Congruent we Govern: Coalition Management in multi-party Presidentialism

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Abstract

This paper challenges the classic definition of divided/unified government as it is applied to multi-party presidential regimes. In this kind of institutional environment, the president's minority condition in Congress is the norm. Building and managing coalition governments, therefore, is the primary task of presidents in order to govern. We depart from the conventional 'arithmetic definition' of divided government and propose a reconceptualization of divided/unified government based on the ideological congruence between the governing coalition and the floor of the Congress. The paper explores empirically the implications of this reconceptualization with Latin American and Brazilian data. We argue that the ideological distance between the floor and the coalition is a key factor explaining legislative success of presidents, costs of governing, coalition breakdowns, chance of impeachments and the degree of activism and effectiveness of legislative oversight mechanisms.

Introduction

It is usually assumed that minority presidents are vulnerable to legislative initiatives such as impeachment petitions or inquiry commissions and have lower presidential success their majoritarian counterparts in implementing their agendas. But in a number of cases around the world, presidents facing minority status are quite successful in surviving impeachment procedures and approving reform agendas. Conversely, in many cases presidents enjoying a nominal majority status have been unable to implement their programs and their governments face high institutional instability.

A paradigmatic case is that of President Michel Temer in Brazil, who managed to survive two impeachment petitions and to pass an impressive array of tough reforms while enjoying support from a parliamentary coalition of roughly the same size as former President Dilma Rousseff (2010-2015), who was impeached.

These unexpected outcomes beg and explanation. The received wisdom is unable to account for these puzzles because it assumes a definition of minority status originating in scholarly debates on divided government in the US. This tradition of presidential research overlooks both the dynamics of multi-party coalitions and more importantly of preference congruence in president-legislative relations.

'If the opposite of pro is con, then the opposite of progress must be Congress' says a popular joke about divided government in the US two-party presidential regime. Divided government occurs when different political parties control different branches of government. By this 'arithmetic definition' (Elgie, 2001), however, divided government almost always takes place in multi-party presidential regimes, given that the party of the president rarely secures a majority of seats in Congress.

In order to govern and pass legislation, a minority president has to build and sustain post-electoral coalitions in multi-party settings. The received wisdom on multi-party presidential regime (Figueiredo et al., 2009), is that constitutional powers held by presidents and their agenda-setting powers would be the key determinants for a successful government. According to this literature these powers are sufficient conditions for a successful president in Congress.

Recent contributions have argued that in addition to constitutional and agenda-setting powers, (Pereira et al., 2011, 2016; Bertholini and Pereira, 2017) that other factors contribute to presidential success including the size of the coalition, the ideological heterogeneity of coalitions, and the degree of power and resource shared with coalition allies.

This paper claims that the congruence between the ideological preference of the presidential coalition and the ideological preference of the floor of the Congress are the crucial for understanding the functioning of presidential systems in fragmented institutional settings.

That is, controlling for presidential powers, for the majority/minority status of the nominal share of seats in Congress backing the president, and for the level of partisan fragmentation in Congress, the higher the preference incongruence between the president's coalition and the

floor, the more difficult it would be for the president to manage her coalition and, consequently, the higher the probability that Congress would work as the 'opposite of progress'. Congruence works as the functional equivalent of divided government in multi-party presidential settings.

With this substantive re-conceptualization, it is possible to observe a numerically majoritarian governing coalition under divided government, on the one hand, and a minority coalition under unified government, on the other. That is, the size of presidential party and/or coalition and its ideological congruence with the floor of the congress are orthogonal dimensions and there might be a mismatch between the two.

The extant literature has not fully acknowledged the consequences of this mechanism. This reconceptualization is particularly useful when one analyzes the functioning of presidential regimes in fragmented institutional settings. The paper aims to demonstrate that this proposition is analytically relevant and has empirical implications. When this ideological mismatch occurs, regardless of the powers (constitutional, budgetary, and agenda-setting) that the executive holds, the size of the majority of the governing coalition, and the level of partisan fragmentation, the president will have a higher chance of facing difficulties in approving legislation in Congress and the cost of governing should be higher, accordingly.

This paper explores empirically the effect of the congruence of ideological preferences between the coalition and the floor in the multi-party presidential regimes in Latin America. With this new research agenda, we will be able to observe the frequency of divided/unified government in the region and its consequences for the legislative success of the president, cost of governing, coalition breakdowns, chances of impeachment and legislative capacity to check the president.

The paper is organized as follows: in the next section we review the literature on divided government which has focused on its consequences in the US two-party presidential regime. Then we re-conceptualize divided government in order to adapt this definition to multi-party presidential regimes. In the third section we provide empirical evidence of divided government in 18 Latin American countries in the last three decades. By doing so, we show that there is great variation in the occurrence of divided government between countries but also within each country. In addition, this exercise shows that the majority status of presidential coalitions do not usually translate into unified governments, and vice-versa. It suggests that an arithmetical definition of divided government in multi-party settings might be useless. Given the wealth of data for Brazil, the fourth section analyzes the effect of divided government in the Brazilian multi-party presidential regime in three complementary empirical assessments: legislative success of the president; cost of governing; impeachment; and the effectiveness of legislative oversight mechanisms. In the final section we conclude highlighting the main findings and its consequences for the current research agenda.

1 Towards a new definition of divided government

When one thinks about divided government the first image that comes to mind is a minority US president, either in just one or in both legislative houses. To the extent that the US is the

paradigmatic case of a presidential regime, it is not surprising the prevalence of this 'arithmetical' (Elgie, 2001) understanding of divided government. In an early general treatment of divided governments, Laver and Shepsle (1991) argued that minority governments in parliamentary systems, in which the executive is controlled by parties that, between them, control less than a legislative majority, was the closest analogue to divided government in the US. In each case, the executive needs to seek support in the legislature beyond its own partisan base. These authors claim that the 'constitutional roots of divided governments' are distinct in parliamentary and presidential systems: divided governments are negotiated in parliamentary regimes whereas they are mandated electorally in separation-of-powers regimes'. Against the explicit claim in the title of this paper - that 'America is not exceptional' -, the implicit assumption in that work is the notion of presidentialism in a typical majoritarian presidential system, such as the US. However, approximately a third of presidential systems in Latin America Chaisty et al. (2012) – and similar rates can be found elsewhere – are multi-party presidential regimes.

This earlier discussion of divided governments conflates system of government and electoral rules. Admittedly the focus of the discussion is the different incentives across regime types to form coalitions – an assumption shared in classic works such as Linz (1994). Presidential systems were held to be inimical to coalition formation, and hence were prone to stalemate. Shugart and Carey (1992) refined this argument and attributed the conflict prone nature of such systems to specific features of some presidential systems, including the strength of the constitutional powers of presidents, their partisan powers, the timing of presidential and legislative elections. Minority status, however, remained a key element in the discussion. Minority presidents faced governability problems because they have weak incentives to engage in coalition bargaining, which ultimately resulted from constitutional design (Alemán and Tsebelis, 2011; Figueiredo et al., 2012).

The criterion for distinguishing governments types was essentially arithmetical: the size of the presidential coalition and the resulting minority or majority status. This is in fact a very straightforward arithmetical definition. That is, if the president's political party enjoys majority of seats in Congress the government it is called unified; and it is called divided government otherwise. As Elgie (2001)[p.3] wrote: 'In the US, therefore, divided government is commonly understood as the situation where no single party controls both the executive and legislative branches of government simultaneously, or, alternatively, where the president's party fails to control a majority in at least one house of the legislature. In this sense, the concept concerns nothing more than a simple description of a certain arithmetic reality and is quite uncontroversial."

Based on this definition, it has been possible to identify periods of unified and divided governments and, as a consequence, this concept has been very useful to understand various political and governing features as well as policy dynamics of the two-party presidential environment of the US majoritarian electoral system. The main assumption is that divided government is synonymous with gridlock, legislative paralysis, and all sort of conflicts between the executive and Congress. In fact, there is an established literature investigating both the determinants and the consequences of divided government, which challenged the received wisdom. A key finding

in that literature is that unified government is not a prerequisite for the approval of significant public policy (Mayhew, 2005).

This arithmetical definition of divided government, nonetheless, fails to address the issue in multi-party presidential regimes. In this institutional environment, elected president's party rarely enjoy majority majority of seats in the legislature. Chaisty et al. (2018) show as democratization advances, it produces minority presidents with ever-increasing frequency. They also show that democratization also impact on the probability that minority presidents will form coalitions, although the magnitude of this effect is lower. During the last two decades, in all 18 Latin American countries with presidential systems, only 26 percent of the time has the president's party had a majority in the lower house (Meireles, 2016).

Presidents in a multi-party setting, sometimes hyper-representative systems with significant partisan fragmentation in the legislature, like Brazil, often face a minority condition. Mainwaring (1993) and Stepan and Skach (1993) referred to this condition as "difficult combination" to express their concerns with potential political conflicts generated in multi-party presidential regimes. That is, divided government would necessarily be the norm. Therefore, presidents must build post-electoral coalitions if they wish to achieve majority status and, ultimately, to govern (Gallardo, 2005; Zucco Jr, 2007; Neto, 1998).

Figueiredo et al. (2009) found that during the more than a quarter-century from 1979 through 2006, only two countries (Costa Rica and Mexico) had single-party governments for the entire duration of their terms of office. Six countries (Bolivia, Brazil, Chile, Colombia, Ecuador, and Panama) had coalition governments throughout that same period, while four others (Argentina, Paraguay, Venezuela, and Uruguay) had coalition governments at least some of the time (Amorim Neto, 2006; Alemán and Tsebelis, 2011). In later works, authors have extended the notion of divided government from the minority status of presidents to include minority coalition governments (Figueiredo et al., 2012; Chaisty et al., 2014).

The phenomenon of multi-party coalition presidentialism is not restricted to Latin America. It is now the modal form of democratic governance in Africa, Asia, and post-communist Europe as well (Chaisty et al., 2012). Indonesia, for instance, has also a multi-party presidential regime since the fall of Suharto's authoritarian New Order and the transition to democracy in 1999.

The unexplored high frequency of elected minority presidents in multi-party presidential regimes and the consequent outcome of post-electoral divided coalition governments has led to a research agenda exploring the puzzle of minority coalitions as an equilibrium (Figueiredo et al., 2009; Chaisty et al., 2014). Conceptually speaking the arithmetical understanding of divided government seems useless to explain this phenomenon in multi-party presidential settings given that almost always the president's party fails to control, say, at least one house of the legislature.

The lack of a partisan majority backing the president in one or both legislative houses does not necessarily mean, however, that the opposition party must automatically control the legislature in a multi-party presidential regime. Instead, the most frequent outcome is an post-electoral majority coalition supporting the president, usually consisting of more than one political party. On the one hand, Presidents in multi-party presidential institutional contexts, tend to be con-

stitutionally strong and capable of attracting partisan support. On the other, many parties are motivated to work as satellites of the president as an opportunity to extract political and financial benefits under the discretion of the executive in exchange for political support in the legislature.

In a multi-party environment, therefore, an arithmetical definition of divided government in presidential regimes can be understood to comprise not simply the situations where a party opposed to the president actually controls at least one house of the legislature, but also the more general cases where the majority comprises more than one party in coalition supporting the president in Congress.

Carey and Shugart (1995), in a comparative assessment of divided presidential government, argues that situations of opposition-party majorities (divided government) are much less common outside the United States. He distinguishes three types of governments in presidential regimes: unified, divided and no-majority government. The authors makes that distinction to clearly differentiate the arithmetic sense of a pure divided government, when a legislative majority is held by a party or pre-electoral coalition different from the president's party, from a situation in which no party hold a majority in one or both houses of the legislature.

This is indeed a conceptual advancement, especially because the idea of divided government could be applicable to other institutional environments beyond the US two-party presidential regime. However, it is still based in a numerical criterion, which also reduces its scope and applicability.

Elgie (2001) proposes a behavioral interpretation of divided government in which it is equated to 'divisiveness'. In his view divided government corresponds to the situation where there is fragmentation and conflict between the executive and the legislative branches of government whatever the support for the executive in the legislature. Similar to the arithmetical definition, the behavioral interpretation of divided government has its roots in the study of the political system of the US, but Elgie (2001) claims that it also finds a clear counterpart in studies of parliamentary and semi-presidential regimes as well, especially in coalition government. This behavioral interpretation mainly observes divided government by the outcome of how politicians behave or compromise, not by the degree of congruence of their ideological preferences.

In addition, this behavioral interpretation mistakenly characterizes coalition government as a form of divided government ignoring that in many occasions the preferences of the governing coalition could match the preferences of the legislature. If this is the case, unified government would be a better definition than divided government. In order to deal with these peculiarities, especially in multi-party presidential regimes, a non-arithmetical and non-behavioral definition of divided government is required.

The extant empirical literature on divided governments has focused on a range of issues, from the executive's strategies in contexts of lack of majority (Cox and McCubbins, 2007; Amorim Neto, 2006; Cheibub and Limongi, 2011), to the reasons why majority coalition governments fail to emerge (Elgie, 2001; Figueiredo et al., 2013; Chaisty et al., 2014).

Elgie (2001) acknowledges that there are certain problems with adopting the behavioral interpretation of divided government. Most notably, and in contrast to the arithmetic definition, he claims that there are no objective criteria, which allow us to identify the various periods of unified (or party) government, on the one hand, and divided government, on the other, on the basis of this interpretation. For example, in the case of the US when does divided government become unified government, especially if, as Brady and Volden (1998) asserts, the US system is characterized by 'revolving gridlock'? Similarly, in the case of parliamentary regimes, are all coalition governments to count as periods of divided government? Can there ever be purposive, coherent coalitions and, if so, are we to treat these examples as periods of unified government or not?

Definition	**Arithmetic**	**Behavioral**	**Substantive**
What matters	Size	Compromise	Congruence
Main question	What?	How?	Why?
Source	Powell 1994; Pfiffiner 1994; Laver & Shepsle 1991	Sundquist 1992; Sinclair 1991; Mayhew 1991; Elgie 2001	Pereira, Melo and Bertholini

Figure 1: Divided Government Definitions

This paper aims at contributing to this conceptual debate by proposing an alternative and substantive theoretical interpretation of divided/unified government in multi-party presidential regimes. In addition, we suggest an objective criteria capable of measuring ideological congruence between and within governments. We claim that the degree of congruence between the preference of the presidential coalition and the preference of the floor of the Congress is the crucial ingredient. That is, regardless of partisan fragmentation, the nominal size backing the president, presidential preferences, powers or institutional characteristics, the higher the preference incongruence between the president's coalition and the floor, the more difficult coalition management would be and the higher the probability that the Congress would work as the opposite of progress. As stated before, it is, in fact, the functional equivalent of divided government in multi-party presidential settings. Figure 1 summarizes the three main definitions of the concept of divided government.

Specifically, we define as unified government the cases where the median preference of the presidential coalition matches the median preference of the floor of the Congress. Otherwise, we label them divided government. Cheibub et al. (2004), Chaisty et al. (2014), and Figueiredo et al. (2012) have investigated to what extent ideological congruence affect the incentives for the existence of both single party minority governments and its majority variant. Our approach considers a different question, namely, what the consequences of ideological congruence are, and more importantly how ideological congruence can be used analytically as a criterion for

identifying governments and their capacity to govern.

This new definition of divided government proposed in this paper sheds light on several puzzles and unexplored issues in the literature regarding presidential success, impeachments and legislative oversight as discussed in the empirical sections of this paper.

Keeping this innovative and substantive interpretation of divided/unified government in mind, the next section of this paper examines the distribution of this event in Latin America and differentiates the occurrence of majority and minority status of the president's party or coalition from the divided and unified government in comparative perspective.

2 Congruent Government: an Empirical Assessment

In this section we will go over an empirical description of how much Latin American governments were divided/unifiend or incongruent/congruent during the last three decades or so. We use data from the Database of Political Institutions 2015 dataset (Cruz et al., 2016) and ideology scores from several different sources, such as Baker and Greene (2011) and Saiegh (2015). Ideology scores were re-scaled to a 1 to 10 scale, where 1 is extreme left and 10 is extreme right.

Our definition of divided government implies a continuous measure, not a binary condition. As such, the challenge posed here is to set an ex-ante threshold for a government to be considered as divided. We arbitrarily set the ideological space between -1 and 1, which is 10% of the ideological scale as the unified government interval (see figure 2). All the countries-years within the gray shaded area are, therefore, considered to be unified under this arbitrary definition, and divided government otherwise.

We propose two ways of measuring divided government. The first measure is obtained by subtracting the average of the congress ideology from the average of the coalition ideology. This procedure generates a variable called 'Ideological Difference Coalition-Congress' I_{diff}, which can vary from -9 - when the coalition is on the extreme left of the political spectrum and the floor is on the extreme right of this theoretical continuum - to 9 - when the very opposite takes place.

The second measure of divided government, which we call 'Ideological Distance Coalition-Congress' I_{dist}, is the absolute value of the differences. This second measure goes from 0 - a situation of perfect symmetry - to 9 - a status of high asymmetry. While the first measure is affected by the direction of ideological incongruence, the second measure does not does not take into account if a government is to lean toward left or to the right of congress average position. In practical terms, the 'ideological difference' can be considered as an interaction between the 'ideological distance' and the relative ideological positioning of the governing coalitions, considering Congress.

We define our measures of divided government with the following formulas:

$$I_{diff} = E[I_{coalition}] - E[I_{floor}] \tag{1}$$

$$I_{dist} = |I_{diff}| \tag{2}$$
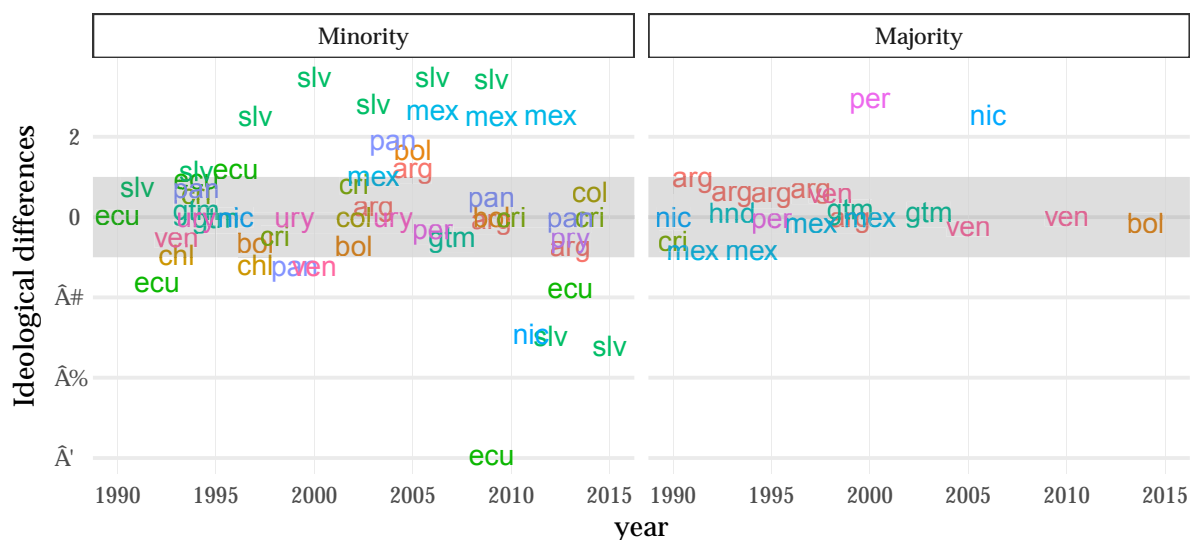
Figure 2: Majority vs Divided Government in Latin America

Countries above the y-axis zero line in Figure 1 are countries where the coalition ideology scores are higher than the congress ideology scores. Therefore, they are more to the right side of the ideological spectrum. Argentinian coalitions, for instance, tend to position themselves to the right. Chilean coalitions, on the contrary, tend to position themselves to the left of congress ideology.

There is a lot of variation both between and within countries; however, most presidents were able to keep the preferences of their coalitions very close to the preferences of the floor. Ecuador and El Salvador were cases in which preferences were consistently divergent. After a period of unified government, Mexico has recently moved a to a more diverse ideological environment.

This empirical assessment re-defines as unified some governments that the classic literature would (mis)identify as minority governments. This is precisely the case of countries that are under the minority facet and inside the gray shaded area (Figure 2, facet Minority): Panama in 2009 and 2013 or Colombia in 2002 and 2014, for instance. Figure 1 also shows that the great number of countries in which the president enjoys the majority status are also considered unified governments, as we expected. Although less common, under the facet Majority, it is possible to identify cases that combine majority coalitions and divided governments, like Peru in 2000 and Nicaragua in 2006. In other words, the simply numeric majority status, measured by the

number of seats held by the party of the president or its coalition, does not necessarily means that the government is unified. The opposite can also be observed. There are cases in which the government coalition, numerically speaking, does not enjoy majority status but, nevertheless, its ideological preferences are congruent with the floor of the Congress, which suggests a unified condition.

3 Divided/Unified Government in Brazil

Brazil was intentionally left out of Figure 1 since the country will be the case study of this paper. The main reason why we test our theory with the Brazilian case is the ample availability of data with considerable granularity. Especially data concerning ideology is far more reliable comparing to that available for other Latin American countries. The Brazilian data comes from Power and Zucco (2012) who has organized an extensive Brazilian Legislative Survey dataset spanning 26 years (1988-2014).
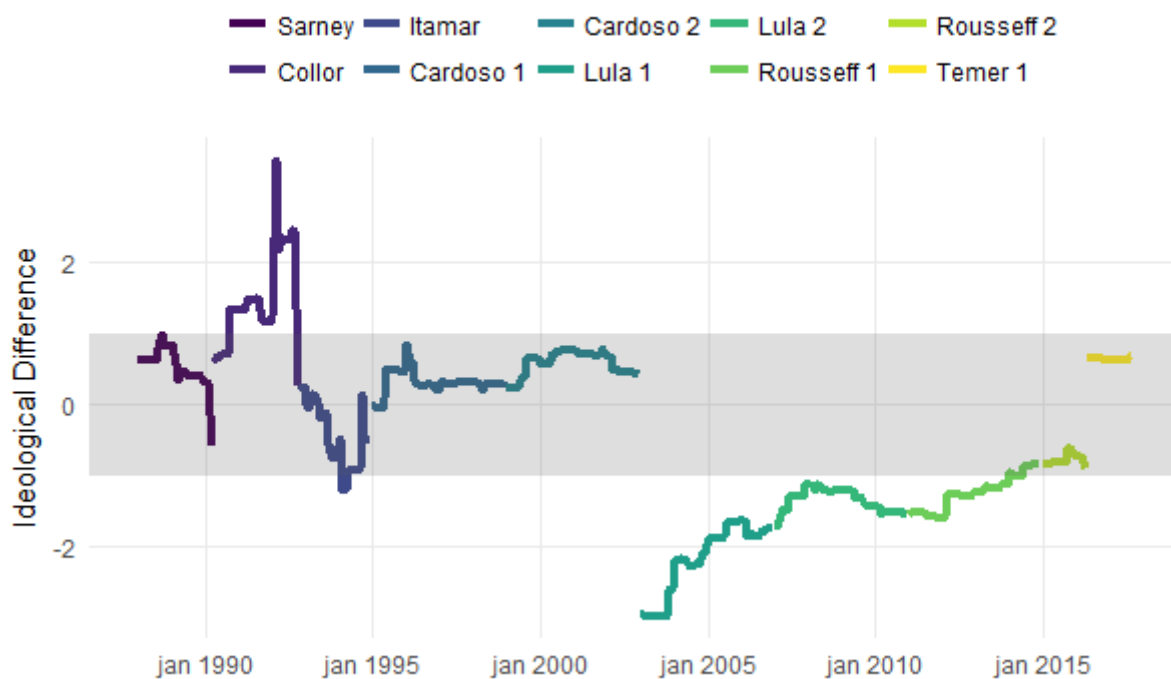

Figure 3: Ideological differences Coalition-Congress in Brazil

Figure 3 shows that Brazil has experienced a lot of variation with regard to ideological congruence between governing coalition and Congress after re-democratization. The two extreme values in the data coincide with impeachment in 1992 and a major corruption scandal in 2005.

President Sarney's coalition (1986-1989) started ideologically aligned to the Congress. As he was the first president of Brazil after the military regime, elected by the congress, this result was somehow expected given that his government was a consequence of a grand coalition between

the two largest parties, PMDB and PFL. In the first direct presidential election in 1989, an ideological misalignment between the presidential coalition and Congress took place: Fernando Collor de Melo, built a minority coalition which deviated from the Congress' ideology by 1 point in our scale. It was a right-wing coalition away from the average ideology of the floor of Congress. Perhaps, it might not be a coincidence that Collor was the first president to be impeached in Brazil.

The other extreme value in the Brazilian data took place in 2005 which coincided with the most important political crisis of the decade, namely the *mensalão* corruption scandal during Lula's first administration (2003-2009) (Raile et al., 2010; Michener and Pereira, 2016).

After Collor's impeachment his vice-president, Itamar Franco, took office. He managed to build a very large coalition which was pretty much aligned with the ideological preference of Congress most of his term in office. As a consequence of the great success of the Real plan, which finally controlled hyperinflation and provided macroeconomic stability, Franco's former Minister of Finance, Fernando Henrique Cardoso, was elected president in 1994. He build a majority coalition that matched the ideological average of Congress for about his two terms in office. In addition to building a large, ideologically heterogeneous and disproportional coalition, the former president Lula also managed a coalition whose ideological preference did not match Congress' ideology. In fact, PT governments embarked on a left-wing shift away from the average of legislators within congress.

Figure 3 also suggests that this ideological mismatch under PT administrations only converged to Congress median ideological preference in the Dilma Russeff's second term, which barely reached the unified government shade area. This seems to be a consequence of a survival strategy in order to avoid her impeachment, which was too late. Under Michel Temer's administration, the new president decided to play for the median preference of the Congress by building and managing his governing coalition that mirrors Congress preferences.

3.1 Estimating the effect of divided government in Brazil

We estimate the effect of a substantive divided government in Brazil with several empirical tests. The first two focuses on presidential legislative success and the costs of building a maintaining a coalition (measured by the Cost of Governing Index, GCI).

The expectation is that a divided government (lack of ideological congruence between the coalition and the floor) decreases the probability of presidents' legislative success, even after controlling for other coalition management aspects such as the size of the coalition, its ideological heterogeneity and the amount of power and resources shared with allies (considering coalescence rates, i.e. its consistency with partners' share of seats). In addition, divided government makes the executive-legislative relations more difficult to be coordinated and, as a consequence, more costly to presidents.

The data on Coalition Management in Brazil comes from the Governing Costs Index dataset (Bertholini and Pereira, 2017). The ideology scores were taken from Power and Zucco (2012).

The data is organized in months and spans from October 1988 to December 2014 and was applied quarterly.

3.1.1 Legislative support

Dependent variable

The model tests the extent to which divided government has an impact on Legislative Support for the President. Therefore, the dependent variable is the percentage of approved legislation proposed by the executive in Congress.

Independent variables

As key independent variable we included our first measure of **divided government** (I_{diff}). First, the ideological difference Coalition-Congress; that is, the difference between the average of Congress ideology and the average of the presidential coalition ideology. Second, ideological distance Coalition-Congress, which is the absolute value of the differences.

The hypothesis to be tested is that under divided government the president will face higher difficulties in passing legislation. We expect that the higher the ideological incongruence between the governing coalition and the floor of the lower house of the Congress, the lower the presidential legislative support.

As controls the estimations include: **agenda size**, the moving average of the number of bills initiated by the executive; **average congress ideology**, based on the ideology scores provided in Power and Zucco (2012); **effective number of parties**, and **nominal support**, the share of seats by the parties that belong to the president's coalition in Congress.

Controlling for the size of the agenda of the president is important in order to estimate if the model holds for different levels of Presidents' legislative ambition. Presidents, for instance, could have a much larger legislative agenda including amendments in the Constitution, which require oversized majorities to be approved in two rounds in both legislative houses. In the particular case of Brazil, the president has agenda setting powers leading the executive to initiate the great majority of bills that would have a higher chance to be enacted into law. We assume, therefore, that agenda size is usually positively correlated to legislative support, given their strategic interaction aspect - a President more confident that will pass a legislation will be more active proposing a greater number of bills.

With regard to the level of partisan fragmentation, it is expected that a higher number of effective political parties the greater coordination problems between executive and the legislative branch. It is reasonable to expect a much greater necessity of the president to build and sustain a post electoral coalition in a fragmented political environment. Therefore, a negative correlation between legislative support for the president and partisan fragmentation is expected. We also included in the model a variable that represents the traditional arithmetic definition

of divided government captured by the nominal political support of the president in Congress measured by the number of seats by the parties that belong to the president's governing coalition. The expectation is straightforward: the greater the nominal support backing the president in Congress (unified government) the higher his/her legislative support. By including this variable we aim at controlling for the majority (unified)/minority (divided) numeric status of the president's coalition. We also decided to control for Congress' ideology to make sure that the estimation is valid regardless of the ideological orientation of the Congress.

Table 1: Regression models with Newey-West correction for autocorrelation - Legislative Support

| | Legislative Support | | | | | |
	(1)	(2)	(3)	(4)	(5)	(6)
I_{diff}	−0.038	−0.046**	−0.073***	−0.073***	−0.073***	−0.062***
	(0.026)	(0.023)	(0.025)	(0.023)	(0.023)	(0.022)
Agenda size		0.005***	0.005***	0.005***	0.005***	0.005***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Congress ideology			0.177*	0.163	0.163	0.117
			(0.091)	(0.133)	(0.133)	(0.128)
ENPP				−0.004	−0.004	−0.022
				(0.044)	(0.044)	(0.044)
Nominal Support						−0.010
						(0.009)
Constant	0.607***	0.522***	−0.484	−0.361	−0.361	0.258
	(0.031)	(0.036)	(0.541)	(1.158)	(1.158)	(1.164)
Observations	263	263	263	263	263	263
Adjusted R^2	0.018	0.080	0.121	0.118	0.118	0.120

Note: *p<0.1; **p<0.05; ***p<0.01

Results

As we are dealing with time series, we employed an OLS and corrected the variance-covariance with the Newey-West estimator (Table 1 and Figure 8 in the Appendix shows the econometric exercises). We used the lag selection procedure to correct the matrix proposed in Newey and West (1994). As expected, divided government is strongly correlated with legislative success in Brazil. Table 1 shows that the greater the ideological difference between the presidential coalition and the floor of the Congress, the smaller the legislative support for the president's initiatives. This result is consistent in all model specifications.

As mentioned, we control for several other aspects: Agenda Size, Average Congress Ideology, Effective Number of Parties, and numerical support. The size of the agenda is also positively correlated to Legislative Support, suggesting thus that the higher the support for the president in Congress, the greater the political agenda of the president in the legislative arena. Model 3 also suggests that Congress ideology increases legislative support suggesting an ideological bias

against left-wing coalitions. That is, Congress tend to punish presidents who built left-wing coalition more often under divided government. This result however may have been influenced by the fact that there are no left-wing Congresses in our dataset. The median congress ideology during the period is roughly 5.5 and the more leftist Congress was around 4.2 in a 1 (left) to 10 (right) ideology scale. Other controls play no significant role to the model, including the traditional arithmetical measure of divided government (See Model 6).

3.1.2 Governing Costs

Dependent variable

To estimate the effect of divided government on the political and financial resources the executive has to spend in order to manage coalition partners, we rely on the Governing Costs Index (GCI), developed by Bertholini and Pereira (2017). The GCI is a synthetic index and consists of three complementary measures of presidential costs associated with coalition management. First, the number of cabinet positions (and secretaries with ministerial status) that a president decides to create in the administration.

Second, the natural log of the total amount of budgetary resources allocated to each cabinet position; and third, the natural log of the value in Reais (Brazilian currency) of legislators' individual amendments to the annual budget (i.e., pork) appropriated by the government. GCI was obtained from a factorial analysis model, using principal components. All of those three measures are organized on a monthly basis.
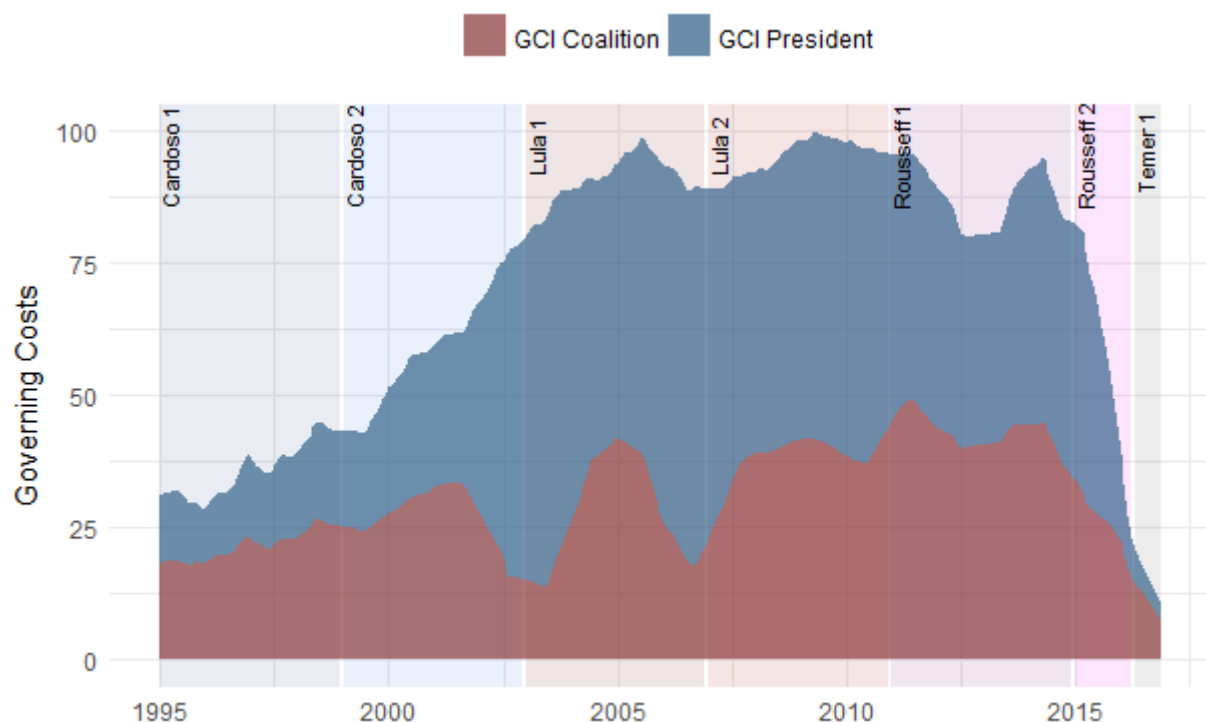

Figure 4: Governing Costs Index in Brazil - 1995 to 2016

As observed in Figure 4 the cost of presidential coalition management varied considerably in Brazil during the period analyzed, not only with regard to the total cost, but also with regard to the composition of this cost: either with the president's party or with the coalition partners. For instance, the first term of president FHC was characterized by a relatively low total cost (average of 36 points). FHC costs with his own party, the PSDB, were lower than the costs – added together – of other parties in his coalition (an average of 14.3 and 21.7 points, respectively). In his second term, however, there was an expressive raise in government total governing costs (average of 59.5 points) and a reversal in the composition of costs with the allocation of a greater portion of resources to PSDB (average 32.4 points) vis-a-vis the cost with the other parties of his coalition (average of 27.1 points).

When the PT took office in Brazil in 2003, not only did the total costs of government increase (average 90.6 points), but also there was a much greater reversal in the composition of costs. The president's party became by far the main recipient in relation to the other parties of the president's coalition (average of 62.6 and 28.1 points, respectively). A similar pattern was reproduced in President Lula's second term. However, there was a further increase in total costs (average of 95.2 points), mainly from half of Lula's second term. This growth was mainly due to an increase in costs with the other parties of his coalition in relation to the PT (average of 38.1 and 57.1 points, respectively). The first term of office of president Rousseff displayed a small decrease in total governing costs (average of 88.1 points). However, the costs with the president's party were still slightly greater than the costs with the sum of the expenditures related to other coalition parties (average of 44.9 and 43.1, respectively).

In her second term in office, the total governability cost decreased considerably (average of 58 points), achieving the level of Cardoso's second term in office. Nevertheless, PT returned to be the over rewarded party relative to the other parties in her governing coalition (average of 31.9 and 26.1 points, respectively).

Finally, given his extremely low rate of popularity and Rousseff's impeachment for fiscal crimes, there was a sharp decline in total coalition management costs under Temer's administration (average of 15.4 points). At the first sight, this does not make any sense. This ran counter expectations that legislators might inflate the price of their support given the political venerability of the new president. Part of the answer to this puzzle has to do with the composition of the management cost.

Temer preferred to allocate 70 percent of the governing resources with coalition allies and less than 30 percent with his own party. Combined with a very high level of proportionality (average of 80.4 points) of the distribution of resources taken into account the political weight of coalition partners in Congress and an extremely low level of ideological heterogeneity (average of 27.1 points) between coalition allies, this strategy of over rewarding partners, instead of his party, has generated an ex ante satisfaction of partisan allies helping the president to be successful in Congress with a relatively low governability costs, despite his political vulnerabilities with the society.

As demonstrated by Bertholini and Pereira (2017), even controlling for partisan fragmentation,

presidential vulnerability and agenda size, the effect of presidential strategies of how to manage their governing coalition were very robust and confirmed their hypotheses. That is, the larger the number of parties in the governing coalition, the higher the degree of ideological heterogeneity, and the smaller the power sharing among coalition partners, the more expensive it is to run a multi-party presidential regimes.

Independent variables

As independent variable we included our second **measure of divided government** (I_{dist}), **agenda size**, **average congress ideology**, **effective number of parties**, **presidential popularity**, and **nominal support**. We did not include GDP, because the GCI already incorporates a GDP correction in its calculation. We expect that the higher the ideological distance between governing coalition and congress, the higher the GCI scores. Controls are expected to follow the same intuition of the Legislative Support model, however in the opposite direction. That is, the greater the size of the legislative agenda of the the president and the partisan fragmentation of Congress, the higher its governing costs. Concerning presidential popularity, we expect that it decreases the cost of governing. With regard to the average of Congress ideology, we expect that left-wing coalition would face high cost of governing.

Finally, concerning the size of the nominal support backing the president in Congress, we do not have a clear cut expectation giving the controversy in the pertinent literature. Riker (1962), for instance, in his seminal study of coalitions, established the "size principle". The principle states that the parties that form coalitions (*formateur*), will build their coalitions large enough (not larger than necessary) to ensure victories in the elections for the legislative branch. This principle was widely known as the minimal winning coalition (MWC). Subsequent models took into account the payoffs that would be shared between coalition partners (Diermeier et al., 2003). This hypothesis was key for Strom and Muller (1999) to explain the existence of minority governments by asserting that members of the coalition government may indeed be burdensome to the president. Interest in joining a coalition is directly associated with the ministries' budget, with possible opportunities for policy making, and with expected electoral gains.

In addition to taking into account the resources of the coalition and the preferences of the parties, other authors have argued that in the real world the parties forming the government do not have complete information on the true preferences of their rivals. It is expected that, as the asymmetry of information among players increases, they are more likely to increase the size of their coalitions (Dodd, 1976). When parties' ability to make credible commitments is unlikely, there will be incentives for opportunistic behavior and blackmail, with each aiming to achieve greater concessions. Carrubba and Volden (2000) predict that, in order to create a more stable exchange environment and less subject to high defection costs, parties create a minimal necessary coalition (MNC) greater than the minimal winning coalition. They also envisage a surplus coalition when the number and diversity of actors is large, when the budget is difficult to approve, and when legislation tends to be costly or inconvenient to its members.

As can be seen, a significant group of authors point out that larger coalitions will lead to

Table 2: Regression models with Newey-West correction for autocorrelation - Governing Costs

| | Governing Costs Index | | | | | |
	(1)	(2)	(3)	(4)	(5)	(6)
I_{dist}	2.146***	2.290***	2.295***	1.882***	1.502***	1.357***
	(0.627)	(0.495)	(0.474)	(0.532)	(0.239)	(0.206)
Nominal Support		0.188	0.199	0.264*	0.139*	0.225***
		(0.127)	(0.121)	(0.144)	(0.073)	(0.076)
Agenda Size			−0.013	−0.005	−0.007	−0.005
			(0.008)	(0.007)	(0.008)	(0.007)
Congress ideology				−2.401**	−5.062***	−3.772***
				(0.946)	(1.155)	(1.016)
ENPP					−0.923	−0.419
					(0.580)	(0.551)
Popularity						0.017**
						(0.007)
Constant	−2.354***	−5.596**	−5.615**	7.138	34.434***	20.245*
	(0.714)	(2.290)	(2.197)	(8.092)	(12.767)	(11.597)
Observations	264	264	264	264	264	264
Adjusted R^2	0.433	0.472	0.476	0.614	0.674	0.705

Note: *p<0.1; **p<0.05; ***p<0.01

higher costs. However, unlike the forecast for forming MWC in virtually all previous formal models, Groseclose and Snyder (1996) modeled the construction of supermajority coalitions and demonstrated that they may be cheaper than forming an MWC. The authors argue that supermajorities occur more frequently because they prevent small parties from acting as the 'casting vote'. In some presidential regimes, for example, a lack of partisan loyalty and discipline means that an MWC may not be enough to win consistently over time. As a consequence, a *formateur* may think that it is cheaper to assemble supermajorities, in which no party belonging to the coalition can be imagined as the pivotal point. Larger coalitions can also occur when two supportive "buyers" with opposing preferences (interest groups, political parties, etc.) have significant resources and bargaining power.

Results

Results (Table 2 and Figure 9 in the Appendix) indicate the feasibility of our main theoretical expectation by showing an statistically significant coefficient of the variable ideological distance between coalition and Congress. It suggests that the ideological distance between the presidential coalition and Congress plays an important role explaining the level of difficulties president will face coordinating its coalition enhancing thus the cost of governing. The average of Congress ideology also behaved according to our theory suggesting that center-right coalitions will face smaller cost of governing. Presidential popularity, on the other hand, presented a positive and statistically significant coefficient contradicting our initial expectation. The coefficient of the variable nominal support of the president in Congress (the arithmetical definition of divided

government) was statistically significant and positive suggesting that the greater the number of legislators backing the president in the legislature the higher the cost of governing. The other controls were not statistically significant

Although these preliminary model specifications generated results supporting our main hypothesis, we are aware that a more robust model is necessary in order to deal with the time series characteristics of the GCI.
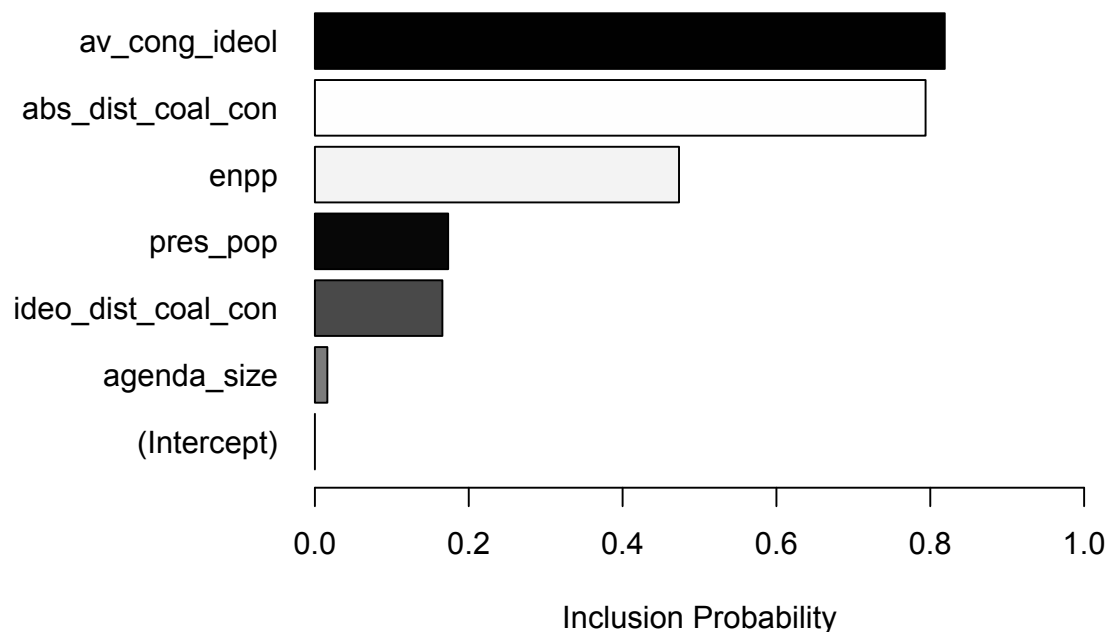

Figure 5: BSTS Model - Governing Costs - Independent Variables Inclusion Probabilities

The previously estimated do not address issues such as trends or seasonality. ARIMA modeling are the model of choice in such cases. To combine both approaches, Bayesian Structural Time Series is a tool described in Scott and Varian (2014) that uses space state methods (Harvey, 1990) to provide a complete model of the time series. These methods come with a new characteristic: as they are Bayesian, by setting a Bernoulli prior into the independent variables, not every variable is ever added to the model; this only happens when they are useful. This technique is very useful when the number of independent variables is large compared to the time series. By estimating such a model we can deal with both structural characteristics of the time series and perform tests for the independent variables.

This method yielded similar results to the linear regression models. The space state model used as a base for developing the results is a local linear trend model with quarterly seasonality (Figure 3). Probabilities higher than 50% indicate a strong chance of having this variable as a good predictor. Based on this model, the two variables with higher probability of being selected are I_{diff} (abs_dist_coal_con) and the average ideology of congressmen (av_cong_ideo). The
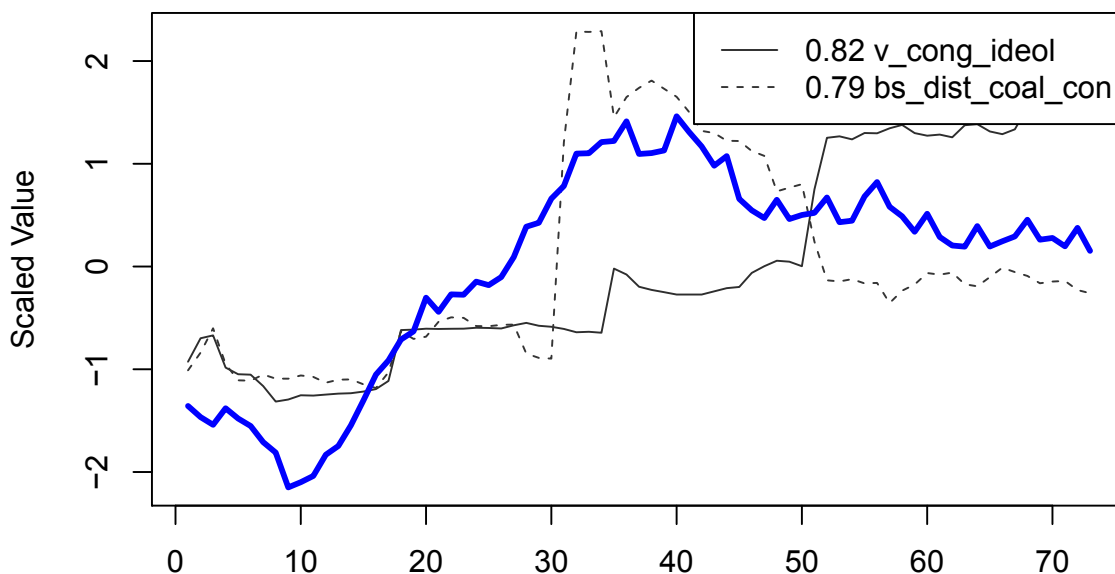
Figure 6: BSTS Model - Governing Costs - Predictors

effective number of parties was selected with probability larger than 50%, is also being considered relevant by this model. President popularity, although previously pointed out as significant was not selected on this approach. The results strongly sustain our hypothesis that divided governments generate more governing costs. Model predictors also present a very good fit with our dependent variable, as suggested by Figure 4, which adds robustness to our initial conclusion.

3.1.3 Parliamentary Inquiry Committees

Overseeing executive's actions is one of the key responsibilities Congress has in a presidential regime. The actions and the degree of activities of legislative committees, nevertheless, vary considerably form one committee to the next. The literature on Congress has been broadly divided into three major theories that vary according to who is assumed to control the legislative process and the capacity of committees to oversee executive actions: the committees' preference outliers (distributive theory, see Weingast and Marshall (1988); the median legislator of the House of Representatives (informational theory, seeGilligan and Krehbiel (1989); or the majority party (majority party or cartel theory, see Cox and McCubbins (2007).

These theories were developed for the US Congress and practically all of the literature is specific to its structure and institutions, where the president is constitutionally weak and his party enjoys, most of the time, the majority status in Congress.

In multi-party presidential regimes, however, committees operate to some degree as agents of the executive (Pereira and Mueller, 2004). Particularly analyzing the case of Brazil, these authors show that committees with more preference outliers tended to be discharged more frequently. It is the committees that are more representative of the floor that would have a greater effect of reducing uncertainty in equilibrium; so it is these committees that would be allowed to examine and report a bill by not receiving an urgency petition. However, committees play an informational function only when they have similar median preferences compared with the floor. Otherwise, the floor's majority or the even the executive would prefer to circumvent committee agencies requesting urgency petition, which, in fact, leaves a reasonable space for the theory of executive dominance to explain how the Brazilian congressional politics works.

In multi-party presidential environment, therefore, Congress faces a constant political dilemma. On one hand, members of the governing coalition want to provide ample conditions for the president to govern. By doing so, however, Congress runs the risk of seeing its preferences expropriated by this powerful president. In this session we attempt to use the insights of this literature to analyze the actions of specific committees particularly created to investigate executive's actions under strong suspicious and/or allegation of corruption. In the case of Brazil, they are called Parliamentary Inquiry Committees (PIC).

As mentioned previously, the most salient feature of the Brazilian Congress is the ability of the executive to pursue its preferences in the legislative process, including in the committee system. However, there are many occasions in which even powerful presidents have to forcefully face the movements from investigatory committees weakening their ability to keep coordinating their majority coalition united and unified. Sometimes, the actions of PICs may open the gate for movements that could end up in an impeachment of the president. Our hypothesis is straightforward: under unified government committees tend to be docile and less active against the executive. When the multi-party presidents faces a minority status, however, congressional committees tend to be more hostile and independent from executive's preferences.

Dependent variable

To estimate the effect of divided government on the probability of an investigation by a Parliamentary Inquiry Committee (PIC), we organized our dataset[1] in a different way, having every demand for a PIC as an event and the actual initiation of the PIC as a success. We then estimate the probability of a parliamentary investigation taking place with a probit model.

Independent variables

As independent variables we included our **measure of divided government** (I_{diff}). **agenda size**, **average congress ideology**, **effective number of parties**, and **presidential popularity**. We expect that the higher the ideological distance between governing coalition and congress, the higher the probability of initiating a PIC. Controls are expected to follow the

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[1]We are grateful to Marcus Melo for sharing this PIC dataset from another project with us

same intuition of the previous models. That is, the greater the size of the legislative agenda of the the president and the partisan fragmentation of Congress, the higher the probability of initiating a PIC. Concerning presidential popularity, we expect that it decreases the higher the probability of an investigation taking place. Finally, with regard to the average of Congress ideology, we expect that left-wing coalitions would face high probabilities of being investigated by congress.

Results

Our results in this case also corroborate the initial intuition on the effect of divided governments on the probability of an effective PIC. From a very parsimonious model (Model 1), with the inclusion of only our main variable, to a model with several controls (Model 5), the effect of I_{diff} remains positive and significant. A 10% variation in the 10-point ideological scale can increase the chance of an investigation by a PIC by nearly 80% on average.

As for controls, only the Effective Number of Political Parties had an effect. The higher the fragmentation, the higher the probability that a president is investigated by a PIC.
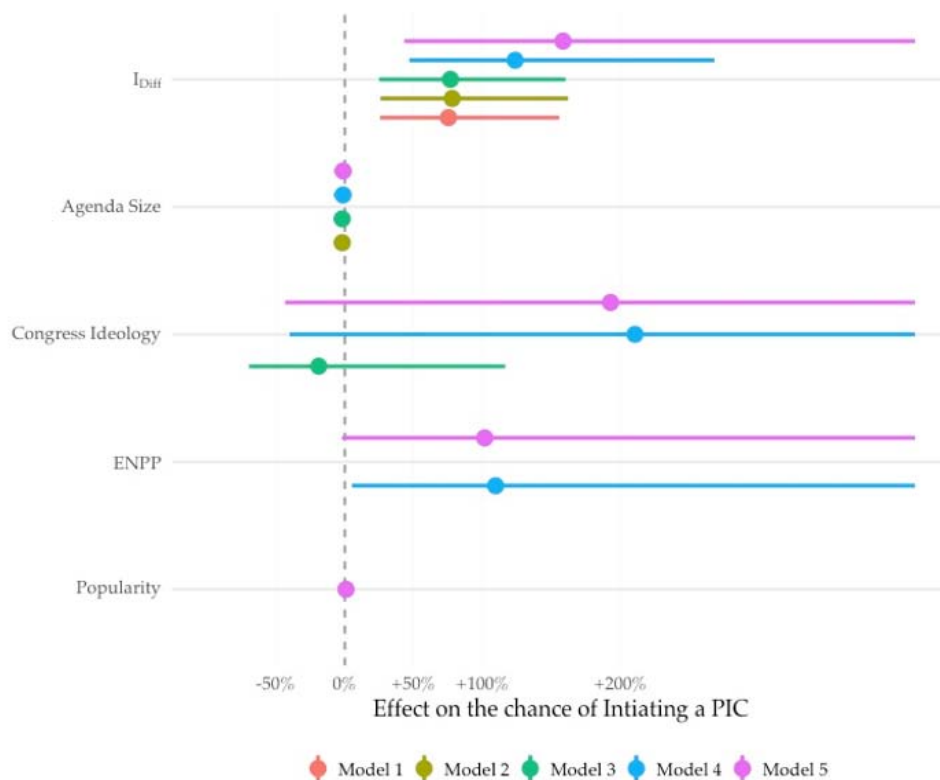

Figure 7: Probit Models of Initiating a PIC

4   Discussion

This article has made two contributions. The first is theoretical by advancing a new conceptualization of divided government, which is based on the revealed preferences of legislators as

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opposed to previous scholarship that focused on the arithmetic minority statuses of governments and coalitions. This original approach helps shedding light on some counterintuitive empirical findings including the cases of presidents with large multi-party coalitions but with poor ability to pass legislation. And vice versa: presidents counting on small coalitions but with strong legislative approval rate. More importantly it provides a more empirically consistent lens for analyzing fragmented presidential systems and weak party systems, which is the modal regime type in new democracies.

The empirical implications of this reconceptualization are relevant as shown for the case of Latin America, and particularly Brazil. The empirical exercise presented for the case of Brazil illustrates the enhanced explanatory power of the new approach. The costs of governing, the ability to pass legislation, and the ability to block parliamentary investigations can be explained by the congruence between the ideological preferences of governing coalitions and congress, even controlling for the nominal size of the governing coalition (the traditional aritimetic understanding of divided government) and the level of partisan fragmentation. The impressionistic evidence about impeachments can be cast in new light in future work, which should be integrated with discussions of party systems.

Therefore, one of the key implications of our findings, especially to the comparative literature, is that we may need to consider downplaying to role of constitutional and agenda-setting powers of the executive overcoming the centrifugal governability problems and costs of monitoring in multi-party presidential regimes. That is, even constitutionally powerful presidents can not ignore the ideological preferences of Congress if they want to be successful in Congress. By managing a governing coalition that does not mirror Congress' preferences, increasing the cost of governing may not necessarily generate more legislative support, but rather may lead to intertemporal cycling majorities ('gost coalition' Mejia-Acosta 2004) and presidential defeats in Congress.

In a multi-party fragmented presidential game, coalition allies need an external coordinator capable of managing a coalition that mirrows Congress' preferences. Without this external CEO (the president), legislative majorities become unstable and unpredictable and the problem of cycling majorities turn out to be the legislative routine.

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# Appendix

Descriptive Statistics

Table 3: Descriptives

Statistic	N	Mean	St. Dev.	Min	Max
Governing Costs Index	264	0.000	2.196	−5.610	3.057
Legislative Support	263	0.635	0.278	0.000	1.000
I_{dist}	264	1.097	0.675	0.029	2.983
I_{diff}	264	−0.723	1.067	−2.983	0.855
Nominal Support	264	16.444	2.426	9.581	20.703
Agenda Size	264	14.390	13.079	0	84
Average Congress Ideology	264	5.614	0.374	5.061	6.319
Effective Number of Parties	264	10.661	1.280	8.849	14.157
Popularity	264	17.562	32.530	−63.000	79.240

Note: N values are months with available data

Data Correlation
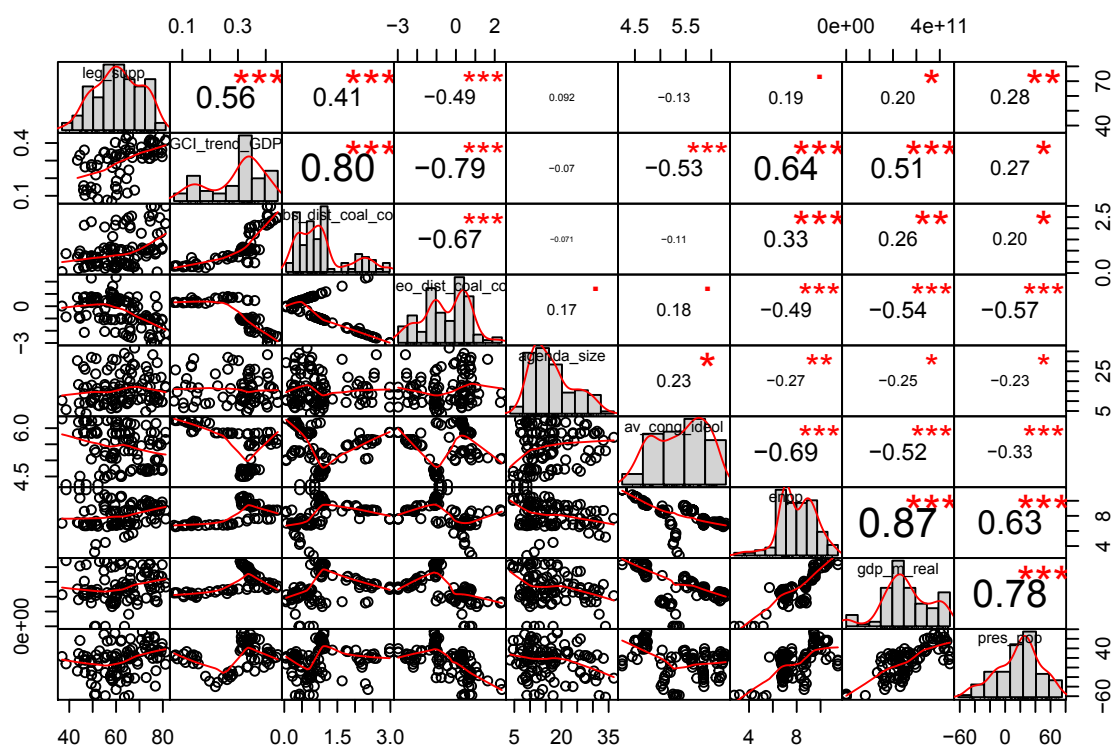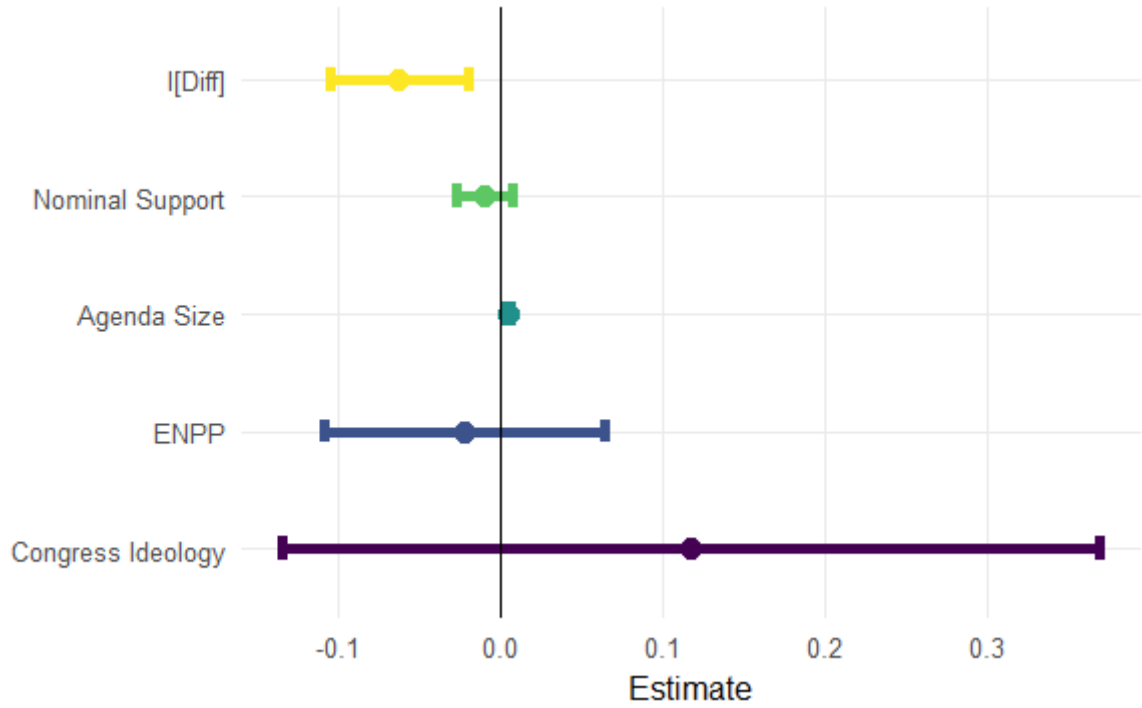
BSTS model Residuals and decomposition
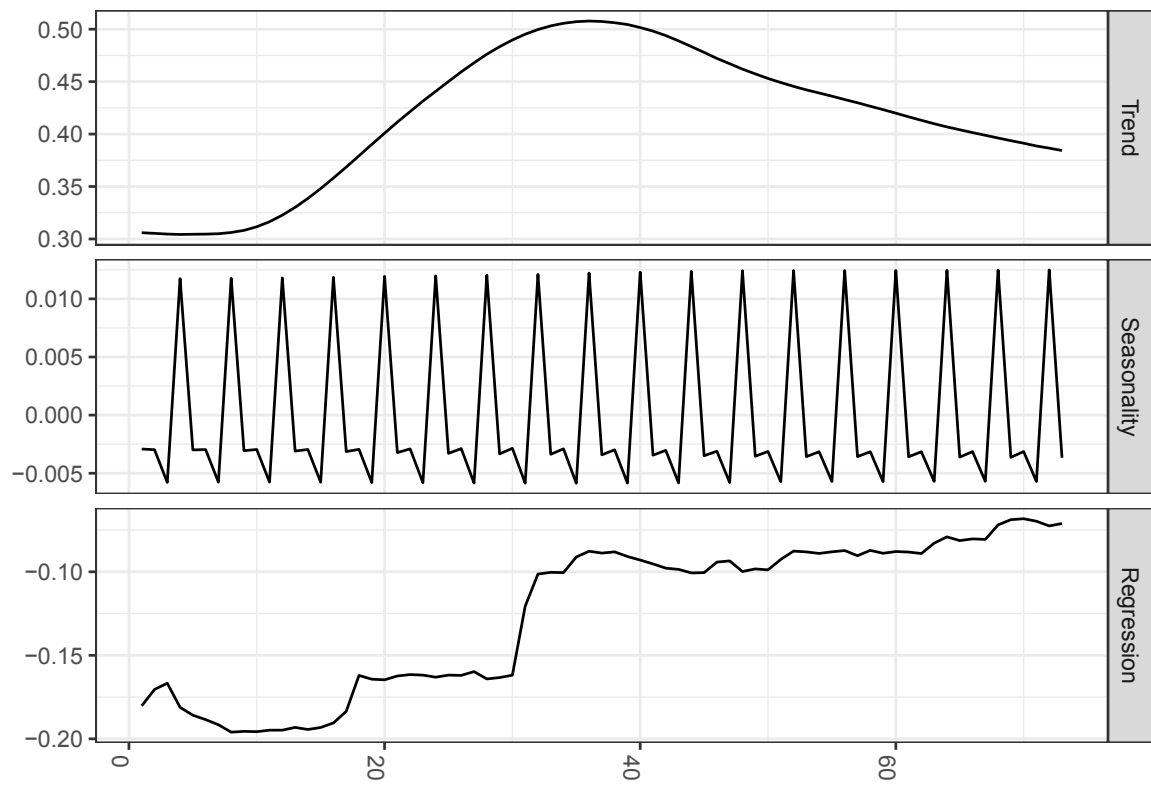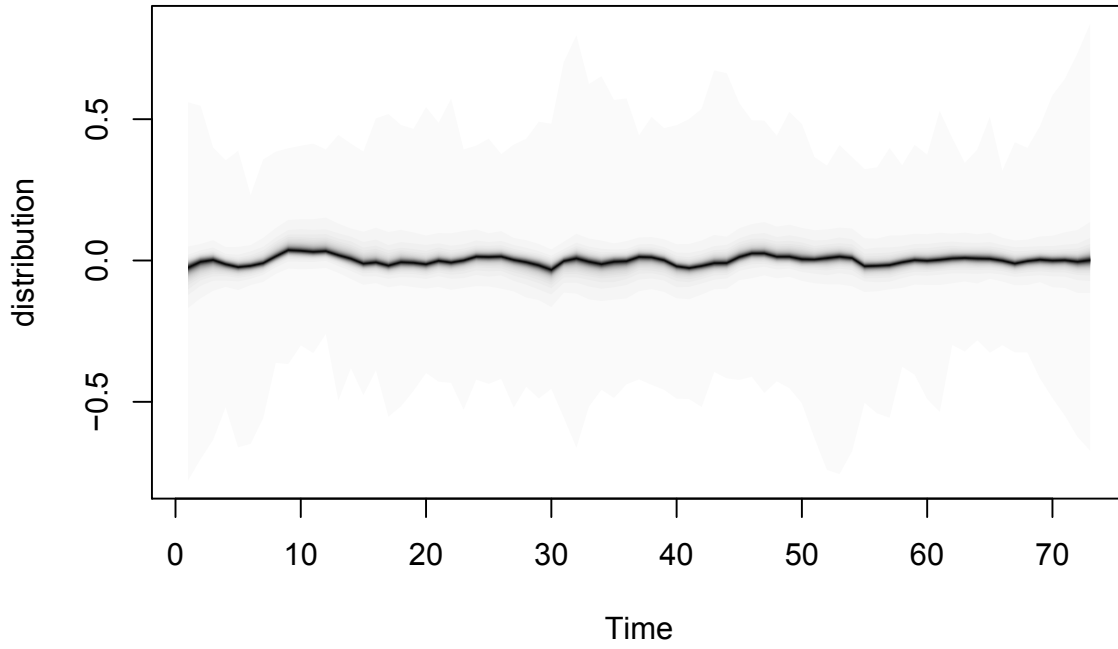
Figure 8: Legislative Support Newey-West OLS preferred specification

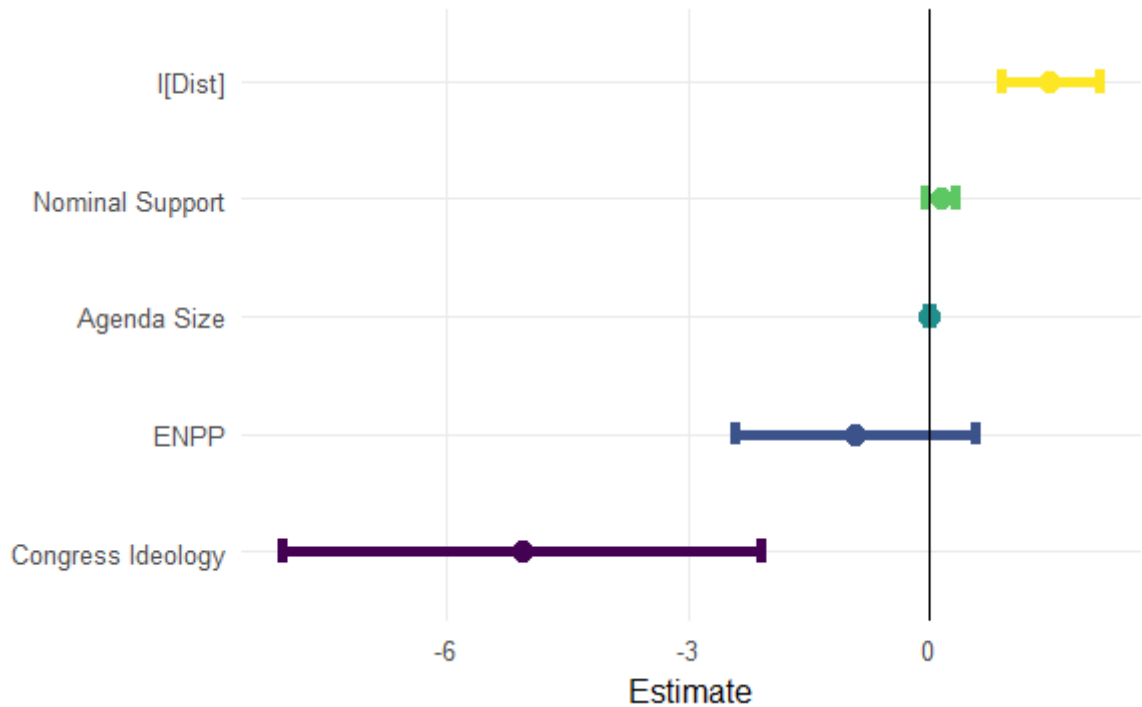Model specification: Model 6, estimates significant at p<0.01

Figure 9: Governing Costs Newey-West OLS preferred specification

Model specification: Model 5, estimates significant at p<0.01