main conclusions can be emphasized. The first conclusion refers to an assumption of the paper, the second is the hypothesis derived from the theoretical model and the third goes beyond a priori predictions.

First, this study provides evidence that the ministers and the parties behind these ministries influence Executive's decisions. Controlling a ministry is a mechanism for privileged access to important decisions for the party and not just another job.

Second, the theoretical model established as a hypothesis to be tested empirically the association between preference distance and influence over decisions. The results indicated that the greater the preference distance between the president and the minister, the less influence over decisions. It can be said that ministers do influence government decisions, but this influence is contingent on preferences proximity. Decision-making in coalitional presidentialism provides coalition influence, but with the president retaining control of government decisions by delegating decisions to ideologically close partners.

Finally, and here is the result not predicted by the theoretical model: the high concentration of the formulation of the legislative agenda in the president's party and the larger sharing of the budget allocation decisions with the other coalition parties. The dynamics of coalition presidentialism may be different from the functioning of coalitions in parliamentary systems because of differentiated institutional incentives. In the case of presidentialism the president concentrates responsibility for the government while the other coalition parties can only claim credit for decisions with high visibility. Thus, it may be an explanation for the results found that the coalition partners do in fact demand greater participation in the allocation of the budget since they can more easily claim credit for policies with concentrated impact. However, this is only a possible path for explanation, considering that this theme is still very incipient.

The most important thing to be noted here is that coalition government implies a dynamic of negotiation and bargaining between coalition partners in this decision arena that is the Executive Branch, in which the ministries play a key role. We expect to have contributed to the understanding of the coalitional presidentialism in Brazil and have brought elements so that more questions are raised on this issue.

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