How Long Will It Last?
Cabinet Termination in Presidential Systems*

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Abstract

Studies on presidential democracies show that coalition governments are not a rare phenomenon in presidential systems. But how long do they last? Whether and under what conditions are coalition terminations more likely to happen in presidential systems? These are the main questions that I aim to answer in this study. I suggest a theory framework in which I adapt elements from the literature on parliamentary systems to the context and specificities of presidential systems. Based on the exclusive powers of the president to form and reshuffle cabinets, I expect economic indicators and the evaluation of the president's job to be crucial factors to predict cabinet termination. By examining 82 cabinets from 1978 to 2007 in 10 Latin American democracies, I found that inflation, unemployment, and the fragmentation within the coalition and the party system are the main predictors of cabinet breakdown.

Keywords: Coalition Governments; Cabinet Survival; Cabinet Termination Presidential Systems; Latin America.

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1 Introduction

Contrary to the assumption that the formation of coalition governments would be rare in presidential systems (Linz, 1990; Mainwaring, 1993), studies on Latin American democracies (Deheza, 1998; Figueiredo and Limongi, 1999; Lanzaro, 2001; Amorim Neto, 2006a) demonstrate that this type of government is the standard (Cheibub, 2007; Figueiredo, Salles and Vieira 2009). Nevertheless, despite the large body of research on the legislative performance of coalition governments in Latin America, empirical and comparative analyses on coalition survival in presidential systems remain scant, and important questions remain unanswered: Why don't coalitions last the entire presidential term? How long will coalition cabinets last in presidential systems? Whether and under what conditions are cabinet terminations more likely to happen in presidential systems?

To answer these questions, in this paper I propose a theoretical framework in which I adapt elements from the extensive literature on cabinet survival in parliamentary systems to the context and specificities of presidential systems. I argue that the problem with the studies on coalition termination[1] in presidential democracies is that they do not consider the possibility that in some contexts it may be more rational for the coalition parties to commit themselves to the president. If the incumbent is popular and the economy is strong, for example, members of the coalition may benefit from the president's popularity, and it would not be rational for the coalition's members to leave the government simply because elections are approaching. Moreover, parties cannot evaluate alternative offers in the formation of the government's cabinet, but only the one offered by the president.

Presidents can alter the government coalition over the course of their terms by building a support base in the legislature, but members of the coalition can also decide to abandon or remain in the government based on contextual factors such as the national economic condition, and the approval ratings of the president. The changes in cabinet due to these factors are not necessarily influenced by institutional mechanisms, but are due to political and electoral

[1] In this study, by using coalition as cabinet coalition, I use cabinet termination and coalition termination interchangeably.

reasons. Accordingly, in this study I suggest a theory in which the likelihood of cabinet termination is affected by contextual factors such as inflation, unemployment, economic growth, and the approval ratings of the president. I also take into consideration important structural factors, such as the fixed-term of the presidency and how fragmented and polarized is the political system. These institutional factors are tested in order to examine whether and under what conditions cabinet terminations are more likely in presidential systems.

By conducting an event history analysis in a longitudinal dataset from 1978 to 2007 that includes 10 democracies in Latin America, the results in this study show that inflation, unemployment, and the fragmentation within the coalition and the party system are the main predictors of cabinet termination.

This paper is structured as follows: In the next section, I present a review of the literature on coalition termination. This review is strongly influenced by the large literature on parliamentary systems, but an automatic application of parliamentary models to the presidential context would result in major misconceptions. Thus, I also aim to provide information on the specificities of presidential systems. In section 3, I present my theory, and, based on the theoretical model proposed, I suggest four hypotheses to be tested. In section 4, I present the data and the variables used in this study, and discuss the conducted method to test the hypotheses. In section 5, I discuss the results of this study, and in section 6, I present my final comments.

2 Literature Review

According to previous studies on presidential systems, Latin American coalition governments should either be rare, due to "the perils of presidentialism" (Linz, 1990), or unstable, due to difficult institutional combinations (Mainwaring, 1993; Stepan and Skach, 1993; Jones, 1995) and the "tyranny of the electoral calendar" (Altman, 2000a,b).

Linz (1990; 1994) suggests that presidential systems have structural problems such as the dual legitimacy of the executive and legislative branches, the increased likelihood of inter-branch conflict, and the lack of an institutional mechanism to resolve these conflicts. The

"difficult combination" hypothesis (Mainwaring, 1993) implies that the inter-branch conflict and the legislature's non-cooperative behavior would be aggravated by the combination of a strong president with a multiparty system. The "tyranny of the electoral calendar" hypothesis (Altman, 2000b), in turn, suggests that as new elections approach, members of the coalition will try to distance themselves from the president in order to avoid paying the costs associated with the government's policies. Therefore, because the coalition's parties would be better off competing in elections alone, they would abandon the government before the end of the presidential term (Chasquetti, 1999; Altman, 2000a,b).

However, studies comparing parliamentary and presidential systems (Cheibub and Limongi, 2002; Cheibub, Przeworski and Saiegh 2004) suggest that the incentives for coalition formation—such as increasing legislative strength and policy influence—are present in both government systems. Therefore, there is no reason to believe in an inherent structural problem within presidential systems when the same behavioral premises and similar decision-making rules are observed in both systems (Cheibub and Limongi, 2002, 2011; Cheibub, Elkins and Ginsburg 2014). Empirical studies on Latin American democracies (Deheza, 1998; Figueiredo and Limongi, 1999; Amorim Neto, 2000a, 2006a; Chasquetti, 1999; Lanzaro, 2001; Alemán and Tsebelis, 2011) support this argument, and have revealed that coalition governments have been the most frequent and effective way to address and resolve the president's problem of legislative minority support. Therefore, coalition government should not be considered a rare phenomenon in presidential systems (Cheibub and Limongi, 2002; Cheibub, Przeworski and Saiegh 2004; Cheibub, 2007; Figueiredo, Salles, and Vieira 2009).

Also, some scholars (Shugart and Carey, 1992; Mainwaring and Shugart, 1997) called attention to the diversity of presidential systems and suggested some virtues of these systems that are usually overlooked by the literature. According to Shugart and Carey (1992), the fixed-term nature of the presidency can be seen as an attribute of predictability within presidential systems, and not as something inherently problematic. Mainwaring and Shugart (1997) reveal that Linz (1990; 1994) overlooked the possibility of conflict in parliamentary systems, as well as underrated the positive features of presidential systems. Also, the mutual

independence of the executive and legislative branches can favor the system of checks and balances between these powers (Melo and Pereira, 2013).

Nevertheless, the analysis on Latin American presidential democracies are mostly descriptive case studies concerned with either demonstrating that coalition governments are not rare in the region, or to evaluate the legislative success of coalition governments under presidential systems. Such examples can be seen in studies on Brazil (Figueiredo and Limongi, 1999), Uruguay (Chasquetti, 1999), Chile (Siavelis, 2000), Argentina (Novaro, 2001), and Bolivia (Mayorga, 2001). In contrast to the extensive literature on parliamentary systems (Strøm, 1984, 1988; Schofield and Laver, 1985; Laver and Schofield, 1990; Laver and Shepsle, 1994; Lupia and Strøm, 1995; Grofman and van Roozendaal, 1997; Strøm, Kaare, Wolfgang Müller, and Torbjörn Bergman, 2008), theoretical models and empirical comparative analysis on cabinet survival in presidential systems remain underdeveloped.

The theories developed regarding cabinet survival and termination under parliamentary systems consider the bargaining environment complexity (Laver and Schofield, 1990; Alt and King, 1994), ideological diversity and polarization (Warwick, 1992, 1994), institutional mechanisms such as investiture and no-confidence vote (Strøm, 1988), external environments such as economic conditions (Robertson, 1983a,b, 1984; Warwick, 1992; Narud, 1995), strategic timing of elections and calculus of alternative coalitions (Grofman and van Roozendaal, 1994; Lupia and Strøm, 1995), strategies to reduce the prime minister's agency loss (Indridason and Kam, 2008), and structural attributes such as the size and number of political parties (Strøm, Müller and Bergman 2008; Bergman and Hellström, 2015).

Some of the theories developed for parliamentary systems are clearly not applicable to presidential contexts. Presidential systems have some specific rules on coalition formation and ministerial reshuffle that should not be overlooked: 1. Presidents have constitutional powers to form and reshuffle the government's cabinet (Amorim Neto, 2000a; Figueiredo, 2007); 2. Presidents are always the *formateur* in the government formation game (Cheibub, Przeworski, and Saiegh, 2004; Alemán and Tsebelis, 2011; Silva, 2016) and; 3. Due to their independency from the legislature and the absence of the vote of no confidence, presidents

have constitutionally fixed terms, and, other than in exceptional cases, presidents remain in power even under adverse legislative conditions (Shugart and Carey, 1992; Mainwaring, 1993; Altman, 2000b; Cheibub, Przeworski and Saiegh 2004; Cheibub, 2007).

The hypothesis of "the tyranny of the electoral calendar" is directly related to the specificities of the presidential systems, particularly regarding presidential and legislature fixed-terms. The term "tyranny of the electoral calendar" was coined by Altman (2000a), but the expectation is similar in all cited studies: as the next election approaches, parties have fewer incentives to join or remain in the government, and therefore cabinet termination should be more likely, given the impending elections (Chasquetti, 1999; Altman, 2000a; Alemán and Tsebelis, 2011). Although Altman considers that other covariates—such as economic and ideological factors—can affect cabinet duration, the author sustains that "nonetheless, whether a party remains in the executive coalition is subject to the tyranny of the electoral calendar" (Altman, 2000a, p. 19). Thus, at the end of the president's term, members of the coalition would mainly be concerned with electoral gains, and behave as office- and vote-seeking actors (Altman, 2000b, p. 268).

The rationale behind "the tyranny of the electoral calendar" is that members of the coalition should try to distance themselves from the president in order to avoid paying the costs of being associated with the incumbent government. Moreover, in presidential systems there is no mechanism to force coalition members to support the president in the legislative branch. Thus, the president should have, at most, only control over members of her own party and not on the other members of the coalition (Chasquetti, 1999). Also, as already mentioned, presidents remain in power even under adverse legislative conditions (Shugart and Carey, 1992; Mainwaring, 1993; Altman, 2000b). Therefore, the proximity of the elections should create strong incentives for members of the coalition to leave the cabinet.

However, the "tyranny of the electoral calendar" hypothesis neglects the possibility that parties' identification with the president can bring electoral benefit for the members of the coalition. As stated by Cheibub and Limongi (2002, p. 158), there is no reason to assume that, under presidential systems, being part of the government "brings no electoral benefit

and that presidents are not able to transfer votes for the politicians who support them." Heading a portfolio allows governing parties to have discretion within specific policy domains (Druckman and Thies, 2002; Falcó-Gimeno and Indridason, 2013). Moreover, being part of a government cabinet can give parties visibility and influence regarding important policy consequences (Freitas, 2013; Araújo, 2016).

Therefore, the decision to join the government involves not only electoral losses, but also potential gains for the members of the coalition (Cheibub and Limongi, 2002; Freitas, 2013; Araújo, Freitas and Vieira 2015). There is no reason to suppose that only under presidential systems do the losses exceed the gains for coalition's members (Limongi, 2003). In addition, even if we supposed that legislators always want to oppose the president, in presidential systems the chief of the executive branch usually controls important resources for legislators, such as patronage, budget or the policy agenda (Shugart and Carey, 1992; Mainwaring and Shugart, 1997; Figueiredo and Limongi, 1999). The control over these resources thus puts the president in a favorable position to bargain cooperation with legislators.

In this paper, I challenge the studies so far conducted on coalition termination in presidential multiparty systems. I propose a theoretical framework in which I adapt elements from the extensive literature on cabinet survival in parliamentary systems to the context of presidential systems. I agree that specificities within presidential system changes the incentives to form and sustain the government's coalition (Chasquetti, 1999; Altman, 2000a; Alemán and Tsebelis, 2011). However, I argue that factors that make the termination of a coalition government more likely in presidential systems are neither due to structural problems of this system of government nor due the "tyranny of the electoral calendar." The reason, theoretically suggested and empirically tested in this study, is that parties cannot evaluate alternative offers in the formation of the government's cabinet, but only the one offered by the president. This puts the president in a privileged position, and consequently makes the evaluation of the president's performance and other contextual factors crucial elements in the parties' calculus whether or not to stay in the government.

3 Theory and Hypotheses

Although this research takes cues from the literature on parliamentary systems, an automatic application of theoretical models from the parliamentary literature to the presidential context would result in major misconceptions. Presidents have some exclusive powers on coalition formation and the dynamics of ministerial reshuffling in presidential systems, which are: 1. Constitutional prerogative powers to form and reshuffle the government's cabinet; 2. Exclusivity as the *formateur* in the coalition's formation, and; 3. Constitutionally-fixed terms, remaining in power even under adverse legislative conditions. In this sense, parties cannot evaluate alternative coalition offers in presidential systems, but only the one offered by the president. Moreover, if the parties decide to not participate in the government by rejecting the president's offer, they have to wait until the next election in order to receive benefits from being part of the government (Alemán and Tsebelis, 2011).

Therefore, in this paper I suggest a theory in which the end of coalition governments depends on contextual factors directly related to government's performance such as economic conditions—inflation, unemployment, and economic growth—and the approval rating of the president. This theory is based on the argument that the exclusive powers of the president to form and reshuffle cabinets restricts the options for potential parties that will comprise the government, and makes the evaluation of the president's approval rating and other contextual factors crucial elements in the parties' decision to participate or not in the coalition. Presidents can alter the government coalition over the course of their terms by building a support base in the legislature, but members of the coalition might decide to abandon or remain in the government based on contextual factors, such as the national economic condition and the public's approval rating of the president. The changes in government due to these factors are not necessarily influenced by institutional mechanisms but due to political and electoral reasons.

Important structural factors—such as the fixed term of presidents, and how fragmented and polarized is the political system—which are commonly presented by the literature as

important factors on cabinet formation and termination (Altman, 2000a,b; Amorim Neto, 2006a; Alemán and Tsebelis, 2011) are also considered here.

According to the theory here suggested, I assume that politicians behave both as office-seeking and policy-seeking actors. Although it is difficult to distinguish these behaviors empirically, as noted by Druckman (2002, p. 761), "the assumption that politicians care only about office seemed unjustifiably restrictive." Maybe policy matters only because it leads to votes and, consequently, to offices, but here it is assumed that policy consideration still influences coalition formation and survival.

Following the theory stated above, four hypotheses will be tested in this study:

Hypothesis 1. As the country's inflation rate increases, a higher likelihood of cabinet termination and, consequently, a shorter duration of the cabinet is expected.

Hypothesis 2. As the country's unemployment rate increases, a higher likelihood of cabinet termination and, consequently, a shorter duration of the cabinet is expected.

Hypothesis 3. As the presidential approval rate increases, a reduction in the likelihood of cabinet termination and, consequently, a longer duration of the cabinet is expected.

Hypothesis 4. As the country's GDP growth increases, a reduction in the likelihood of cabinet termination and, consequently, a longer duration of the cabinet is expected.

4 Concepts, Data, and Methods

With some important exceptions (Amorim Neto, 2000a, 2006a; Altman, 2000b; Alemán and Tsebelis, 2011; Martínez-Gallardo, 2012, 2014), studies of coalitions under presidentialism remain largely descriptive (Lanzaro, 2001; Figueiredo and Limongi, 2007; Figueiredo, 2007) and usually lack a comparative perspective, making generalizations from theoretical models rather difficult. In order to model the likelihood of coalition termination, in this study I will conduct an event-history analysis (Cox and Oakes, 1984; Box-Steffensmeier and Jones, 2004) using a dataset that is comprised of data from 10 Latin American democracies, from

1978 to 2007.[2] The justification for the use of these cases is based on data availability, and on definitions for three main concepts of the analysis: democracy, presidential systems, and coalition government.

4.1 Concepts: Democracy, Presidential System, and Coalition Government

For the classification of a democratic regime, I use the definition suggested by Przeworski, Alvarez, Cheibub and Limongi (2000), and further developed by Cheibub, Gandhi and Vreeland (2010, p. 69):

1. The chief executive must be chosen by popular election or by a body that was itself popularly elected;

2. The legislature must be popularly elected;

3. There must be more than one party competing in the elections; and

4. An alternation in power under electoral rules identical to the ones that brought the incumbent to office must have taken place.

This classification has the advantages of being comprehensive on classifying worldwide political regimes in a minimalist way, related to the particular research question that is being addressed in this study (Collier and Adcock, 1999), and, in practice, this classification is strongly correlated with other common measures of democracy such as those developed by the Freedom House and the Polity IV Project.

Presidential systems are defined according to the commonly used concept developed by Shugart and Carey (1992, p. 19-20):

1. The chief executive is elected by popular vote or by a body that was itself popularly elected;

[2]The presidential systems and the time range included are: Argentina (1989-2001), Bolivia (1982-2001), Brazil (1985-2007), Chile (1990-2004), Colombia (1978-2000), Ecuador (1979-1999), Panama (1990-2002), Peru (1980-1991), Uruguay (1985-2003), and Venezuela (1992-1999).

2. The terms of the chief executive and the assembly are fixed, and are not contingent on mutual confidence;

3. The chief executive selects and removes the members of the cabinet; and

4. The chief executive has some constitutionally granted lawmaking authority such as veto power.

Finally, for coalition government I adopt a minimalist definition: a coalition government is present when at least two parties hold cabinet portfolios. The criterium to define the demarcation of the end of a cabinet is also very straightforward: Any changes in the set of parties holding cabinet membership. Following Laver and Schofield (1990, p. 129), it is important to distinguish two kinds of coalitions: a government (portfolio) coalition, a set of parties that receive ministerial portfolios and formally support the government, and, a legislative coalition—that is, a set of parties that ensure votes for the government in congress in order to approve the president's agenda. These coalitions can be the same, but not necessarily so. Parties can support the president in the legislative branch even if they do not hold cabinet portfolios. Thus, in this study, I am concerned with government coalitions.

One last caveat: The use of the term *cabinet termination* instead of *cabinet duration* or *ministerial turnover* is justified to emphasize a deliberate decision of specific political actors (i.e. a coalition's members). According to Grofman (1997, p. 423-424), *cabinet duration* emphasizes that which happens, while *cabinet termination* emphasizes "those who are making things happen and invites a concern for why they are choosing to act." In this sense, a cabinet turnover or reshuffle can happen even in the absence of cabinet termination, e.g. when the president changes the ministers, but the set of parties composing the cabinet does not change.

4.2 Data: Duration of Cabinets, Economic Indicators, and Political Institutions

The dataset used in this study comprises 82 cabinets from 1978 to 2007, and was built from political data provided by Amorim Neto, updated with data from the Brazilian Center of Anal-

ysis and Planning (CEBRAP), and supplemented with economic data from The World Bank and the Executive Approval Project (EAP).[3] The specified model for testing the hypotheses of this study, explained in detail in next section, is composed of one dependent variable, four main independent variables, and seven independent variables for control as described below.

Dependent Variable

Cabinet's durability. The dependent variable is the durability of the cabinets, as measured by the number of days that the cabinet survived. By having a cabinet for each country as the unit of analysis, each of the cabinets has a start date and an end date, which allows the measurement of the durability of each cabinet. As an example, since its recent democratization in 1990 to the last data available in 2004, Chile has had five different cabinets. The first Chilean cabinet, during the presidency of Patricio Azócar (1990-1994), lasted 934 days (that is, the difference between the end date and the start date of the coalition). The same operation was conducted for each cabinet in every country included in the analysis. The average duration of the cabinets in the sample is 585.39 days, with a standard deviation of 483.18 days.

The less durable cabinet, with only 30 days, started in June 1986 and was the second cabinet formed by Ecuadorian President León Febres Cordero. The most enduring cabinets lasted 1826 days: the first cabinet formed by Uruguayan President Luis Alberto Lacalle, which started in March 1990, and the first cabinet formed in the second term of Venezuelan President Rafael Caldera, which started in February 1994.

Independent Variables

By considering the lagged effects of economic indicators and the president's approval rating on a cabinet's durability, all main independent variables were either lagged by one year, or by one quarter, as described below. It is important to note that the year of reference for lagging the variable is the year of the dissolution of the cabinet. For example, if a cabinet ends on year t, the economic information used is the one for $t - 1$.

Inflation. This variable is a measurement of the consumer price index (CPI), reflecting

[3]The complete data source can be viewed in Appendix A of the Appendix Material. Summary statistics can be viewed in Appendix B of the same supplementary material.

the quarterly percentage change in the cost to the average consumer of acquiring a basket of goods and services. In the sample, this variable has a mean value of 22.71 percent, with a standard deviation of 43.45 percent. The minimum value of the sample is -0.58 (Bolivia in the first quarter of 2001) and the maximum value is 204.54 (Peru in the last quarter of 1988). The period of hyperinflation in Latin America (from 1985 to 1995) presents disproportionate values for this variable (with a median = 5.18, seventy-five percent of the values are between -0.57 and 14 percent, and only 17 observations have a value for inflation greater than 14). This makes the distribution of the variable extremely skewed, and for this reason the variable inflation was log transformed.[4]

Unemployment. This variable refers to the quarterly share (percentage) of the labor force that is without work but available for and seeking employment. The average unemployment rate among the countries included in this analysis is 9.29 percent, with a standard deviation of 3.56 percent. The lowest unemployment rate in the sample is 3.40 (Brazil in the last quarter of 1989), and the highest value is 19.82 (Panama in the first quarter of 1983).

GDP Growth. Annual percentage growth rate of gross domestic product (GDP) at market prices, based on constant 2005 U.S. dollars. The mean value of this variable in the sample is 2.69 percent, with a standard deviation of 4.31 percent. The variable ranges from a minimum value of -11.70 (Peru in 1990) and a maximum value of 11.94 (Argentina in 1992).

President's Approval Rating. This variable measures the presidential job approval based on country-specific surveys that included the question, "Do you approve or disapprove of the way that [name of the chief executive] is handling his/her job as [title of executive position]?"[5] The mean value of this variable is 43.30 percent, with a standard deviation of 11.91 percent. The least-popular president in the sample is the Peruvian President Fernando Belaúnde Terry in 1984 (14.93 percent), and the most-popular president in the sample is the Colombian President César Gaviria Trujillo in 1992 (69.60 percent).

[4]The distributions of the variables—including the distribution for the log transformed inflation—can be viewed in Appendix D of the Appendix Material.

[5]In order to deal with the transformation of disparate job approval series into data comparable across administrations, countries, and time, the original authors of the dataset (Carlin, Martínez-Gallardo, and Hartlyn 2012) conducted a methodology based on estimating country-specific measurement models.

Control Variables

Cycle. This variable measures the elapsing of the president's term, expressed as $1 - \frac{T_e - T_{ca}}{T_{co}}$. Where T_e = the year the president's term ends, T_{ca} = the current year of the president's term according to the cabinet i, and T_{co} is the fixed number of years of the president's term as defined by the country's constitution. As an example of a presidential term of four years, a value of 0.25 refers to the first year of the president's term, 0.5 is the second year, 0.75 is the third year, and 1 refers to the last year of the president's term.

As mentioned before, an important part of the literature on coalition termination suggests that as a new election approaches, the likelihood of a cabinet termination will be greater (Altman, 2000a,b). Chasquetti (1999) states that the fixed terms of the president, vice-president and legislatures seem to be decisive for the duration and stability of cabinets, because parties that compose the coalition are fully aware of the electoral calendar, and thus maintaining a coalition should be a function of the temporal distance of the national election (Altman, 2000b, p.278n1). Therefore, according to the "tyranny of the electoral calendar" hypothesis, it is expected that the more advanced the presidential term (in a temporal sense), the higher the likelihood of a cabinet termination. Based on the theory proposed in this study, I expect no relationship between the elapsing of the president's term and the cabinet termination.

Size of the coalition. This variable refers to the number of parties represented in the cabinet, i.e. the fragmentation of the coalition. In the sample, this variable has a mean of 3.5 parties composing the coalition, with a standard deviation of 1.62 parties. The smallest coalitions in the sample are those formed with two parties (26 observations), and the three biggest coalitions are composed of eight parties—the first (2003) and second (2004) coalitions formed in the first term of the Brazilian President Lula da Silva, and the first coalition (2007) formed by Lula da Silva in his second term.

Studies on parliamentary systems found that the number of parties in the cabinet has a significant and negative impact on cabinet durability (Taylor and Herman, 1971; Sanders and Herman, 1977). By considering that more parties in the cabinet can lead to more conflict within the coalition among the governing parties, the same outcome is expected in presidential

systems: as the number of parties in the cabinet increases, the likelihood of a cabinet's termination will also increase.

President's Legislative Power (IPIL). Presidential systems vary considerably in the degree of legislative powers that constitutions grant to the president (Shugart and Carey, 1992). In order to measure the legislative power of the presidents, I use the legislative institutional power index (IPIL) developed by Montero (2009). This measurement aggregates five dimensions: 1. The president's capacity to initiate legislation; 2. The president's capacity to form and regulate legislative committees; 3. Symmetry of bicameralism; 4. Presidential veto powers, and; 5. The president's decree power and extraordinary prerogatives. The IPIL index ranges from 0 to 1, where values close to 1 indicate democracies in which presidents have large institutional prerogatives to influence the legislative activity, i.e. the president's dominance over the lawmaking process. The value 0 of the index, in turn, indicates democracies in which the legislative branch has fewer obstacles to intervene on legislation process, i.e. dominance of the legislative branch over the lawmaking process.

In the sample, the average for this variable indicates a very balanced lawmaking process between the president and the legislative branch—a mean of 0.50, with a standard deviation of 0.08. Nevertheless, a look at specific cases in the dataset show important variance on this index. In the sample, the president with the least legislative power is the Venezuelan President Rafael Caldera in his second term in 1994 ($IPIL = 0.28$), and the president with the highest legislative power is the Chilean President Ricardo Lagos in 2000 ($IPIL = 0.71$).

This variable is included in the model based on the aforementioned assumption that politicians behave both as office-seeking and policy-seeking actors. Following Strøm's argument (1990), parties can leave the government if being dissociated with the government can increase a party's ability to influence policy in the legislature. Therefore, it is expected that the greater the president's legislative powers, the smaller the likelihood of a cabinet termination—thus, the cabinet duration is longer, because the governing parties cannot exert a greater influence on the policy agenda outside the coalition.

Ideological Dispersion. This variable measures the ideological heterogeneity of the cabinets

or polarization, i.e. the ideological distance between the furthest-left party represented in the cabinet to the furthest-right party represented in the cabinet. Following Coppedge (1997), Saez and Freidenberg (2001) and Neto (2006a), each governing party was assigned to a numeric value (from -1 to 1) in a left-right ideological continuum: Left = -1; center-left = -0.5; center = 0; center-right = 0.5, and; right = 1. Thus, the ideological dispersion of the cabinet can be expressed as $|P_{fl} - P_{fr}|$, where P_{fl} = the ideological position on the left-right continuum of the furthest-left party represented in the cabinet, and P_{fr} = the ideological position on the left-right continuum of the furthest-right party represented in the cabinet. The variable thus ranges from 0—absence of ideological heterogeneity, or a cabinet ideologically homogeneous—to 2—maximum ideological heterogeneity.

In the sample, there are 16 homogeneous cabinets, and nine observations with the maximum heterogeneity value. Ideologically homogeneous cabinets are less vulnerable to conflict and disagreements on policy choices. In other words, the conflict of interest within the coalition intensifies as the ideological dispersion of the cabinet increases, which therefore increases the polarization of the cabinet. Thus, I expect that the higher the ideological dispersion, the higher the likelihood of a cabinet termination.

Majority Status. A dichotomous variable indicating that the coalition government has the majority of seats in the legislative branch. As the opportunity for forming coalition governments depends on the partisan distribution of seats in the legislature (Cheibub, Przeworski, and Saiegh, 2004), when the parties holding portfolios have less than 50 percent of the legislative seats, the coalition is considered a minority coalition (and the variable receives a value of 0). When the governing parties have more than 50 percent of the legislative seats, the coalition is considered a majority coalition (and the variable receives a value of 1). Sixty-one percent of the cabinets included in the sample were cabinets with a majority status.

In order to increase the chance of having her policy agenda approved in the legislature, the president seeks a higher support of voters among the legislators in the legislative branch. In other words, when the coalition only forms a minority in congress, the president's agenda becomes more unlikely to be approved. Thus, the expected strategy of the president to

overcome this problem is to distribute portfolios to more parties, increasing the coalition size or changing the set of parties that compose it. If the president's party, combined with the other governing parties, already have the majority in the legislative branch, the president has no incentives to change or add more parties to the coalition. In this sense, in the presence of a coalition with a majority status, I expect that a cabinet termination is less likely.

Cabinet Coalescence Rate. One of the factors suggested by the literature in explaining the durability of cabinets in presidential systems is the deviation from the proportionality between the number of ministries held by the governing parties and the number of legislative seats these parties hold in the legislature (Amorim Neto, 2006a). In this study, I use the cabinet coalescence rate suggested by Neto (2006a; 2006b) to measure the proportionality of portfolio distribution, that can be expressed as:

$$Coalescence = 1 - \frac{\sum_{i=1}^{n}(|s_i - p_i|)}{2}$$

Where s_i= the percentage of legislative seats governing party i holds when the cabinet is appointed, and; p_i = the proportion of portfolios governing party i receives from the total of available portfolios.

The coalescence rate varies between 0—no correspondence between cabinet shares and legislative seats—and 1—perfect correspondence between cabinet shares and legislative weights. In Neto's definition (2000b, p. 4), cabinet coalescence "measures how the distribution of cabinet posts is roughly weighed *vis-à-vis* the dispersion of legislative seats across the legislative contingent of the parties joining the executive."

The cabinets included in the sample have a very high coalescence rate, with a mean of 0.94, and a standard deviation of 0.05. The less proportional cabinet was the first cabinet formed by the Uruguayan President Luis Herrera in 1990 (coalescence = 0.74), and a perfect proportional cabinet (coalescence = 1) was formed by the Colombian President Cesár Trujillo, also in 1990.

According to Neto (2000a), the more proportional the distribution of portfolios among the

coalition's members—based on their legislative strength—the higher is the legislative discipline of these members. Thus, it is expected that the greater the cabinet coalescence, the less likely is a cabinet termination. This makes sense, because if the government is receiving support from the parties that comprise the coalition, there is no incentive, *ceteris paribus*, for the president to change the cabinet.

Effective Number of Parties (ENP). This variable is the Laakso and Taagepera's (1979) measurement of the fragmentation of the party system in the legislative branch. That is, $ENP = \frac{1}{\sum_{i=1}^{n} s_i^2}$, where s_i = percentage of legislative seats the governing party i holds when the cabinet is appointed. The mean value for this variable in the sample is 5.36 parties, with a standard deviation of 2.27 parties. The less fragmented party system is Colombia's in 1986 (ENP = 1.98), and the most fragmented party systems is Brazil's between 1992 and 1993 (ENP = 9.34).

The higher the legislative fractionalization, the lower the president's party size (Mainwaring, 1993; Mainwaring and Shugart, 1997; Jones, 1995), and consequently, the greater the incentive for the president to form coalitions (Chasquetti, 2001; Cheibub, 2007). Also, according to Chasquetti (2001), an extremely fragmented system (ENP $>$ 4) should be more problematic for government stability in presidential systems due to less legislative support for the president. Thus, I expect that the higher the legislative fractionalization, the higher the likelihood of a cabinet termination.

4.3 Method: The Cox Proportional Hazards Model

When the duration of the presidential cabinets—measured by the number of days the cabinet lasts until it terminates—is used as the dependent variable, traditional regression techniques such as OLS-type should be avoided (Box-Steffensmeier and Jones, 2004). First, because the dependent variable is the duration, it cannot assume negative values. The time to failure or the time to the termination of the event is thus always positive. But more importantly, the problem with using OLS to analyze event history data lies with the assumed distribution of the residuals. In linear regression, the residuals are assumed to be distributed normally, but

the assumption of normality of time to an event may be unreasonable. It is unreasonable, for instance, if we are thinking about an event that has a likelihood of terminating instantaneously that is constant over time. In that case, the distribution of time would follow an exponential distribution.

In this sense, a common approach to estimate duration models is to assume a probability distribution function for the duration of the event, for example, a Weibull, an exponential, or a logistic distribution, and estimate the probability for the duration with the method of maximum likelihood. King, Alt, Burns and Laver (1990) and Warwick (1992), for instance, used parametric methods to understand coalition durations in parliamentary systems. Both studies had strong theoretical expectations regarding the distribution of the residuals. The downside of this approach is that the results are quite sensitive to the chosen distribution function, and if the distribution of failure times is parameterized incorrectly, then the interpretations afforded by parametric models could be misleading and may not make substantive sense (Box-Steffensmeier and Jones, 2004).

The theory developed in this study is less focused on the notion of time-dependency, and more focused on the relationship between the cabinet duration and independent variables of theoretical interest that vary over time. Thus, in order to estimate the model of cabinet duration, I use the Cox proportional hazards model with time-varying covariates (Cox, 1972; Cox and Oakes, 1984; Fisher and Lin, 1999; Box-Steffensmeier and Jones, 2004; Martinussen and Scheike, 2006; Thomas and Reyes, 2014). The advantage of this approach is that we can leave the particular distribution form for the duration dependency unspecified,[6] and it has been shown to be preferable on both substantive and statistical grounds to parametric models (Box-Steffensmeier and Jones, 2004, p. 48).[7]

[6]The Cox model is considered a "semi-parametric" model. As described by Box-Steffensmeier and Jones (2004, p. 49), "the (ordered) duration times are parameterized in terms of a set of covariates, but the particular distributional form of the duration times is not parameterized."

[7]The Cox model is also preferred for dealing with right-censoring data—subjects that we do not or cannot observe long enough for all of them to fail. In the sample data I am using, however, there is no censoring; the full duration time of cabinets are observed. Nevertheless, left-truncation could be present in the data when history prior to the first observed cabinet in a country is unobserved. The fact that only Latin American presidential systems are included in this study minimizes this problem, because the first observation for each country in the dataset is usually the first cabinet formed in the current democratic era of the country (any

The specification of the full model to be estimated is:

$$h_i(t) = h_0(t)exp(\beta_1 log(inf_t) + \beta_2 unemp_t + \beta_3 presapp_t + \beta_4 GDP_t + \mathbf{x}_i'\alpha) \quad (1)$$

Where $h_i(t)$ is the hazard function for cabinets' duration—the dependent variable; $h_0(t)$ is the baseline hazard function—a term that depends on time, but where the independent variables = 0; the main time-varying independent variables (subscripted with t) inflation (*log(inf)*), unemployment (*unemp*), presidential approval rating (*presapp*), and GDP growth (*GDP*) enter in the model linearly with parameter estimates vector β, and; $\mathbf{x}_i'$ is a vector of observations on the control variables with parameter estimates vector α. There is no error term in the equation, because the randomness is implicit to the survival process. Also, because the baseline hazard rate is left unspecified, the result from the Cox regression model contains no constant term. This term is "absorbed" into the baseline hazard function $h_0(t)$, and for this reason the method for estimation of the Cox regression model is called maximum "partial" likelihood (Cox, 1975).

5 Results and Discussion

In interpreting the coefficients of a Cox proportional hazards model, the dependent variable is the hazard rate of the duration of the cabinet. In other words, the hazard rate refers to the likelihood that a cabinet will terminate at a particular point in time, given that it has not yet fallen. Therefore, higher hazard rates—positive estimate coefficients—represent a higher likelihood and, consequently, a shorter duration of the cabinet. Negative estimate coefficients, in turn, represent a reduction in the likelihood of termination, and consequently, a longer duration of the cabinet.

Table 1 presents estimate coefficients for four Cox regression models. Due to 10 missing values in the independent variable "presidential approval rate," in the first model I decided to remove this variable in order to keep all observations. The second model is the full model, as depicted in Equation 1 above. Latin American presidential systems are political and socially

coalition formed in country's non-democratic period is not included in the analysis).

diversified, and thus generalizing the region's governments can lead to unreliable results. In order to control for country specificities, I also present the estimates for the first model with country fixed-effects (Model 3) and for the second model with country fixed-effects (Model 4). To echo Schofield and Laver's argument (1985, p. 143) for the parliamentary context, "differences between countries are at least as significant as those between theories."[8]

By exponentiating Cox estimates from Table 1, the coefficients turn into the metric of hazard ratios, and with this we can make better substantial inferences. Table 1 presents the results in terms of the hazard ratio *italics*. As such, hazard ratios greater than 1 imply that the likelihood (or hazard) of cabinet termination increases as the value of the independent variable increases, thus resulting in a shorter cabinet duration. Hazard ratios smaller than 1, in turn, imply that the likelihood (or hazard) of cabinet termination decreases as the value of the independent variable increases, thus resulting in a longer cabinet duration. In contrast, hazard ratios close to 1—as in the case of the parameters for "GDP growth" and "presidential approval"—imply that the hazard rate is essentially invariant to changes in the independent variable, i.e. the coefficient has no effect on increasing (or decreasing) the hazard of cabinet duration.

[8]In order to save space, the non-significant results for the fixed-effects terms for countries were omitted from Table 1. The results for these terms can be viewed in Appendix F of the Appendix Material.

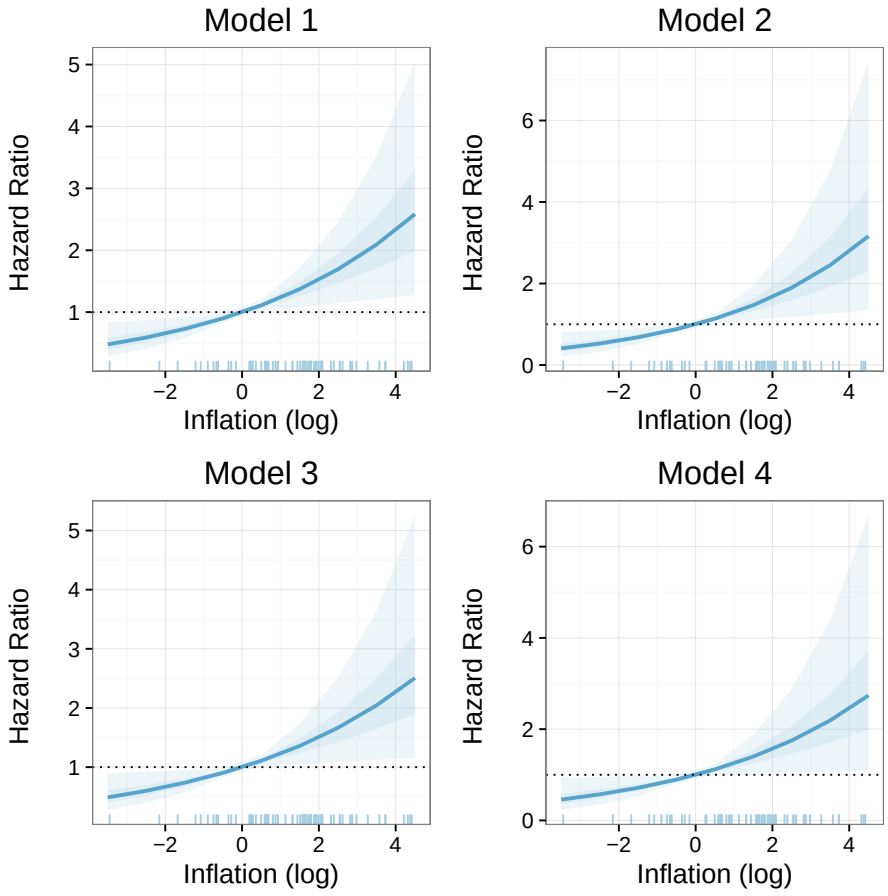
Table 1: Cox Model Estimates of Cabinet Duration by Economic Indicators, President's Approval Rating, and Control Variables

	Model 1		Model 2		Model 3		Model 4	
	Coefficient	*exp(coeff.)*	Coefficient	*exp(coeff.)*	Coefficient	*exp(coeff.)*	Coefficient	*exp(coeff.)*
Inflation (log)	**0.208****	***1.231***	**0.263****	***1.301***	**0.204***	***1.227***	**0.222***	***1.249***
	(0.091)		(0.119)		(0.106)		(0.127)	
Unemployment	**0.096***	***1.101***	**0.108***	***1.114***	−0.038	*0.963*	−0.033	*0.967*
	(0.052)		(0.064)		(0.081)		(0.099)	
GDP Growth	0.021	*1.021*	0.015	*1.016*	−0.004	*0.996*	−0.015	*0.985*
	(0.032)		(0.033)		(0.043)		(0.044)	
Presidential Approval			0.006	*1.006*			0.009	*1.009*
			(0.015)				(0.018)	
Cycle	−0.306	*0.736*	−0.184	*0.832*	−0.379	*0.685*	−0.125	*0.882*
	(0.410)		(0.456)		(0.425)		(0.475)	
Size of the Coalition	0.111	*1.117*	0.078	*1.081*	**0.393****	***1.482***	**0.373***	***1.452***
	(0.123)		(0.141)		(0.162)		(0.194)	
Legislative Power (IPIL)	0.626	*1.870*	0.784	*2.189*	5.505	*245.894*	5.311	*202.539*
	(1.444)		(1.579)		(4.640)		(4.894)	
Ideological Dispersion	−0.109	*0.896*	−0.128	*0.880*	−0.070	*0.933*	−0.250	*0.778*
	(0.281)		(0.318)		(0.417)		(0.468)	
Majority Status	−0.138	*0.871*	−0.135	*0.874*	0.151	*1.163*	0.256	*1.292*
	(0.334)		(0.362)		(0.416)		(0.442)	
Cabinet Coalescence	2.317	*10.140*	1.843	*6.314*	1.525	*4.596*	1.733	*5.656*
	(2.150)		(2.299)		(2.994)		(3.032)	
Fragmentation (ENP)	**0.316*****	***1.371***	**0.352*****	***1.422***	**0.450*****	***1.568***	**0.412****	***1.510***
	(0.106)		(0.121)		(0.162)		(0.164)	
Brazil					**−2.344***	***0.096***	−2.298	*0.101*
					(1.376)		(1.413)	
Chile					**−3.373***	***0.034***	**−3.638***	***0.026***
					(2.029)		(2.135)	
N	79		69		79		69	
R^2	0.360		0.367		0.533		0.530	
Log Likelihood	−251.667		−210.429		−239.188		−200.121	
Wald Test	34.230***		30.560***		51.600***		44.280***	
LR Test	35.248***		31.522***		60.205***		52.139***	
Score (Logrank) Test	37.429***		34.496***		61.750***		54.677***	

Notes: Dependent variable: Hazard ratios of cabinet duration = exp(coefficients). Standard errors of the (non-exponentiate) coefficients in parenthesis: *p<0.1; **p<0.05; ***p<0.01. Two-tailed test. Statistically significant estimates are in **bold**.

As we can see in Table 1, and depicted graphically in Figure 1, inflation is statistically significant in all models among the main independent variables. With a positive coefficient estimate for inflation, as the value for inflation increases, the hazard rate increases, thus decreasing the duration of the cabinet. Substantively, as inflation increases by one-unit, the likelihood of a cabinet termination increases to almost 25 percent in models 1, 2, and 3, and by 30 percent in the model with random effects including presidential approval (model 2). This result supports the first hypothesis of this study, according to which as the country's inflation rate increases, a shorter duration of the cabinet is expected.

Figure 1: Hazard Ratios of Cabinet Duration by Inflation

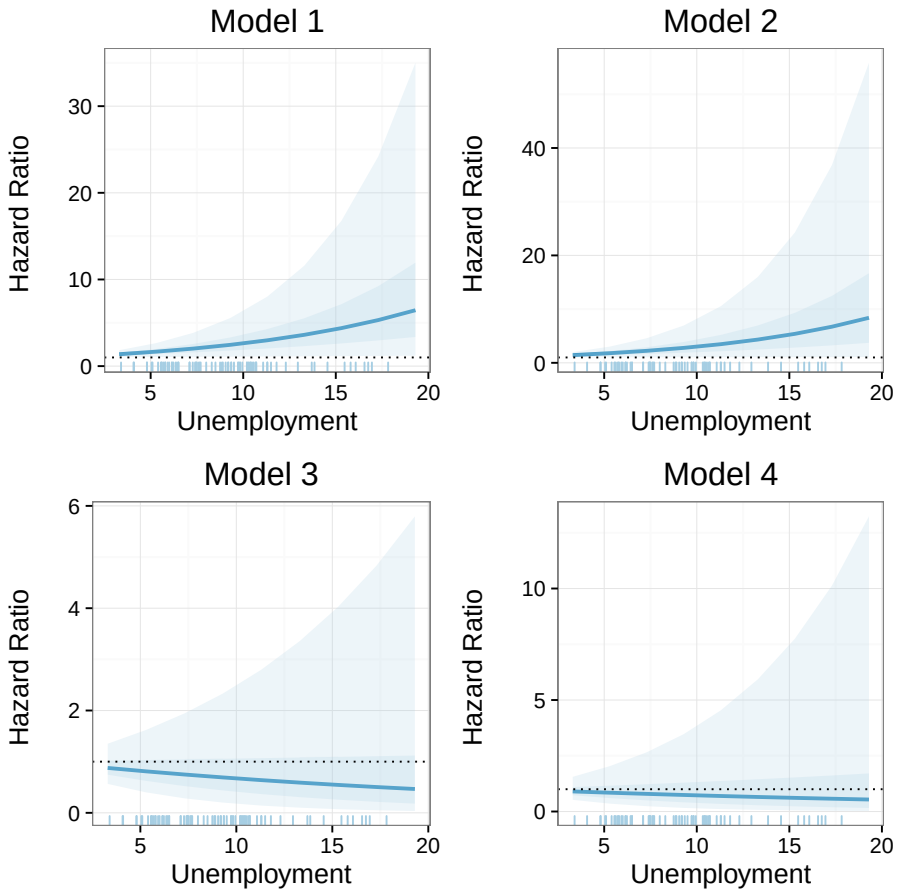


Note: Dashed-line at $y = 1$. Hazard ratios greater than 1 imply that the likelihood is increasing as the value of the independent variable increases, thus resulting in a shorter cabinet duration. Hazard ratios smaller than 1, in turn, imply that the likelihood of cabinet termination decreases as the value of the independent variable increases, thus resulting in a longer cabinet duration. The plot is visually weighted, i.e. the darker areas of the graph have a higher concentration of hazard ratios simulation by the independent variable of interest. Confidence intervals at level 0.1.

The second hypothesis—as the country's unemployment rate increases, a shorter dura-

tion of the cabinet is also expected—is partially supported by the results. The estimate for unemployment is positive and statistically significant in the random-effects models (model 1 and model 2) (see Figure 2 below). Substantively, as the unemployment rate increases by 1 percent, the likelihood of a cabinet termination increases by close to 10 percent.

Figure 2: Hazard Ratios of Cabinet Duration by Unemployment



Note: Dashed-line at $y = 1$. Hazard ratios greater than 1 imply that the likelihood is increasing as the value of the independent variable increases, thus resulting in a shorter cabinet duration. Hazard ratios smaller than 1, in turn, imply that the likelihood of cabinet termination decreases as the value of the independent variable increases, thus resulting in a longer cabinet duration. The plot is visually weighted, i.e. the darker areas of the graph have a higher concentration of hazard ratios simulation by the independent variable of interest. Confidence intervals at level 0.1.

Although hypotheses 1 and 2 are supported by the results of this study, hypotheses 3 and 4 are not. "GDP growth" and "presidential approval" are not statistically significant in any model, and their hazard ratios are close to 1, implying no effect on cabinet duration. This is an interesting finding, and may indicate that in their calculus of whether or not to stay in the government, the governing parties are more attentive to factors that affect their voters

directly, such as inflation and unemployment.

Regarding the control variables, it is noteworthy that the results do not support the "tyranny of the electoral calendar" hypothesis. An increase in the independent variable "cycle"—meaning that a new election is closer—results in a estimate not statistically significant and in the opposite direction expected by the "tyranny of the electoral calendar" hypothesis. According to the theory proposed in this study, these results go in favor of the expected outcomes. That is, when the model specified includes factors such as economic indicators, no relationship between the elapsing of the president's term and the cabinet termination is found.

The estimates for the variables "size of the Coalition" and "effective number of parties (ENP)" are the only statistically significant control variables. It indicates that both the fragmentation within the coalition and the fragmentation of the party systems are—along with inflation and unemployment—strong predictors of cabinet termination. As the coalition increases by one more party, the likelihood of a cabinet termination increases by almost 50 percent (statistically significant at level 0.05 in model 3, and at level 0.1 in model 4). The estimate for ENP, in turn, is significant at and below level 0.05 in all models. A one-unit increase in ENP increases the likelihood of a cabinet termination by almost 40 percent in models 1 and 2, and by a little more than 50 percent in fixed-effect models 3 and 4.

These results show that the effects of the fragmentation of the coalition and of the fragmentation of the party system are stronger than the effects of inflation and unemployment on cabinet duration. This reveals the importance of also considering institutional structures in presidential systems—related to the fact that these structures can change the incentives for the coalition formation. Nevertheless, the results for the economic indicators—inflation and unemployment—reveal that the termination of coalition follows a logic that fits a rational behavior of the coalition's members. When the government is successful in controlling inflation and unemployment, cabinet termination becomes less likely.

6 Conclusions

In this study, I aimed to fill a major gap in the theoretical explanation of coalition termination in presidential democracies by suggesting an answer to the question: Whether and under what conditions are cabinet terminations more likely to happen in presidential systems? I proposed a theoretical framework in which I adapt elements from the literature on cabinet survival in parliamentary systems to the context of presidential systems. Considering that presidents have some exclusive powers to form and reshuffle cabinets, I suggested that the termination of a cabinet in presidential systems depends on contextual factors such as economic conditions—inflation, unemployment, and economic growth—and the approval ratings of the president.

The results of this study partially support the hypotheses tested. Among the main independent variables, inflation and unemployment rates were found to have an effect on cabinet breakdown. As the country's inflation and unemployment rates increase, the duration of the cabinet decreases. Nevertheless, the effect of unemployment was found only for the random-effects models, suggesting that this effect may actually be nested on countries' specificities, particularly for Brazil and Chile.[9] The results also show that the fragmentation within the cabinet and the party system are strong predictors of cabinet termination, revealing the importance of also considering institutional structures in the analysis.

These results are similar to some findings regarding parliamentary systems. Warwick (1992), for example, investigated the linkage between the trends of economic indicators and government survival in 16 European parliamentary systems and found that both inflation and unemployment are important explanatory factors for cabinet termination. Saalfeld (2008) and Bergman (2015) also found that in parliamentary systems, cabinets facing unfavorable macroeconomic situations have an increased risk of breakdown. Also, the polarization and fractionalization of the party system were seen to be important factors on cabinet stability in parliamentary studies (King, Alt, Burns, and Laver 1990; Laver and Schofield, 1990; Warwick, 1994; Diermeier and Stevenson, 1999). According to these studies, the more ideologically

[9] See the results with country fixed-effects in Figure 7 in Appendix F.

diversified and fractionalized the party system, the higher the likelihood of early cabinet terminations (Laver and Schofield, 1990).

In sum, whether in parliamentary systems or presidential systems, cabinet termination has to be understood as the result of rational actors calculating the pros and cons of being associated with the current government coalition. As shown in this study, in their calculation of whether or not to stay in the government, governing parties are attentive to factors that affect their voters directly, such as inflation and unemployment rates. Regarding the presidential system context, the factors that make the termination of a coalition government more likely are neither inherent structural problems nor the "tyranny of the electoral calendar."

Although this study was restricted to Latin American democracies, the theory proposed here is not restricted to these cases. The issue examined here has broader impacts beyond Latin America, particularly in new presidential democracies outside the Americas, including South Korea, the Philippines, and several countries in Africa. The availability of new data will make it possible to test the theory proposed here in a broader comparative perspective.

As new data become available, other covariates that can affect cabinet termination but could not be considered in this study can also enter into the analysis, such as the effects of corruption and political scandals. Moreover, the results from this study raise new questions that can be examined in future research. For example, why do some cabinets that are faced with unfavorable economic and political conditions dissolve immediately, while other cabinets do not? This is a potential research question for further studies on a topic that has only recently begun to receive more attention from scholars of presidential systems.

References

Alemán, Eduardo, and George Tsebelis. 2011. "Political Parties and Government Coalitions in the Americas." *Journal of Politics in Latin America* 3 (1): 3–28.

Alt, James, and Gary King. 1994. "Transfers of Governmental Power: The Meaning of Time Dependence." *Comparative Political Studies* 27 (2): 190–210.

Altman, David. 2000a. "Coalition Formation and Survival under Multiparty Presidential Democracies in Latin America: Between the Tyranny of the Electoral Calendar, the Irony of Ideological Polarization, and Inertial Effects." *Paper presented at the Meeting of the Latin American Studies Association, Hyatt Regency, Miami.*

Altman, David. 2000b. "The Politics of Coalition Formation and Survival in Multiparty Presidential Democracies: The Case of Uruguay, 1989-1999." *Party Politics* 6 (3): 259–283.

Amorim Neto, Octavio. 2000a. "Gabinetes Presidenciais, Ciclos Eleitorais e Disciplina Legislativa no Brasil." *Dados* 43 (3): 1–25.

Amorim Neto, Octavio. 2000b. "Presidential Cabinets, Electoral Cycles, and Coalition Discipline in Brazil." *Working Paper*: 1–29.

Amorim Neto, Octavio. 2006a. *Presidencialismo e Governabilidade nas Américas*. Rio de Janeiro: FGV; Konrad Adenauer Stiffung.

Amorim Neto, Octavio. 2006b. "The Presidential Calculus: Executive Policy Making and Cabinet Formation in the Americas." *Comparative Political Studies* 39 (4): 415–440.

Araújo, Victor. 2016. "Mecanismos de Alinhamento de Preferências em Governos Multipartidários: Controle de Políticas Públicas no Presidencialismo Brasileiro." *Dissertation defended at University of São Paulo (PhD Degree in Political Science), São Paulo.*

Araújo, Victor, Andrea Freitas and Marcelo Vieira. 2015. "Parties and Control Over Policy: The Presidential Logic of Government Formation." *Paper presented at 73rd Annual Conference of the Midwest Political Science Association. Chicago.*

Bergman, Torbjörn, Svante Ersson, and Johan Hellström. 2015. "Government Formation and Breakdown in Western and Central Eastern Europe." *Comparative European Politics* 13 (3): 345–375.

Box-Steffensmeier, Janet, and Bradford Jones. 2004. *Event History Modeling: A Guide for Social Scientists*. Cambridge: Cambridge University Press.

Carlin, Ryan, Cecilia Martínez-Gallardo, and Jonathan Hartlyn. 2012. "Executive Approval Dynamics under Alternative Democratic Regime Types." In *Institutions and Democracy: Essays in Honor of Alfred Stepan*, ed. Douglas Chalmers and Scott Mainwaring. South Bend: University of Notre Dame Press.

CEBRAP. 2015. "Legislative Dataset of the Brazilian Center of Analysis and Planning (CEBRAP)." http://neci.fflch.usp.br/node/506.

Chasquetti, Daniel. 1999. "Compartiendo el Gobierno: Multipartidismo y Coaliciones en Uruguay (1971-1997)." *Revista Uruguaya de Ciencia Política* 10: 25–46.

Chasquetti, Daniel. 2001. "Democracia, Multipartidismo y Coaliciones en América Latina: Evaluando La Difícil Combinación." In *Tipos de Presidencialismo y Coaliciones Políticas en América Latina*, ed. Jorge Lanzaro. Buenos Aires: CLACSO - Consejo Latinoamericano de Ciencias Sociales.

Cheibub, José Antonio. 2007. *Presidentialism, Parliamentarism, and Democracy*. Cambridge: Cambridge University Press.

Cheibub, José Antonio, Adam Przeworski, and Sebastián Saiegh. 2004. "Government Coalitions and Legislative Success Under Presidentialism and Parliamentarism." *British Journal of Political Science* 34: 565–587.

Cheibub, José Antonio, and Fernando Limongi. 2002. "Democratic Institutions and Regime Survival: Parliamentary and Presidential Democracies Reconsidered." *Annual Review of Political Science* 5: 151–179.

Cheibub, José Antonio, and Fernando Limongi. 2011. "From Conflict to Coordination: Perspectives on the Study of Executive-Legislative Relations." *Iberian-American Journal of Legislative Studies* 1 (1): 38–53.

Cheibub, José Antonio, Jennifer Gandhi, and James Vreeland. 2010. "Democracy and Dictatorship Revisited." *Public Choice* 143 (1-2): 67–101.

Cheibub, José Antonio, Zachary Elkins, and Tom Ginsburg. 2014. "Beyond Presidentialism and Parliamentarism." *British Journal of Political Science* 44 (3): 284–312.

Collier, David, and Robert Adcock. 1999. "Democracy and Dichotomies: A Pragmatic Approach to Choices about Concepts." *Annual Review of Political Science* 2: 537–565.

Coppedge, Michael. 1997. "A Classification of Latin American Politicla Parties." *Kellog Institute, Working Paper* 244.

Cox, David. 1972. "Regression Models and Life Tables." *Journal of the Royal Statistical Society* 34: 187–220.

Cox, David. 1975. "Partial Likelihood." *Biometrika* 62: 269–276.

Cox, David, and David Oakes. 1984. *Analysis of Survival Data*. New York: Chapman and Hall.

Deheza, Grace Ivana. 1998. "Gobiernos de Coalición en el Sistema Presidencial: América del Sur." In *El Presidencialismo Renovado: Instituciones y Cambio Político en América Latina*, ed. Dieter Nohlen and Mario Fernández B. Caracas: Nueva Sociedad.

Diermeier, Daniel, and Randy Stevenson. 1999. "Cabinet Survival and Competing Risks." *American Journal of Political Science* 43 (4): 1051–1068.

Druckman, James, and Michael Thies. 2002. "The Importance of Concurrence: The Impact of Bicameralism on Government Formation and Duration." *American Journal of Political Science* 46 (4): 760–771.

EAP. 2015. "The Executive Approval Project (EAP)." http://www.executiveapproval.org.

Falcó-Gimeno, Albert, and Indridi Indridason. 2013. "Uncertainty, Complexity, and Gamson's Law: Comparing Coalition Formation in Western Europe." *West European Politics* 36 (1): 221–247.

Figueiredo, Argelina. 2007. "Government Coalitions in Brazilian Democracy." *Brazilian Political Science Review* 1 (2): 182–216.

Figueiredo, Argelina, Denise Salles, and Marcelo Vieira. 2009. "Political and Institutional Determinants of the Executive's Legislative Success in Latin America." *Brazilian Political Science Review* 3 (2): 155–171.

Figueiredo, Argelina, and Fernando Limongi. 1999. *Executivo e Legislativo na Nova Ordem Constitucional*. Rio de Janeiro: FGV.

Figueiredo, Argelina, and Fernando Limongi. 2007. "Instituições Políticas e Governabilidade: Desempenho do Governo e apoio Legislativo na Democracia Brasileira." In *A Democracia Brasileira. Balanço e Perspectivas para o Século 21*, ed. C. Melo and M. Sáez (Eds.). Belo Horizonte: Editora UFMG.

Fisher, Lloyd, and Danyu Lin. 1999. "Time-Dependent Covariates in the Cox Proportional-Hazards Regression Model." *Annual Review of Public Health* 20: 145–157.

Freitas, Andrea. 2013. "O Presidencialismo da Coalizão." *Dissertation defended at University of São Paulo (PhD Degree in Political Science), São Paulo.*

Grofman, Bernard, and Peter van Roozendaal. 1994. "Toward a Theoretical Explanation of Premature Cabinet Termination." *European Journal of Political Research* 26 (2): 155–170.

Grofman, Bernard, and Peter van Roozendaal. 1997. "Modelling Cabinet Durability and Termination." *British Journal of Political Science* 27 (03): 419–451.

Indridason, Indridi, and Christopher Kam. 2008. "Cabinet Reshuffles and Ministerial Drift." *British Journal of Political Science* 38 (621–656).

Jones, Mark. 1995. *Electoral Laws and the Survival of Presidential Democracies*. South Bend: Notre Dame University Press.

King, Gary, James Alt, Nancy Burns, and Michael Laver. 1990. "A Unified Model of Cabinet Dissolution in Parliamentary Democracies." *American Journal of Political Science* 34 (3): 846–871.

Laakso, Helsinki M., and Irvine R. Taagepera. 1979. "Effective Number of Parties: A Measure with Application to West Europe." *Comparative Political Studies* 12: 3–27.

Lanzaro, Jorge, ed. 2001. *Tipos de Presidencialismo y Coaliciones Políticas en América Latina*. Buenos Aires: CLACSO - Consejo Latinoamericano de Ciencias Sociales.

Laver, Michael, and Kenneth Shepsle. 1994. *Cabinet Ministers and Parliamentary Government*. Cambridge: Cambridge University Press.

Laver, Michael, and Norman Schofield. 1990. *Multiparty Government: The Politics of Coalition in Europe*. Ann Arbor: The University of Michigan Press.

Limongi, Fernando. 2003. "Formas de Governo, Leis Partidárias e Processo Decisório." *BIB-Revista Brasileira de Informação Bibliográfica em Ciências Sociais* 55: 7–40.

Linz, Juan. 1990. "The Perils of Presidentialism." *Journal of Democracy* 1 (1): 51–69.

Linz, Juan. 1994. "Presidential or Parliamentary Democracy: Does It Make a Difference?" In *The Failure of Presidential Democracy: The Case of Latin America*, ed. Juan Linz and Arturo Valenzuela. Baltimore: Johns Hopkins University Press.

Lupia, Arthur, and Kaare Strøm. 1995. "Coalition Termination and the Strategic Timing of Parliamentary Elections." *American Political Science Review* 89 (3): 648–665.

Mainwaring, Scott. 1993. "Presidentialism, Multipartism and Democracy: The Difficult Combination." *Comparative Political Studies* 26 (2): 198–228.

Mainwaring, Scott, and Matthew Shugart. 1997. *Presidentialism and Democracy in Latin America*. Cambridge: Cambridge University Press.

Martínez-Gallardo, Cecilia. 2012. "Out of the Cabinet: What Dries Defections From the Government in Presidential Systems?" *Comparative Political Studies* 45 (1): 62–90.

Martínez-Gallardo, Cecilia. 2014. "Designing Cabinets: Presidential Politics and Ministerial Instability." *Journal of Politics in Latin America* 6 (2): 3–38.

Martinussen, Torben, and Thomas Scheike. 2006. *Dynamic Regression Models for Survival Data*. New York: Springer.

Mayorga, René. 2001. "Presidencialismo Parlamentarizado y Gobiernos de Coalición en Bolivia." In *Tipos de Presidencialismo y Coaliciones Políticas en América Latina*, ed. Jorge Lanzaro. Buenos Aires: CLACSO - Consejo Latinoamericano de Ciencias Sociales.

Melo, Marcus André, and Carlos Pereira. 2013. *Making Brazil Work: Checking the President in a Multiparty System*. New York: Palgrave Macmillan.

Montero, Mercedes García. 2009. *Presidentes y Parlamentos: Â£Quién Controla la Actividad Legislativa en América Latina?* Montalbán: Centro de Investigaciones Sociológicas.

Narud, Hanne Marthe. 1995. "Coalition Termination in Norway: Models and Cases." *Scandinavian Political Studies* 18 (1): 1–24.

Novaro, Marcos. 2001. "Presidentes, Equilibrios Institucionales y Coaliciones de Gobierno en Argentina (1989-2000)." In *Tipos de Presidencialismo y Coaliciones Políticas en América*

Latina, ed. Jorge Lanzaro. Buenos Aires: CLACSO - Consejo Latinoamericano de Ciencias Sociales.

Przeworski, Adam, Michael Alvarez, José Antonio Cheibub, and Fernando Limongi. 2000. *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990*. Cambridge: Cambridge University Press.

Robertson, John. 1983a. "Inflation, Unemployment, and Government Collapse: A Poisson Application." *Comparative Political Studies* 15 (4): 425–444.

Robertson, John. 1983b. "The Political Economy and the Durability of European Coalition Cabinets: New Variations on a Game-Theoretic Perspective." *The Journal of Politics* 45 (4): 932–957.

Robertson, John. 1984. "Toward a Political-Economic Accounting of the Endurance of Cabinet Administrations: An Empirical Assessment of Eight European Democracies." *American Journal of Political Science* 28 (4): 693–709.

Saafeld, Thomas. 2008. "Institutions, Chance, and Choices: The Dynamics of Cabinet Survival." In *Cabinets and Coalition Bargaining: The Democratic Life Cycle in Western Europe*, ed. Kaare Strøm, Wolfgang Müller, and Torbjörn Bergman. Oxford: Oxford University Press.

Saez, Manuel Alcántara and Flavia Freidenberg, eds. 2001. *Partidos Políticos de América Latina.* Salamanca: Ediciones Universidad.

Sanders, David, and Valentine Herman. 1977. "The Stability and Survival of Governments in Western Democracies." *Acta Politica* 12 (3): 346–377.

Schofield, Norman, and Michael Laver. 1985. "Bargaining Theory and Portfolio Payoffs in European Coalition Governments, 1945-1983." *British Journal of Political Science* 15 (2): 143–164.

Shugart, Matthew, and John Carey. 1992. *Presidents and Assemblies: Constitutional Design and Electoral Dynamics*. Cambridge: Cambridge University Press.

Siavelis, Peter. 2000. *The President and Congress in Post-Authoritarian Chile: Institutional Constraints to Democratic Consolidation*. University Park: Pennsylvania State University Press.

Silva, Thiago. 2016. "Who Gets What? The Importance of Ministerial Budget in the Allocation of Portfolios in Presidential Multiparty Systems." *Paper presented at the XXXIV International Congress of the Latin American Studies Association, New York City, NY, USA*.

Stepan, Alfred, and Cindy Skach. 1993. "Constitutional Frameworks and Democratic Consolidation: Parliamentarianism versus Presidentialism." *World Politics* 46 (1): 1–22.

Strøm, Kaare. 1984. "Minority Governments in Parliamentary Democracies: The Rationality of Nonwinning Cabinet Solutions." *Comparative Political Studies* 17 (2): 199–227.

Strøm, Kaare. 1988. "Contending Models of Cabinet Stability." *American Political Science Review* 82 (3): 738–754.

Strøm, Kaare. 1990. *Minority Government and Majority Rule*. Cambridge: Cambridge University Press.

Strøm, Kaare, Wolfgang Müller, and Torbjörn Bergman, ed. 2008. *Cabinets and Coalition Bargaining: The Democratic Life Cycle in Western Europe*. Oxford: Oxford University Press.

Taylor, Michael, and Valentine Herman. 1971. "Party Systems and Government Stability." *American Political Science Review* 65 (1): 28–37.

The World Bank. 2014. "World Bank Open Data: Economic Indicators." http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG.

Thomas, Laine, and Eric Reyes. 2014. "Tutorial: Survival Estimation for Cox Regression Models with Time-Varying Coefficients Using SAS and R." *Journal of Statistical Software* 61 (1): 1–23.

Warwick, Paul. 1992. "Economic Trends and Government Survival in West European Parliamentary Democracies." *American Political Science Review* 86 (4): 875–887.

Warwick, Paul. 1994. *Government Survival in Parliamentary Democracies*. Cambridge: Cambridge University Press.

Appendix Material

Appendix A

Table 2: Data Source

Variable	Source
Duration	Amorim Neto, 2006a; CEBRAP, 2015.
Inflation	EAP, 2015.
Presidential Approval	EAP, 2015.
Unemployment	EAP, 2015.
GDP Growth	The World Bank, 2014.
Cycle	Amorim Neto, 2006a; CEBRAP, 2015.
President's Legislative Power (IPIL)	Montero, 2009.
Size of the Coalition	Amorim Neto, 2006a; CEBRAP, 2015.
Ideological Dispersion	Amorim Neto, 2006a.
Majority Status	Amorim Neto, 2006a; CEBRAP, 2015.
Coalescence	Amorim Neto, 2006a
Effective Number of Parties (ENP)	Amorim Neto, 2006a; CEBRAP, 2015.

Appendix B

Table 3: Independent Variables, Summary Statistics and Expectations

Variable and Summary Statistics	Coding	Expectation
Inflation: $\mu = 22.71$, $\sigma = 43.46$, $N = 82$ $min = -0.58$, $max = 204.54$	Quarterly percentage change in CPI	+
Unemployment: $\mu = 9.29$, $\sigma = 3.56$, $N = 82$ $min = 3.40$, $max - 19.82$	Quarterly percentage of the labor force without work	+
President's Approval Rate: $\mu = 43.30$, $\sigma = 11.91$, $N = 72$ $min = 14.93$, $max = 69.60$	Quarterly percentage of presidential job approval	-
GDP Growth: $\mu = 2.69$, $\sigma = 4.31$, $N = 82$ $min = -11.70$, $max = 11.94$	Annual percentage growth rate of GDP	-
Cycle: $\mu = 0.62$, $\sigma = 0.31$, $N = 82$ $min = 0$, $max = 1.5$	$\frac{T_e - T_{ca}}{T_{co}}$	No relationship
Size of the Coalition: $\mu = 3.50$, $\sigma = 1.62$, $N = 82$ $min = 2$, $max = 8$	Number of parties represented in the cabinet	+
Legislative Power (IPIL): $\mu = 0.50$, $\sigma = 0.08$, $N = 82$ $min = 0.28$, $max = 0.71$	Index of presidential dominance over the lawmaking process	-
Ideological Dispersion: $\mu = 0.85$, $\sigma = 0.66$, $N = 82$ $min = 0$, $max = 2$	$\lvert P_{fl} - P_{fr} \rvert$	+
Majority Status $N = 83$	Dichotomous variable: 1 = cabinet with a majority status; 0 = cabinet with a minority status	-
Cabinet Coalescence Rate: $\mu = 0.94$, $\sigma = 0.05$, $N = 82$ $min = 0.74$, $max = 1$	$1 - \frac{\sum_{i=1}^{n}(\lvert s_i - p_i \rvert)}{2}$	-
Effective Number of Parties (ENP): $\mu = 5.36$, $\sigma = 2.27$, $N = 82$ $min = 1.98$, $max = 9.34$	$\frac{1}{\sum_{i=1}^{n} s_i^2}$	+

Notes: μ =arithmetic mean, and σ = standard deviation. The dependent variable is the hazard rate of cabinet duration. Thus, a negative sign (-) in the column *Expectation* refers to a smaller likelihood of cabinet termination—meaning a longer cabinet duration—as the value for the independent variable increases (keeping all other independent variables constant). A positive sign (+) refers to a greater likelihood of cabinet termination—a shorter cabinet duration—as the value for the independent variable increases (keeping all other independent variables constant).

Appendix C.1

Table 4: Correlation Matrix of Variables (not including Presidential Approval Rating; $N = 82$)

Variable	Duration	Inflation	Unemployment	GDP	Cycle	Coalition Size
Duration	1	-0.167020554	0.129304483	0.022518059	0.10094269	-0.28183733
Inflation	-0.16702055	1	-0.422224931	-0.326982389	0.0604145	0.01195589
Unemployment	0.12930448	-0.422224931	1	0.002938322	0.23432405	-0.08494898
GDP	0.02251806	-0.326982389	0.002938322	1	0.01585105	0.08092697
Cycle	0.10094269	0.060414501	0.234324051	0.015851048	1	-0.02575777
Coalition Size	-0.28183733	0.01195589	-0.084948981	0.080926972	-0.02575777	1
IPIL	0.04194493	-0.069493033	0.247801952	0.181596561	-0.06153467	0.29688428
Ideo. Disper.	-0.08594349	0.1518617	-0.238881967	-0.141759241	0.06367647	0.6246429
Majority Status	0.23861277	-0.008708898	-0.026523238	0.081193756	-0.01240682	0.29506729
Coalescence	-0.25626259	0.229246424	-0.195419035	-0.117169586	-0.16972119	0.04659794
ENP	-0.48608352	0.217125889	-0.402768468	-0.103795132	-0.01040435	0.5166875

Variable	IPIL	Ideo. Disper.	Majority Status	Coalescence	ENP
Duration	0.041944934	-0.085943489	0.238612765	-0.25626259	-0.48608352
Inflation	-0.069493033	0.1518617	-0.008708898	0.22924642	0.21712589
Unemployment	0.247801952	-0.238881967	-0.026523238	-0.19541903	-0.40276847
GDP	0.181596561	-0.141759241	0.081193756	-0.11716959	-0.10379513
Cycle	-0.061534667	0.063676466	-0.012406823	-0.16972119	-0.01040435
Coalition Size	0.296884282	0.624642899	0.29506729	0.04659794	0.5166875
IPIL	1	0.009514306	0.281209609	-0.20846182	-0.0408599
Ideo. Disper.	0.009514306	1	0.349838406	0.1980444	0.35459559
Majority Status	0.281209609	0.349838406	1	0.04017331	-0.28354278
Coalescence	-0.208461816	0.1980444	0.040173312	1	0.17096577
ENP	-0.040859899	0.35459559	-0.283542782	0.17096577	1

Appendix C.2

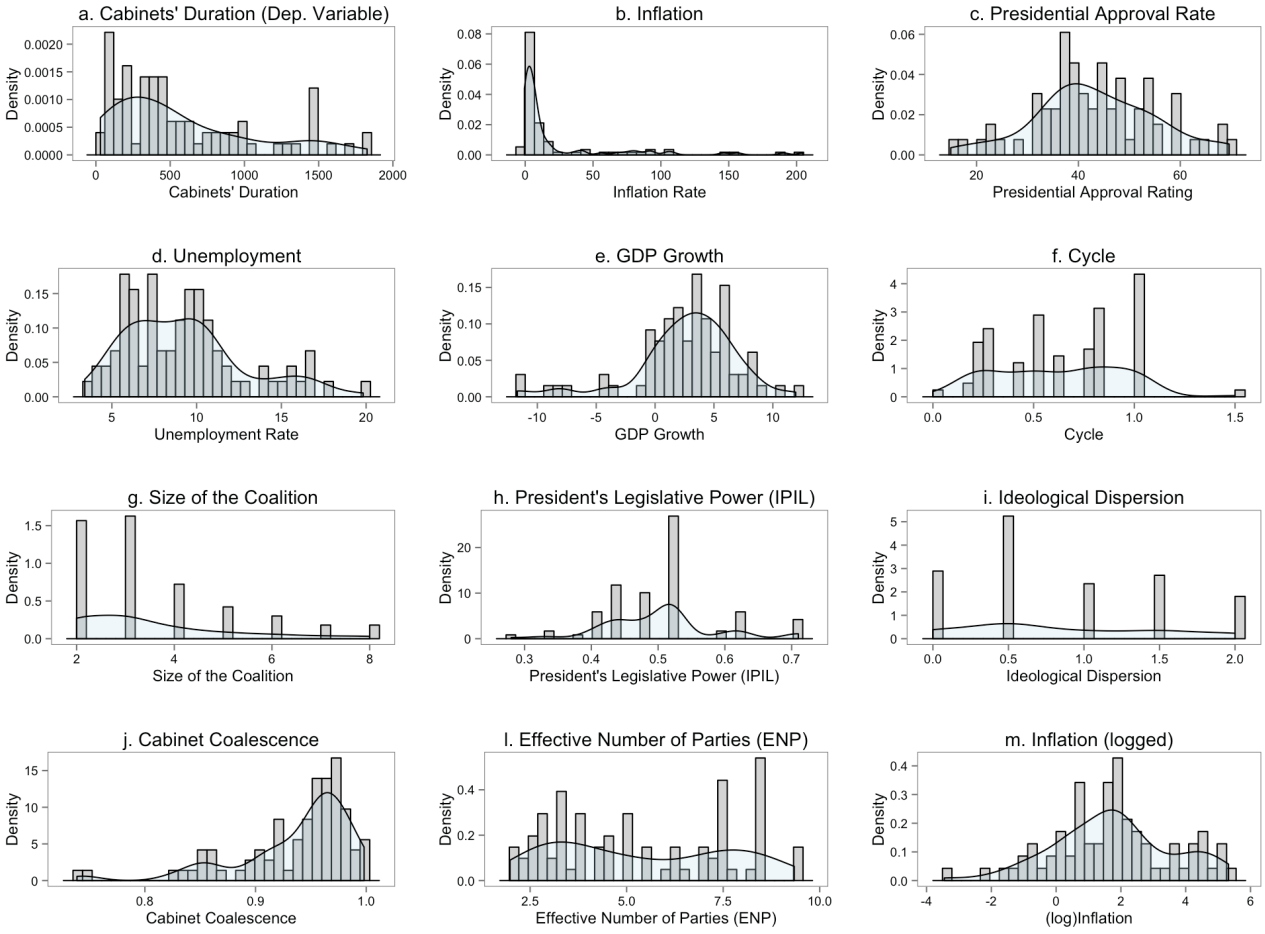
Table 5: Correlation Matrix of Variables (including Presidential Approval Rating; $N = 72$)

Variable	Duration	Inflation	Pres. Approval	Unemployment	GDP	Cycle
Duration	1	-0.151399108	-0.05373539	0.19646092	0.02934272	-0.023492808
Inflation	-0.15139911	1	-0.38603803	-0.44626184	-0.31362722	0.02617391
Pres. Approval	-0.05373539	-0.386038034	1	-0.13410337	0.33348182	-0.270785766
Unemployment	0.19646092	-0.446261836	-0.13410337	1	-0.01299817	0.304493238
GDP	0.02934272	-0.313627218	0.33348182	-0.01299817	1	0.056372521
Cycle	-0.02349281	0.02617391	-0.27078577	0.30449324	0.05637252	1
Coalition Size	-0.25115487	-0.006022411	0.38524029	-0.08661672	0.08647316	0.020699096
IPIL	0.11465104	-0.03172536	0.18663785	0.20022285	0.15324055	-0.000561181
Ideo. Disper.	-0.12297753	0.132179457	0.07529287	-0.20085236	-0.14478612	0.0408607
Majority Status	0.19607245	0.09955671	0.13943784	-0.03423124	0.05373444	-0.018336197
Coalescence	-0.26513325	0.25643878	-0.07203957	-0.23403836	-0.12054863	-0.159321446
ENP	-0.48056211	0.18324502	0.07772415	-0.42864671	-0.09474026	0.024090485

Variable	Coalition Size	IPIL	Ideo. Disper.	Majority Status	Coalescence	ENP
Duration	-0.251154867	0.114651039	-0.12297753	0.19607245	-0.26513325	-0.48056211
Inflation	-0.006022411	-0.03172536	0.13217946	0.09955671	0.25643878	0.18324502
Pres. Approval	0.385240292	0.186637854	0.07529287	0.13943784	-0.07203957	0.07772415
Unemployment	-0.086616716	0.200222851	-0.20085236	-0.03423124	-0.23403836	-0.42864671
GDP	0.086473162	0.153240554	-0.14478612	0.05373444	-0.12054863	-0.09474026
Cycle	0.020699096	-0.000561181	0.0408607	-0.0183362	-0.15932145	0.02409048
Coalition Size	1	0.317352591	0.66056968	0.34239449	0.03241004	0.51875963
IPIL	0.31735259	1	0.07787469	0.30265866	-0.2386624	-0.04277699
Ideo. Disper.	0.660569681	0.07787469	1	0.36414973	0.20811187	0.42679171
Majority Status	0.342394488	0.302658665	0.36414973	1	0.02383489	-0.21712593
Coalescence	0.032410039	-0.238662398	0.20811187	0.02383489	1	0.2356916
ENP	0.518759635	-0.042776989	0.42679171	-0.21712593	0.2356916	1

Appendix D

Figure 3: Variables' Distribution



Appendix E

Table 6: OLS Estimated Coefficients of Economic Indicators, Presidential Approval, and Control Variables on Cabinet Duration

	(OLS 1)	(OLS 2)	(OLS 3) OLS 1 with Fixed Effects	(OLS 4) OLS 2 with Fixed Effects
Inflation (log)	−102.205***	−100.179**	−88.273**	−69.523
	(35.537)	(44.094)	(36.002)	(42.611)
Unemployment	−40.727**	−33.706	7.734	19.353
	(20.237)	(24.514)	(25.104)	(28.269)
GDP Growth	−11.828	−5.353	−3.466	2.338
	(11.830)	(12.617)	(13.477)	(14.086)
Presidential Approval		−4.195		−3.309
		(5.437)		(5.277)
Cycle	186.536	−11.191	149.715	−22.371
	(159.463)	(182.654)	(158.374)	(175.409)
Size of the Coalition	−77.537	−64.065	−138.152***	−124.397**
	(48.028)	(55.641)	(47.352)	(54.283)
Legislative Power (IPIL)	21.025	127.327	−1,547.746	−1,614.352
	(664.574)	(697.100)	(1,370.836)	(1,393.182)
Ideological Dispersion	67.244	85.336	54.339	93.806
	(102.901)	(114.389)	(113.896)	(126.727)
Majority Status	148.161	133.297	−8.805	−44.599
	(128.758)	(137.223)	(142.296)	(149.648)
Cabinet Coalescence	−1,243.123	−1,216.830	24.296	−235.179
	(972.975)	(1,046.688)	(955.217)	(994.449)
Fragmentation (ENP)	−83.005**	−81.579**	−94.874**	−78.295*
	(32.920)	(37.136)	(41.930)	(43.412)
Brazil			875.017*	833.324*
			(471.442)	(471.799)
Chile			1,413.171**	1,506.948**
			(632.748)	(640.999)
Uruguay			780.788*	807.098*
			(465.967)	(468.234)
Constant	2,776.235***	2,841.017**	1,703.052	1,898.905
	(983.326)	(1,103.166)	(1,207.276)	(1,307.392)
N	79	69	79	69
R^2	0.410	0.369	0.599	0.587
Adjusted R^2	0.324	0.247	0.470	0.426
Residual Std. Error	402.797 (df = 68)	407.394 (df = 57)	356.655 (df = 59)	355.460 (df = 49)
F Statistic	4.730*** (df = 10; 68)	3.024*** (df = 11; 57)	4.635*** (df = 19; 59)	3.661*** (df = 19; 49)

Notes: Dependent variable: Cabinet duration (in days). Standard errors in parenthesis: *p<0.1; **p<0.05; ***p<0.01. Two-tailed test.

Appendix F

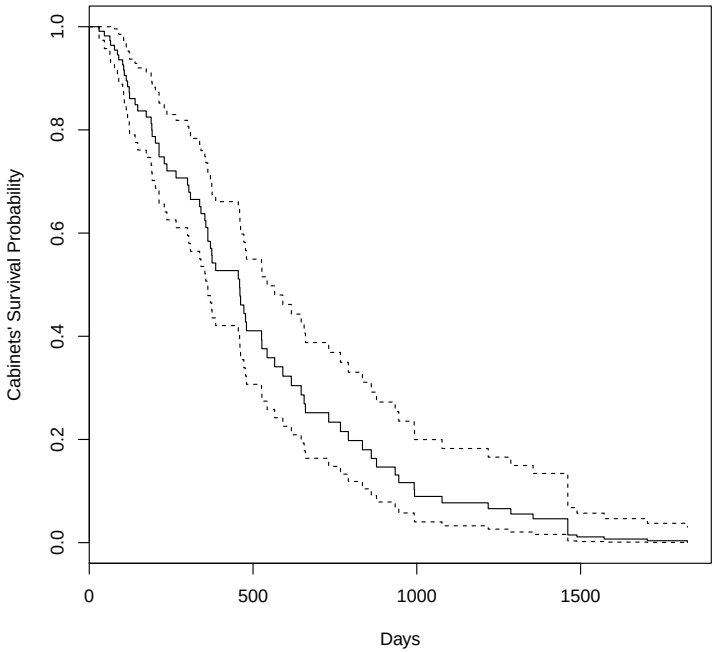
Table 7: Cox Model Estimates of Cabinet Duration by Economic Indicators, President's Approval Rating, and Control Variables (All Terms Included)

	Model 1		Model 2		Model 3		Model 4	
	Coefficient	*exp(coeff.)*	Coefficient	*exp(coeff.)*	Coefficient	*exp(coeff.)*	Coefficient	*exp(coeff.)*
Inflation (log)	**0.208****	***1.231***	**0.263****	***1.301***	**0.204***	***1.227***	**0.222***	***1.249***
	(0.091)		(0.119)		(0.106)		(0.127)	
Unemployment	**0.096***	***1.101***	**0.108***	***1.114***	−0.038	*0.963*	−0.033	*0.967*
	(0.052)		(0.064)		(0.081)		(0.099)	
GDP Growth	0.021	*1.021*	0.015	*1.016*	−0.004	*0.996*	−0.015	*0.985*
	(0.032)		(0.033)		(0.043)		(0.044)	
Presidential Approval			0.006	*1.006*			0.009	*1.009*
			(0.015)				(0.018)	
Cycle	−0.306	*0.736*	−0.184	*0.832*	−0.379	*0.685*	−0.125	*0.882*
	(0.410)		(0.456)		(0.425)		(0.475)	
Size of the Coalition	0.111	*1.117*	0.078	*1.081*	**0.393****	***1.482***	**0.373***	***1.452***
	(0.123)		(0.141)		(0.162)		(0.194)	
Legislative Power (IPIL)	0.626	*1.870*	0.784	*2.189*	5.505	*245.894*	5.311	*202.539*
	(1.444)		(1.579)		(4.640)		(4.894)	
Ideological Dispersion	−0.109	*0.896*	−0.128	*0.880*	−0.070	*0.933*	−0.250	*0.778*
	(0.281)		(0.318)		(0.417)		(0.468)	
Majority Status	−0.138	*0.871*	−0.135	*0.874*	0.151	*1.163*	0.256	*1.292*
	(0.334)		(0.362)		(0.416)		(0.442)	
Cabinet Coalescence	2.317	*10.140*	1.843	*6.314*	1.525	*4.596*	1.733	*5.656*
	(2.150)		(2.299)		(2.994)		(3.032)	
Fragmentation (ENP)	**0.316*****	***1.371***	**0.352*****	***1.422***	**0.450*****	***1.568***	**0.412****	***1.510***
	(0.106)		(0.121)		(0.162)		(0.164)	
Argentina					0.515	*1.673*	0.209	*1.233*
					(1.896)		(1.951)	
Bolivia					−1.450	*0.235*		
					(1.353)			
Brazil					**−2.344***	***0.096***	−2.298	*0.101*
					(1.376)		(1.413)	
Chile					**−3.373***	***0.034***	**−3.638***	***0.026***
					(2.029)		(2.135)	
Colombia					0.024	*1.025*	−0.333	*0.717*
					(1.353)		(1.444)	
Ecuador					−0.014	*0.986*	−0.286	*0.751*
					(1.310)		(1.324)	
Peru					−0.423	*0.655*	−0.515	*0.598*
					(1.177)		(1.186)	
Uruguay					−1.179	*0.308*	−1.536	*0.215*
					(1.450)		(1.470)	
Venezuela					−0.923	*0.397*	−1.314	*0.269*
					(1.718)		(1.841)	
N	79		69		79		69	
R^2	0.360		0.367		0.533		0.530	
Log Likelihood	−251.667		−210.429		−239.188		−200.121	
Wald Test	34.230***		30.560***		51.600***		44.280***	
LR Test	35.248***		31.522***		60.205***		52.139***	
Score (Logrank) Test	37.429***		34.496***		61.750***		54.677***	

Notes: Dependent variable: Hazard ratios of cabinet duration = exp(coefficients). Standard errors of the (non-exponentiate) coefficients in parenthesis: *p<0.1; **p<0.05; ***p<0.01. Two-tailed test. Statistically significant estimates are in **bold**.

Appendix G

Figure 4: Estimated Survival Function for the Cox Model of Cabinet Duration



Note: Having fit a Cox model to the data, this figure depicts the estimated distribution of survival times for cabinet duration, at the mean values of the independent variables. The broken lines show a point-wise 95 percent confidence intervals around the survival function.

Appendix H

Table 8: Model Diagnostic: Test for the Proportional-Hazards Assumption (Models 1 and Model 2)

	Model 1			*Model 2*		
Variable	ρ	χ^2	p-value	ρ	χ^2	p-value
Inflation (log)	-0.0836	0.624	0.4296	-0.0144	0.0177	0.8941
Unemployment	-0.1051	0.946	0.3307	-0.0299	0.0706	0.7905
GDP Growth	-0.0922	0.805	0.3696	-0.077	0.5002	0.4794
Presidential Approval				0.0342	0.0991	0.7529
Cycle	0.0984	0.839	0.3596	0.0598	0.2805	0.5964
Size of the Coalition	0.1451	2.067	0.1505	0.1014	0.8845	0.347
Legislative Power (IPIL)	0.1868	2.293	0.1299	0.228	3.3792	0.066
Ideological Dispersion	0.1071	1.092	0.2959	0.0993	0.8856	0.3467
Majority Status	-0.1616	2.307	0.1288	-0.1405	1.6433	0.1999
Cabinet Coalescence	-0.0849	0.462	0.4969	-0.0494	0.1456	0.7027
Fragmentation (ENP)	-0.2266	6.323	0.0119	-0.1718	3.3747	0.0662
GLOBAL	.	14.827	0.1385	.	12.3402	0.3386

Notes: Although there is evidence of non-proportional hazards for "fragmentation (ENP)," the global test is not statistically significant.

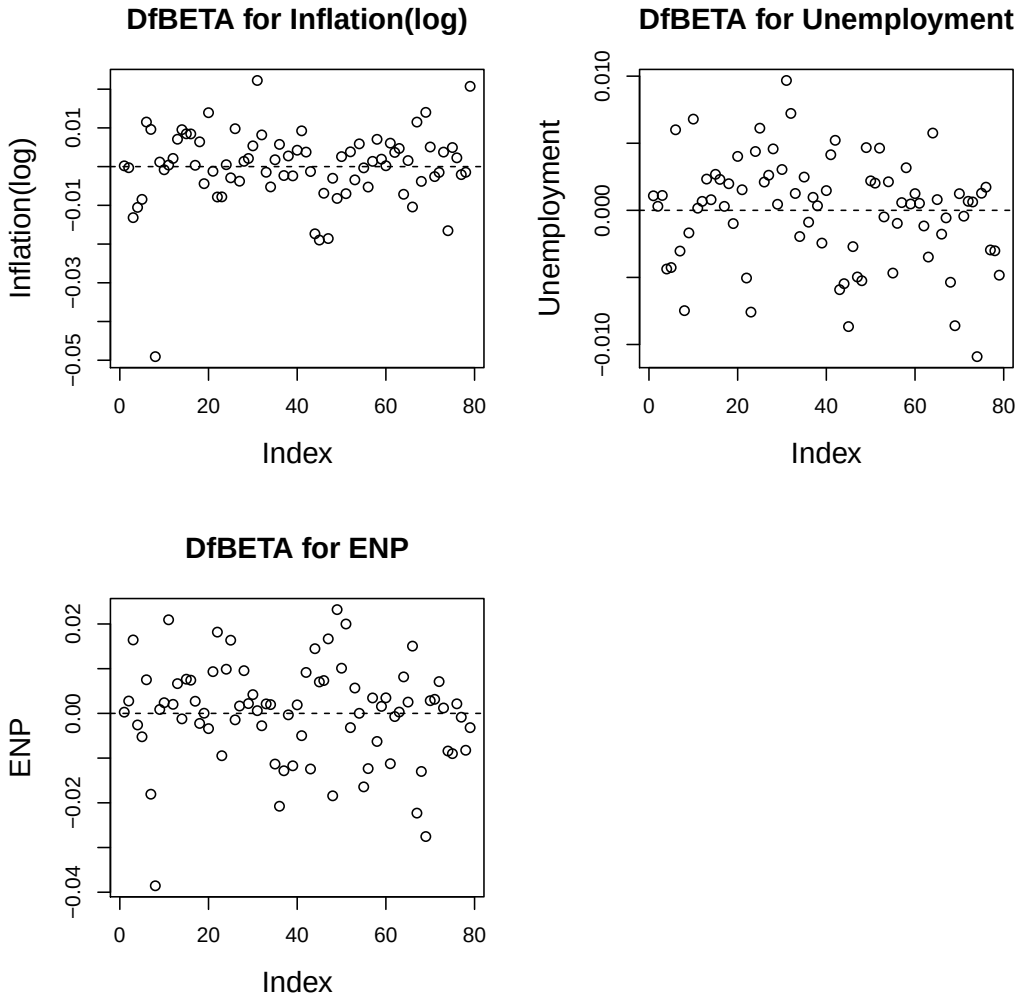
Table 9: Model Diagnostic: Test for the Proportional-Hazards Assumption (Models 3 and Model 4)

	Model 3			*Model 4*		
Variable	ρ	χ^2	p-value	ρ	χ^2	p-value
Inflation (log)	-0.0902	7.43E-01	0.3886	-0.05167	0.20717	0.649
Unemployment	-0.12514	1.92E+00	0.1654	-0.13116	2.16469	0.1412
GDP Growth	-0.20619	5.39E+00	0.0203	-0.24999	6.34392	0.0118
Presidential Approval				0.04096	0.18642	0.6659
Cycle	0.11111	9.77E-01	0.3228	0.15872	1.78145	0.182
Size of the Coalition	0.16728	3.90E+00	0.0482	0.17778	4.28377	0.0385
Legislative Power (IPIL)	0.14316	2.58E+00	0.108	0.17084	3.6111	0.0574
Ideological Dispersion	-0.01531	3.49E-02	0.8517	-0.05618	0.40017	0.527
Majority Status	-0.06824	4.21E-01	0.5163	-0.02465	0.04898	0.8248
Cabinet Coalescence	-0.00155	3.11E-04	0.9859	0.01611	0.02661	0.8704
Fragmentation (ENP)	-0.06771	7.17E-01	0.397	-0.08027	0.86213	0.3531
Argentina	0.14544	1.74E+00	0.1872	0.15393	1.86095	0.1725
Bolivia	0.04118	1.41E-01	0.7074	.	.	.
Brazil	-0.05259	2.23E-01	0.637	-0.07523	0.43014	0.5119
Chile	-0.07741	6.53E-01	0.4191	-0.11642	1.36587	0.2425
Colombia	-0.00247	5.87E-04	0.9807	0.00709	0.00407	0.9491
Ecuador	0.02507	5.35E-02	0.8171	0.01409	0.01431	0.9048
Peru	-0.06588	3.66E-01	0.545	-0.07395	0.3919	0.5313
Uruguay	0.02861	7.96E-02	0.7779	0.01198	0.01146	0.9147
Venezuela	0.0413	1.83E-01	0.6686	0.04337	0.21774	0.6408
GLOBAL	.	2.07E+01	0.3528	.	20.62666	0.4194

Notes: Although there is evidence of non-proportional hazards for "size of the coalition" and "GDP growth," the global test is not statistically significant.

Appendix I.1

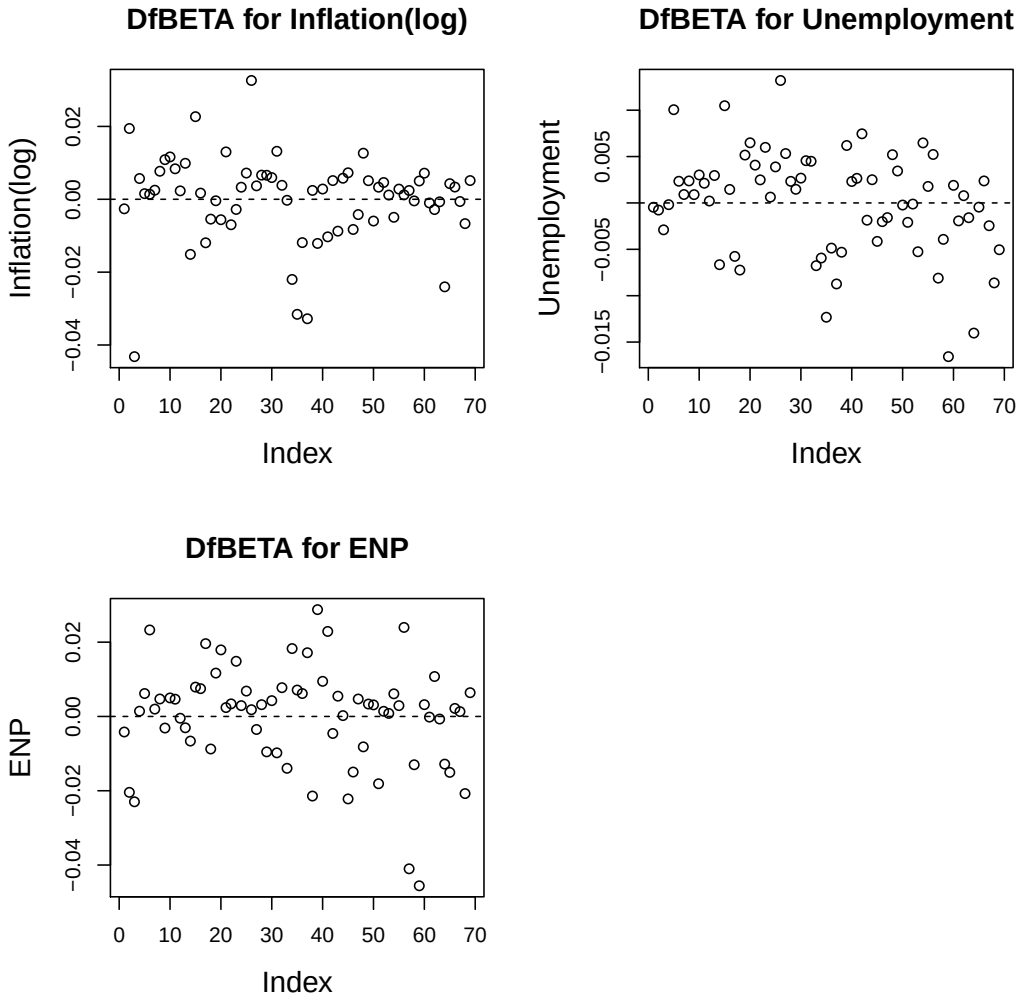
Figure 5: Model Diagnostics: Influential Observations in Model 1



Note: Dashed-line at $y = 0$. This figure depicts the index plots produced by specifying the argument $type = dfbeta$ to residuals in order to produce a matrix of estimated changes in the regression coefficients upon deleting each observation in turn (the plots are only for the independent variables with statistically significant estimates). Comparing the magnitudes of the largest $dfbeta$ values to the regression coefficients suggests that none of the observations is significantly influential individually.

Appendix I.2

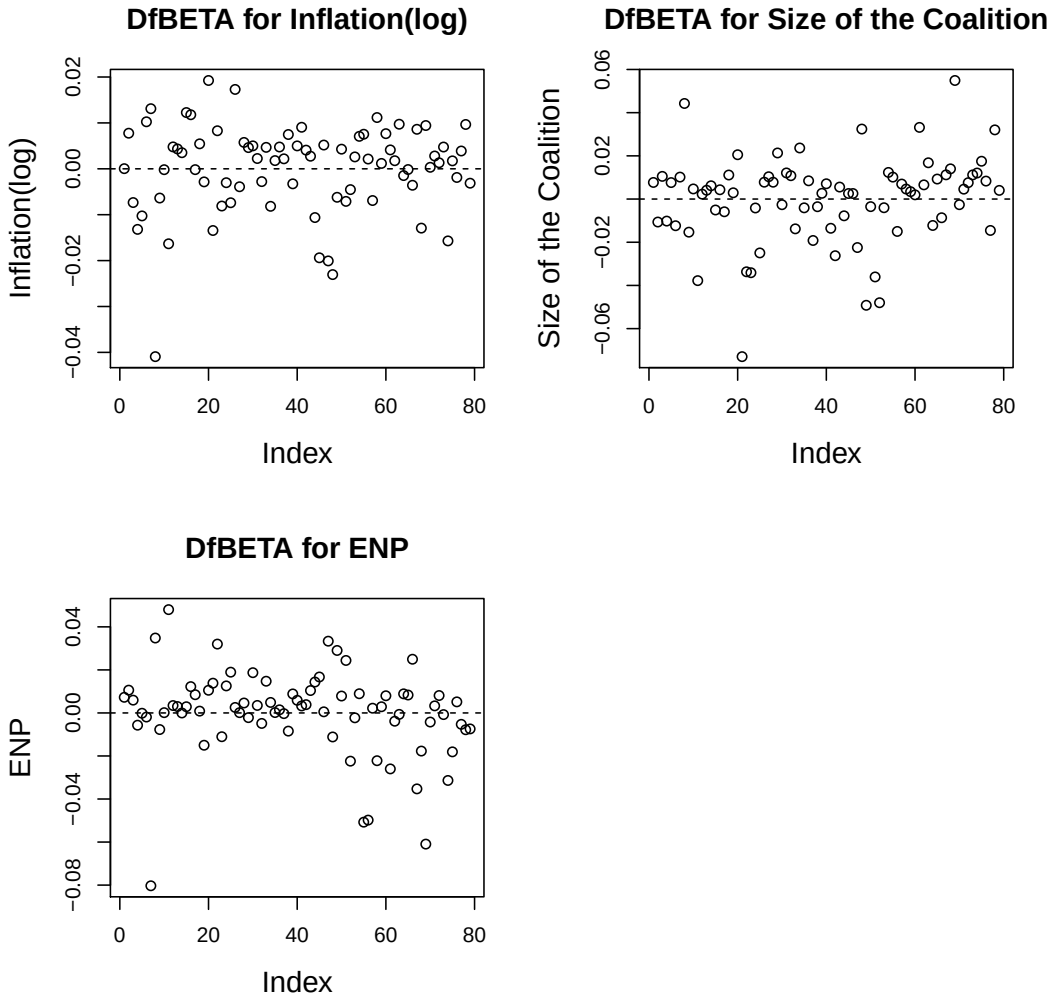
Figure 6: Model Diagnostics: Influential Observations in Model 2



Note: Dashed-line at $y = 0$. This figure depicts the index plots produced by specifying the argument $type = dfbeta$ to residuals in order to produce a matrix of estimated changes in the regression coefficients upon deleting each observation in turn (the plots are only for the independent variables with statistically significant estimates). Comparing the magnitudes of the largest $dfbeta$ values to the regression coefficients suggests that none of the observations is significantly influential individually.

Appendix I.3

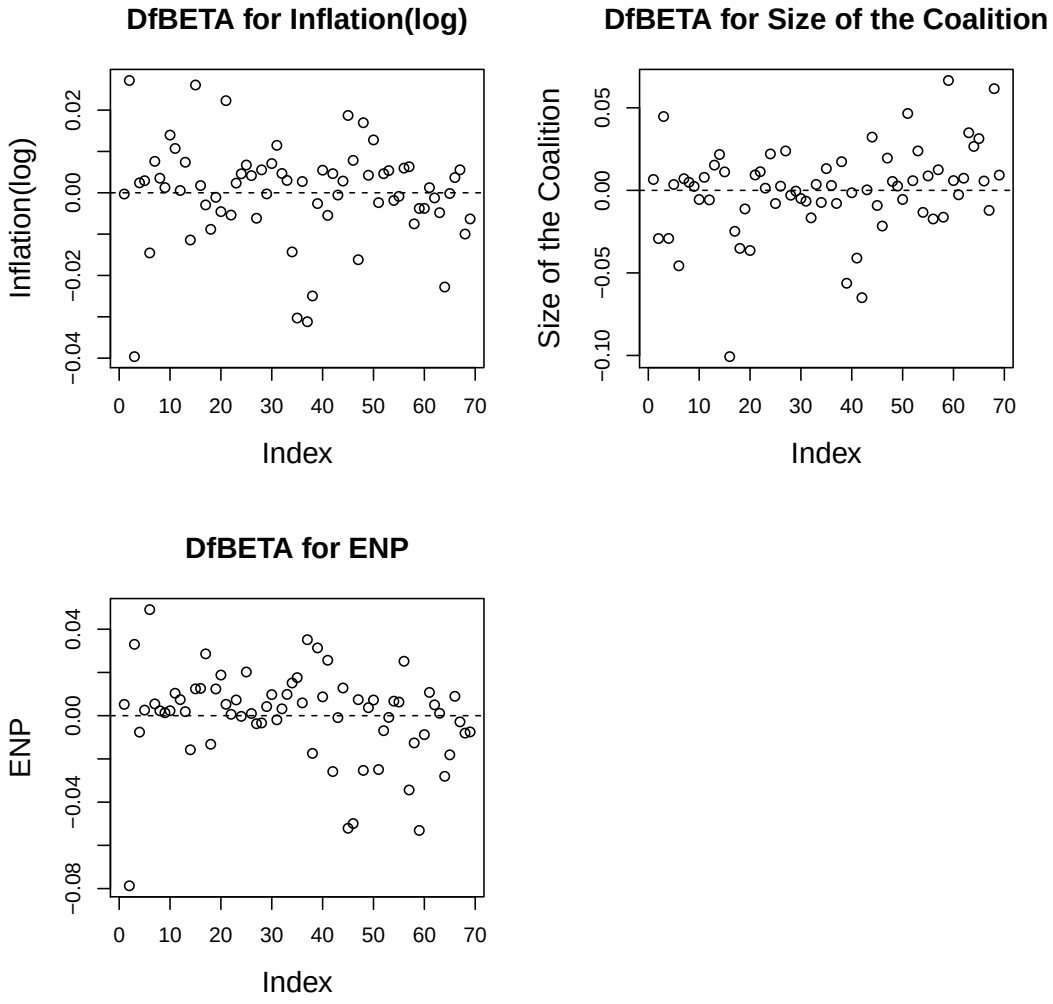
Figure 7: Model Diagnostics: Influential Observations in Model 3



Note: Dashed-line at $y = 0$. This figure depicts the index plots produced by specifying the argument $type = dfbeta$ to residuals in order to produce a matrix of estimated changes in the regression coefficients upon deleting each observation in turn (the plots are only for the independent variables with statistically significant estimates). Comparing the magnitudes of the largest $dfbeta$ values to the regression coefficients suggests that none of the observations is significantly influential individually.

Appendix I.4

Figure 8: Model Diagnostics: Influential Observations in Model 4



Note: Dashed-line at $y = 0$. This figure depicts the index plots produced by specifying the argument $type = dfbeta$ to residuals in order to produce a matrix of estimated changes in the regression coefficients upon deleting each observation in turn (the plots are only for the independent variables with statistically significant estimates). Comparing the magnitudes of the largest $dfbeta$ values to the regression coefficients suggests that none of the observations is significantly influential individually.

Appendix J

Table 10: Cox Model Diagnostics

	Model 1	Model 2	Model 3	Model 4
N	79	69	79	69
R^2	0.360	0.367	0.533	0.530
Log Likelihood	−251.667	−210.429	−239.188	−200.121
Wald Test	34.230*** (on 10 df)	30.560*** (on 11 df)	51.600*** (on 19 df)	44.280*** (on 19 df)
LR Test	35.248*** (on 10 df)	31.522*** (on 11 df)	60.205*** (on 19 df)	52.139*** (on 19 df)
Score (Logrank) Test	37.429*** (on 10 df)	34.496*** (on 11 df)	61.750*** (on 19 df)	54.677*** (on 19 df)
AIC	523.3346	442.8587	516.3769	438.2422
BIC	547.0291	467.4339	561.3964	480.6902

Note: ***p<0.01.