

**Duration of Party Control in Parliamentary and Presidential Governments:
A Study of Sixty-Five Democracies, 1950-1998**

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Keywords: parliamentary systems, presidential systems, political parties, government survival, electoral systems, event history analysis.

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Abstract

Most of the previous work on political stability uses cabinet duration or leadership duration to measure stability. This study, however, focuses on another area of stability, namely the party control of the executive branch. This approach not only allows us to compare political durability in presidential and parliamentary systems directly, but also, we believe, better reflects policy changes that stem from government party composition. Our analysis of longitudinal data from 65 democracies reveals that presidential and parliamentary governments create different patterns of government survival. Ruling parties in parliamentary systems encounter a declining hazard rate over time, whereas those in presidentialism face an increasing hazard rate in their survival. We explain this difference by focusing on how parliamentary and presidential systems create different incentive structures for political parties.

Introduction

How well democracies function is one of the most prominent concerns among political scientists. Among other factors, government stability is essential for effective democratic governance. Efficacious policymaking requires a certain level of government stability. Both policy formulation and policy implementation can be lengthy processes, and frequent changes in government are likely to hinder such processes.

Given a potential relationship between the quality of democracies and political stability, scholars have studied this topic by examining a wide range of political phenomena. These studies can be roughly classified into three groups. First, there is literature on democratic stability, where the focus is on what conditions account for the durability of democracy (for example, see Linz & Stepan, 1978, and Cheibub & Limongi, 2002). Second, originating in Bienen and van de Walle's (1991) work, some studies are carried out with the focus on the length of the political leaders' tenure (see Bueno de Mesquita et al., 2000 and Gelpi & Grieco, 2001, for more recent examples). The third group is the study of cabinet durability in parliamentary democracies, in which Western European countries have typically been analyzed as the sample cases (see Laver, 2003, for a recent review of this literature).

In this paper, we deviate from the previous studies and investigate another area of political stability. Specifically, we focus on political parties and measure political durability by the length of time political parties stay in power. Table 1 illustrates the ruling party approach using the British case. As the table shows, Margaret Thatcher was the prime minister of three consecutive cabinets that lasted from 1979 to 1990. John Major then succeeded Margaret Thatcher and maintained the prime ministership from 1990 to 1997 and was the prime minister over two

cabinets. Tony Blair replaced John Major in 1997 and his third cabinet is in power to the present day.

--- Table 1 about here ---

Based on the cabinet duration approach, the number of governments since 1979 in Britain is eight, including the current one. If we focus only on the individuals in power, Britain has had three governments. In the ruling party approach, the Thatcher and Major governments are combined into one government because the Conservative Party controlled these cabinets. The Labor Party replaced the Conservatives after the 1997 general election, so based on our approach, there were two governments during the time period.

We believe that studying the stability of parties in power has two distinctive merits. First, the focus on parties is helpful in capturing important political changes. Modern democratic governments are party governments in that there are no democracies without political parties. Since each party has its own policy platform, the change in governing parties would usually bring about policy changes that are more significant than the cases where chief executives or cabinets alternate within the same party.¹

Of course, we do not intend to argue that the party composition of the executive branch solely determines government policies. The legislature, for example, plays a role in policy making. If the chief executive's party or coalition does not possess a majority in the legislature—the situation that is often called “minority cabinet” in parliamentary systems and “divided government” in presidential systems—the executive's ability to implement its policies may be reduced considerably. However, in many countries, the executive branch is where most policies originate, and hence its importance in policy making process should not be underrated. In many Latin American presidential systems, the separation of powers is not as strict as in the United

States, and the presidency is the dominant power in the political scene. In parliamentary systems, the study by Blais, Blake, and Dion (1996) demonstrates that partisanship matters even when the government does not control a majority in the parliament.

The other merit of studying the ruling party stability is that we can compare presidential and parliamentary governments in a systematic manner. Scholars often focused on cabinet durability within parliamentary governments because presidentialism and parliamentarism are not comparable in the framework of cabinet durability because of the fixed term in presidential systems. Given obvious differences in how the two systems terminate their governments, the comparison of stability in parliamentarism and presidentialism has not been examined thoroughly. Moreover, some scholars may consider an analysis that includes both systems rather useless. Others may also dismiss the importance of such an analysis because they simply assume that presidential systems are more durable than parliamentary systems since presidents have fixed terms, whereas the cabinets in parliamentary systems can be dissolved at any time. Indeed, it is the conventional wisdom that presidential systems create political rigidity because of the fixed terms (Linz, 1994).

If we focus on political parties, the two systems can be compared effectively. We believe it is meaningful to compare government stability between parliamentarism and presidentialism because the literature is still scarce in relation to government stability, although scholars have extensively studied the two systems with regard to other political phenomena, such as regime stability. As argued earlier, government durability can influence democratic performance. Hence if the two systems manifest a significant difference in the survival patterns of their governments, this study will give us important insights into the quality of governance each system creates.²

The primary goal of our study then is to examine the difference of presidential and parliamentary systems with respect to government durability, and we do so by paying attention to the length of time governing parties stay in the executive office. We first explain how the distribution of power in the executive office influences government durability in parliamentary and presidential systems. After presenting a testable hypothesis, we describe our sample, variables, and the statistical model. We then empirically assess our hypothesis by examining 65 democracies between 1950 and 1998.

Explaining Ruling Party Durability in Parliamentarism and Presidentialism

An obvious difference between parliamentary and presidential systems in government survival is that presidential governments have fixed terms and do not terminate during the first few years, while some parliamentary governments fall within a few months. The explanation of government survival based on fixed terms is hardly novel, and a critical task for us here is to explore how ruling party durability in parliamentarism and presidentialism differ when they have lasted more than four or five years. Which system creates a higher risk of termination for ruling parties? What contributes to survival patterns in the two systems? We argue that parliamentary and presidential systems promote different party goals, which cause ruling parties in presidentialism to face higher hazard rates compared to parliamentarism.

Party Goals in Parliamentary and Presidential Systems

Political parties are said to seek three types of goals: maximizing votes, seeking office, and influencing policy. These goals are often not simultaneously attainable, and political parties have to make difficult decisions in pursuing these conflicting goals (Strom, 1990a; Muller & Strom,

1999). Of these three goals, according to Samuels (2002), presidential systems especially encourage political parties to focus on vote-seeking activities, while parliamentary systems allow parties to seek other goals. The presidential post is an enormously important prize for political parties in presidential systems. Lijphart (1999, p.118) states that presidential systems have “one-person, non-collegial executives” while parliamentary systems have “collective or collegial executives.” A single party usually dominates the executive branch in presidential systems, whereas multiple parties can form coalition and share the executive branch in parliamentary systems.

Because of the concentration of power in president’s hand, presidential elections naturally become all-or-nothing type competition, and election campaigns become excessively heated. Shugart and Carey (1992, p.31) elaborate these points:

“Because of the exclusive nature of the unitary executive, the importance of capturing the presidency becomes paramount, dwarfing all other electoral goals for parties in presidential systems.... The high stakes, and the certainty that control of the executive will not be open to question again for a set period, raise the tension of the electoral politics.”

Because of the importance of presidential elections, Samuels (2002, p.467) states that vote-seeking incentives in presidential systems “are much stronger, *ceteris paribus*, than any vote-seeking incentive that exists under parliamentarism.” The idea that the parties in presidentialism engage in vote-seeking behavior is consistent with Strom’s (1990a) proposition that disproportional electoral systems give stronger incentives for parties to seek votes. Since “the winner takes ‘each and every seat’” (Samuels, 2002, p.467) in presidential elections, presidentialism is necessarily disproportional in translating votes into seats.

On the contrary, parliamentarism does not impose any uniform effect on parties’ behavior. Strom (1990a) argues that the parties in parliamentary systems may pursue votes, office, or

policy depending on various factors such as electoral disproportionality, party systems, parliamentary rules, and public party finance (see, also, Muller & Strom, 1999).

For example, in some parliamentary systems, proportional electoral rules make it easier for small parties to be represented in the legislature, and parliamentary rules allow opposition parties to affect government's policymaking process. Also, where many parties exist and coalition cabinets are usually formed, a small party may join a coalition and enjoy office benefits. Under such circumstances, parties may choose the strategy that maintains their policy positions and retains their stable support base, rather than maximize their votes by changing their policy platforms and becoming a major party.

Of course, some parliamentary systems, especially the ones with British influence, use disproportional and majoritarian institutions, where electoral competition would manifest the all-or-nothing type politics. Yet Samuels asserts, as cited above, that the vote-seeking incentives the parties in those countries have would still be not as strong as the incentives in presidential systems. It is also obvious that if we take the average of all parliamentary systems, the intensity of vote-seeking behavior of parties will surely be lower than that in presidential systems. Moreover, although disproportional elections in parliamentary systems may weed out small parties in many countries, the chance that these parties survive and enter the government as a coalition partner still remains. For example, when small parties have support in geographically concentrated areas, they might be able to secure seats even in plurality elections. In presidential elections, these opportunities are less likely to be present. Samuels (2002) also points out that the importance of presidential elections is reinforced by the coattail effect on the legislative elections and that the parties' strategies toward the presidential elections tend to shape the parties' overall behavior.

Party Goals and Ruling Party Durability

Different party goals in parliamentarism and presidentialism influence ruling parties' survival rates over time. Opposition parties in presidential systems face strong pressure to win the next presidential election. The consequence is the emergence of a viable candidate supported by the opposition parties. There may be many opposition parties, especially when the proportional representation system is used in the legislative elections. Even under such circumstances, a credible candidate would be placed by the opposition parties since the opposition leaders would understand the need for coordination if they are to seek victory. The fact that the presidential term is fixed and the date of the next election is certain also helps coordination among opposition parties. Furthermore, if the incumbent president runs for re-election, the presence of the incumbent candidate "reduces the probability of coordination failure among the opposition politicians" because they see an identifiable candidate against whom they must compete (Jones, 2004, p.81).

Hence, an incumbent government in a presidential system is likely to be challenged by a strong candidate in presidential elections. So the ruling parties in presidentialism will face an increasing rate of termination over time. In addition, when competition becomes dualistic between the candidate from the governing party (may or may not be the incumbent president) and the coordinated opposition candidate, a substantial number of swing voters would emerge in the electorate because both candidates attempt to appeal to voters who are located around the median of the political spectrum (Downs, 1957). The existence of many swing voters makes the election results uncertain and keeps the ruling parties from remaining in power for an extended period of time.

We would like to emphasize that our argument about presidentialism is applicable regardless of electoral formulas of presidential elections (i.e., plurality or majority runoff). Coordination among parties to nominate a strong candidate is easier under the plurality formula, as Jones (2004) demonstrates. Yet, even under the runoff formula, the candidate from the ruling party—if he or she proceeds to the second round—will face only one challenger in the second round, which will be a one-to-one competition. Although the runoff formula in presidential elections is associated with multipartism (Jones, 1994) and more presidential candidates (Jones, 2004), it does not mean that the ruling party is less likely to face a strong challenger.

In parliamentary systems, on the other hand, the parties' goals would be diverse, and seeking votes may not be the priority for some parties. For parties with a stable support base, actively seeking more votes through shifting of policy platform takes the risk of isolating the long-time supporters and activists. As a result, they may well take the defensive strategy to settle as opposition parties and secure their survival, which may decrease the number of swing voters and reduce uncertainty over time. Therefore, ruling parties in parliamentary systems, compared to their presidential counterparts, will enjoy a decreasing rate of termination over the lifetime of their control of government.

The power of the government to manipulate the electoral cycle in parliamentarism also helps ruling parties to win re-election.³ The governments can hold new elections when they decide that the timing is advantageous for them; and also the endogenous electoral cycle makes the coordination of opposition parties more difficult.

If our argument is correct, the following hypothesis should be supported empirically.

Hypothesis: Ruling parties in presidential systems face an increasing hazard rate of termination as they stay longer in power, while ruling parties in parliamentary systems enjoy a decreasing hazard rate.

In this paper, we focus only on the difference between presidential and parliamentary systems. Since our analysis will look at the observations from both types of systems, it is impossible for us to include variables that are relevant for one type but not for the other type. The electoral system is an example of the factors that cannot be included in the model for this reason. Strom (1990a) points out that disproportional electoral systems promote stronger incentives to seek votes, while proportional electoral rules allow parties to seek other goals. Different party goals, then, should produce distinctive patterns of government survival. Thus, electoral rules would surely create a wide variety in government duration.

The function of electoral systems is quite different between presidentialism and parliamentarism. In presidentialism, there are two levels of elections, presidential and legislative, that play different roles in political competition. Since our focus is on the party control of the executive branch, the electoral system of presidential elections is more relevant in our analysis. However, in parliamentarism, elections are held only for the legislative branch. Therefore, it does not make sense to create a single variable that represents electoral rules for the entire sample. Although future research that explores the determinants of government duration within each type of system will have to examine the effects of electoral systems, this paper does not take electoral rules into consideration.

Empirical Analysis

Sample

The sample of this study includes all democracies between 1950 and 1998. The year 1950 is chosen as the starting point because it is the year our data source, the Penn World Table 6.1 (Heston, Summers, & Aten, 2002), begins its coverage. To distinguish democracies from non-

democracies, we consult four sources: *POLITY IV* (Marshall & Jaggers, 2000), the *Political Regime Change Dataset* (Gasiorowski, 1996), Przeworski et al. (2000), and Bernhard, Nordstrom, and Reenock (2001). For many countries, the four sources provide identical classification between democracies and non-democracies. If this is the case, we simply follow their consensus. When the sources disagree, we take the majority opinion.⁴

Since our primary interest is the comparison between parliamentarism and presidentialism, countries that are neither type are not included in our sample.⁵ In addition, we exclude countries for which the data on some variables—for example, the information for the government composition or the values of the control variables—are not available.⁶ Finally, small countries that are not included in *POLITY* are excluded.

For some countries, we made adjustments to the starting point of democratic governments. For example, according to *POLITY*, Argentina became democratic in October 1983, whereas we consider December 1983 as the starting point of its democracy. The reason for the change is that the sources we consulted usually treat the time when a free election is held as the beginning of democracy. However, we consider the time when the elected leader officially assumes the office as the beginning in order to measure the length of government more accurately. Following the rules stated above, 65 countries are selected in our sample.

Dependent Variable

The outcome variable is the duration of party control of the executive branch measured by months. Specifically, we define the change in party control as the time when the chief executive (president or prime minister) is replaced by another who belongs to a different party. The upper panel of Table 2 shows the summary values of this variable.

--- Table 2 about here ---

Using the method described above, we have 292 governments based on party control (194 from parliamentary systems and 98 from presidential systems) with 66.9 months as the average length (68.7 for parliamentary systems and 63.4 for presidential systems) in our sample.

To check the robustness of the results, we repeat our analysis with another indicator based on the party compositions of the executive branch. Specifically, we look at the magnitude of the changing portion of the two successive cabinets in this second measurement. We call this second indicator the *Government Change Index* (GCI, hereafter). The GCI takes values between 0 and 100. A GCI value of 100 indicates a complete alternation in ruling parties while 0 means that successive cabinets retained exactly the same party compositions. In presidential systems, the GCI can take either 0 or 100 since presidency is a one-person post. (More explanation of this index is presented in Appendix.)

With the use of GCI, we need to decide what value should be considered as an alternation of parties in power. The GCI can take any values between 0 and 100, and we have no theoretical standard in deciding what value should be considered as a meaningful value in representing an alternation of parties in power since this is a continuous variable. A simple solution to the problem is to take a half way between 0 and 100. We also created other cutting points, such as 40 and 60. However, we will only present the results based on $GCI > 50$ because the results based on $GCI > 40$ or $GCI > 60$ were not substantially different. By defining an alternation by $GCI > 50$, we have 257 periods of party control (159 parliamentary and 98 presidential) in the sample, and the average length is 76.0 months (83.8 for parliamentary and 63.4 for presidential).⁷ Table 2 also presents the standard deviations of government duration for the two systems, and it shows that parliamentary governments have much larger variation in length than presidential governments.

This is not surprising since some parliamentary governments terminate in a few months. (The list of sample cases along with the data of the duration of party control used in this paper are available on the authors' websites: <http://www.psci.unt.edu/Maeda/> and <http://www.bsu.edu/web/mnishikawa/>.)

Independent Variables

Our main explanatory variable is a dummy variable that takes the value of 1 if the case is a parliamentary system and 0 if it is presidential. The following control variables are also included in our analysis. First, a measure of the level of democracy is added to the model. Although the selected cases in our analysis are all “democracies,” democratic maturity is quite diverse. Some countries are consolidated democracies, while many developing countries are frail democracies. Since the difference in the levels of democracy may influence government durations, we control for it. The combined polity scores in the POLITY 98d data set are used to measure the level of democracy.

Second, we control for how long a country has experienced a democratic regime. The length of time that the country has been democratic may have an impact on the government survival. For example, countries that have experienced a long period of democracy may have more highly institutionalized party systems than those that have democratized recently. The institutionalization of parties may lead to the creation of political stability (Mainwaring & Scully, 1995; Kuenzi & Lambright, 2001). The variable is calculated by taking the natural log of (1 + the number of years). For the countries that were already democratic in 1950, the time when POLITY’s score became 7 or larger than 7 is considered as the beginning of democracy.

Third, information on the length of terms is added. For example, the president of the United States has a 4-year-term while the South Korean president serves 5 years. Quite intuitively, the length of presidential terms affects the duration of government. For parliamentary systems, the length of legislative terms is used for this variable. Since the length of term of presidents and legislators may have different impacts on government survival (parliaments are often dissolved before politicians' terms end while presidents have fixed terms), an interaction variable based on the length of term and parliamentarism is also included in our analysis.

Fourth, a dummy variable for an executive's term limit is also included. Many presidential systems have term limits, and when the incumbent president is not allowed to run for the next term, the ruling party has to find a new candidate. In such a case, the possibility for the ruling party remaining in power after the end of an incumbent president's term would be lower than the case without term limits. This variable takes the value of one if the incumbent chief executive cannot seek the next term and zero otherwise. For parliamentary systems, the values are invariably zero.

Finally, economic growth rates are included. It is natural that an incumbent party is more likely to be defeated when the economy is not performing well. We use the annual growth rate of the real GDP per capita from the Penn World Table 6.1 (Heston, Summers, & Aten, 2002).⁸

In the preliminary analysis, we estimated the effects of two more independent variables that were dropped from the final model. First, we included the degree of ethnic fractionalization because it may influence the durability of ruling parties. The results showed that it did not have significant effects. Since the data were not available in many countries, and the inclusion of the variable in the model reduced the number of observations considerably, the ethnic fractionalization variable is dropped from the model. Second, since a change in party control of

the executive branch is a repeatable event, it is possible that the durations of party control are not independent across events (i.e., a government after a short-lived government may last for a long (or short) period of time). In order to account for this effect, we included the length of the previous period of party control. The inclusion of this variable also means a reduced number of the sample cases since the first observation of each country has to be excluded. This variable was not statistically significant and did not make any substantial difference in the results, and, therefore, it was also dropped from the final model. The results of these analyses are available from the authors upon request.

There may be an argument that the number of parties should also be included in the model. However, we need to be cautious about this variable. Our argument is that parliamentarism and presidentialism promote different goals in political parties, and party systems are shaped up by these party goals. Hence, the characteristics of party systems are connected with an integral component of the process our theory specifies. Therefore, the inclusion of the number of parties could suppress the impact of the two systems, and the difference between the two systems may not appear in the results accurately. Nonetheless, we have performed the analysis by including the effective number of parties to check the robustness of our results and have found out that the results did not change substantially. What is interesting to add, though, is that the number of parties was shown to be positively associated with hazard rates after controlling for other factors. This means that, on average, the larger the number of parties, the shorter the government duration would be. This is probably because the parliamentary governments that terminate quickly (say, less than a year) are usually found in systems with many parties. We have also found out that the average effective number of parties is larger in presidential systems (4.03) than parliamentary systems (3.87).⁹ The means and

standard deviations of the independent variables are reported in the lower panel of Table 2 where each row represents the values for each institutional type.

Method

By employing duration models (i.e., event history models), we estimate how the survival patterns of the ruling parties vary across different institutional types while controlling for the various factors other than institutional characteristics. Testing our hypothesis is not straightforward because the hypothesis does not simply predict which institution makes governments' tenures longer. If we were only concerned about comparing the average length of governments between the two systems, we would simply include a dummy variable that represents the two systems and examine its effects on the average lengths of terms. Our hypothesis instead is concerned with the shapes of hazard rates over time which we suspect to be different in presidential and parliamentary systems. Hence, the statistical model we use must be able to estimate two (possibly) different shapes of changing hazard rates over time.

The Weibull and Cox models are widely used among political scientists but are not suitable for testing our hypothesis for three reasons. First, the Weibull model can only estimate the hazard rates that are monotonically increasing or decreasing. In our analysis, we expect ruling parties' hazard rates to take more complex shapes. Second, most models that are used widely, including Weibull and Cox, assume proportional hazard rates across different groups of cases. When we compare two groups of countries with a proportional hazard model, the difference between the two groups in terms of the probability of *events* (changes in party control in this study) is fixed over the entire period of observations. That is, it is assumed that one group has a constantly higher (or lower) hazard than the other group over the years and that the hazard ratio

between groups never changes as time elapses. In our case, on the other hand, we do not expect the two institutional types to produce fixed proportional hazard rates. The recent extensions of the Cox model (e.g., Hastie & Tibshirani, 1993; Hess, 1994) can allow for non-proportional hazards. Yet Royston and Parmar (2002, p.2176) argue that “there is no ‘natural’, widely accepted approach, and obtaining a satisfactory model can be complicated.”

Third, the Cox model estimates the effects of covariates parametrically while the baseline hazard function is left unparameterized. In other words, it does not estimate or specify how the hazard rate changes over time.¹⁰ Although it is possible to retrieve baseline hazard functions from the Cox estimation (e.g., Kalbfleisch & Prentice, 1980), the Cox model was not designed to perform such a function when it was originally created. Royston and Parmar (2002, p.2176) raise a question about using the Cox model for retrieving the baseline hazard function, pointing out that the retrieved baselines are “very overfitted,” and “too closely adapted to the data at hand.” Hence the baselines are difficult to interpret and generalize. Similarly, Yamaguchi (1991, p.103) maintains that the Cox model “does not permit us to analyze the form of time dependence directly” and therefore is relatively disadvantageous, if the substantive interest is on the form of survival patterns themselves.

A flexible parametric model developed by Royston and Parmar (2002) appears to be the suitable method for our study. With the use of Royston and Parmar’s model, we can estimate complex shapes of non-proportional baseline functions. The Royston-Parmar model is basically an extension of Weibull and log-logistic models. In order to allow for flexible shapes in hazard rates, it employs the spline method, in which the observed time period is divided into a certain number of segments and the baseline hazard is estimated within each segment. The estimated hazard rates are then smoothly connected by mathematical techniques to produce a continuous

curve. Each segment of a curve is called a “spline,” and the joining points between segments are called “knots.” Since this model produces smoothed curves, the interpretation is relatively easier.

A user of this model has to select the shape of parent distribution (either log cumulative hazard or log cumulative odds in Royston and Parmar’s (2002) presentation) and the number of splines in the model.¹¹ Since the estimation results can be quite different depending on these choices, model selection is a difficult and important task. Royston and Parmar (2002) suggest selecting the model by comparing the Akaike Information Criterion (AIC). The AIC is obtained by subtracting the log-likelihood from the number of parameters, multiplying the result by two, and finally dividing by the number of observations (Akaike, 1973). Smaller AIC values indicate better fit, but Royston and Parmar also note that models with fewer splines are more parsimonious and are therefore generally recommended.¹²

Using this flexible parametric model, we can estimate how parliamentary and presidential systems create different shapes of hazard rates while holding other factors constant. In this study, we repeat ten regressions for each model, trying both parent distributions (i.e. log cumulative hazard or log cumulative odds) and changing the number of splines from one to five. We will then choose the model with the smallest AIC as Royston and Parmar suggest. In this way, we can select a model with an objective standard, rather than arbitrarily choosing a model that fits our expected results.

Before presenting the results, a few additional explanations of our estimation procedure are in order. First, since we start our observation in January 1950, the countries that were already democratic then are subject to left-truncation. Our data set contains 20 such cases. For those cases, we have checked what parties were in power in January 1950 and when these parties first took control of the executive branch before 1950. Since the entry points of the left-truncated

observations can be identified, the statistical model is capable of incorporating those cases into the analysis without creating bias in the estimation.

Second, there are also many right-censored observations that drop out of the sample without experiencing the change in party control. This happens because (1) the government reaches the end of the observation period (December 1998), (2) the governmental form changes into a system that does not belong to either presidential or parliamentary systems, or (3) the regime type changes from democratic to non-democratic (e.g., a military coup). They are treated as censored observations in the statistical analysis.

Results

The results of the statistical analyses are presented in Table 3. Model 1 represents the sample where the alternation in party control is defined as the change of the chief executive's party, and Model 2 is for the sample where the alternation is defined by the GCI larger than 50. As we explained earlier, we have repeated 10 regressions for each model—trying two parent distributions and changing the number of splines from one to five—and chose the one with the smallest AIC to select the best model objectively. The log-cumulative odds with five splines produces the smallest AIC for both models.

--- Table 3 about here ---

The upper portion of the table shows the effect of each independent variable. According to the table, the coefficient for parliamentarism is -1.779 for Model 1 and -3.708 for Model 2. The negative coefficients suggest that, on average, parliamentarism has a lower hazard for government termination compared to presidentialism. The fact that this variable is not statistically significant may seem to work against our expectation; yet it is actually consistent

with our argument. The coefficient of this variable shows the impact of the institutional type on the hazard rate during the entire observation period. Since we expect that the two groups of observations have different shapes of survival patterns that change over time, it should come as no surprise that there is no significant difference between the average hazard rates of the two groups for the entire period.

The baseline hazard rates of the two groups that possibly change over time are estimated by employing the spline method with the parliamentarism dummy as the stratifying variable. The lower portion of the table shows the estimated coefficients for each spline. By stratifying the spline functions according to the dummy variable of parliamentarism, the model can estimate non-proportional hazard rates for the presidential and parliamentary systems. The Wald test can be used to examine whether the stratification is needed, i.e., whether the two hazard curves are indeed non-proportional. The results we obtain confirm our expectation that they are non-proportional: the Chi-squared values are 71.18 for Model (1) and 38.62 for Model (2) with 5 degrees of freedom, yielding p-values smaller than .001 for both models.

The test above shows that the two types of institutions create different patterns of government survival. How are they different? Because the Royston-Parmer model specifies a base line hazard function by smoothing the curves, it is difficult to learn the survival patterns from the numerical results presented in Table 3. Instead, we depend on the graphic presentation of the baseline hazard function. The estimated hazard curves of presidential and parliamentary governments are presented in Figure 1. The two curves in the figure are calculated while fixing the control variables at their mean values.¹³ The y-axes of the graphs show the estimated hazard rate, which is the probability of an “event” (a change in party control) occurring at a certain moment, given that the observation did not experience the event until that time.

--- Figure 1 about here ---

The two graphs (Figures 1a and 1b) depict quite similar patterns in hazard rates over time. The hazard for presidential governments is low at the beginning of their tenure because of fixed presidential terms, and it increases noticeably at about 5 years, however it declines again when the presidents who are reelected start their second terms. On the other hand, the hazard for parliamentary systems is high at the beginning, possibly due to the fall of fragile coalition cabinets.

After about 8 years, the two curves manifest a remarkable difference. While the hazard rate for parliamentarism declines slowly, the hazard for presidentialism rises dramatically. Fourteen years from the beginning, only 3% of the cases in presidential systems are expected to be surviving, compared to 13 or 17% (depending on the definition of the change in party control) in parliamentary governments. The empirical results clearly support our hypothesis.

The estimated coefficients of the control variables are mostly consistent with our expectation. Newly democratized countries are associated with shorter tenure of party control (i.e., higher hazard of alternation in party control), and the existence of term limits shortens it as well. The length of a presidential term is positively correlated with the length of party control in presidential systems, while the length of a legislative term in parliamentary systems is negatively associated with it, which is somewhat intriguing. Economic growth rates and the levels of democracy do not appear to affect the durability of ruling parties.

Conclusion

Parliamentarism and presidentialism have differences in party incentives, which affect how long parties within each system control the executive branch. Parliamentary systems allow parties to

pursue different goals and create declining hazard rates in government termination over time, whereas presidential systems primarily encourage vote-seeking activities which, in turn, produce increasing hazard rates. Consequently, presidential governments tend to alternate regularly, and few parties succeed in staying in office long—say, more than three terms. However, some parliamentary governments last for an exceptionally long period of time while others, because of the absence of fixed terms, fall within a few months.

The difference between the two systems has an implication for the debate over governmental accountability in the parliamentary and presidential forms of democracy. The critics of presidentialism argue that the separation of powers blurs the responsibility for government policy, and, thus, accountability in presidentialism tends to be low (Linz, 1994; Manin et al., 1999). On the other hand, others argue that accountability is high in presidentialism because voters directly elect and replace the chief executive (Shugart & Carey, 1992). Our findings provide evidence of governmental accountability in presidentialism in terms of replacing the chief executive. That is, we have demonstrated that ruling parties in presidential systems are actually voted out of office through elections in relatively regular cycles. One of the conditions of accountability is that a government that fails to satisfy the citizens is voted out of office (Manin et al., 1999); and despite some arguments that question accountability in presidentialism, we have shown that voters in presidentialism have indeed been able to “throw the rascals out.” Of course, there are many other aspects in governmental accountability, and hence our findings do not simply mean that accountability is necessarily higher in presidentialism than in parliamentarism. However, the new empirical evidence we presented tells us that presidentialism can in fact enhance a certain aspect of accountability.

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Table 1: Government Stability in Cabinets, Leaders, and Political Parties: Using Great Britain as an Example

Year	Cabinet	Leader	Party
1979-	Thatcher 1st	Thatcher	Conservative
1983-	Thatcher 2nd		
1987-	Thatcher 3rd		
1990-	Major 1st	Major	
1992-	Major 2nd		
1997-	Blair 1st	Blair	Labour
2001-	Blair 2nd		
2005-	Blair 3rd		

Table 2: Descriptive Statistics of the Variables

2-A: Ruling Party Duration *

Alternation in party control defined by chief executive's party

	Presidentialism	Parliamentarism
Number of Periods of Party Control	98	194
Average Months of Survival	63.4	68.7
Standard Deviation	39.9	87.5

Alternation in party control defined by GCI > 50

	Presidentialism	Parliamentarism
Number of Periods of Party Control	98	159
Average Months of Survival	63.4	83.8
Standard Deviation	39.9	103.7

2-B: Control Variables

	Presidentialism		Parliamentarism	
	mean	std.dev.	mean	std.dev.
Polity Score	7.921	1.764	9.580	0.934
Age of Democracy	2.596	1.244	3.494	1.096
Length of Term	4.584	0.767	4.264	0.700
Term Limit	0.735	0.441	0.000	0.000
GDP Growth Rate	1.793	5.354	2.578	3.518

* The average lengths of survival are calculated by including both censored and uncensored cases.

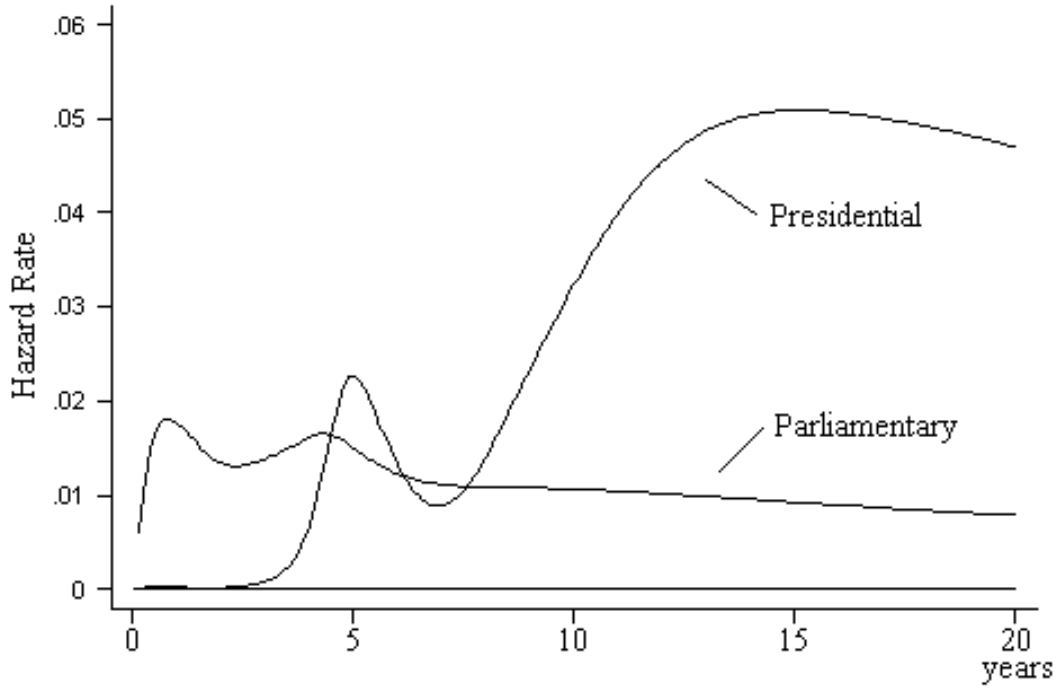
Table 3: Estimated Effects on the Survival of Ruling Parties

Model		(1)		(2)	
Alternation defined by		Executive's Party		GCI > 50	
		coefficient	standard error	coefficient	standard error
Parliamentarism		-1.779	3.704	-3.708	2.933
Polity Score		0.188	0.111	0.039	0.121
Age of Democracy		-0.330	0.111 **	-0.225	0.123
Length of Term		-1.189	0.306 **	-1.282	0.330 **
Term * Parliamentarism		1.577	0.363 **	1.478	0.387 **
Term Limit		1.873	0.635 **	2.165	0.672 **
GDP Growth Rate		-0.026	0.028	-0.029	0.029
Constant		-6.146	3.634	-2.755	2.801
Spline1	Parliamentarism	-0.529	1.747	0.368	1.019
	Constant	2.310	1.696	1.164	0.922
Spline2	Parliamentarism	-2.973	0.586 **	-10.419	2.977 **
	Constant	3.313	0.541 **	11.135	2.807 **
Spline3	Parliamentarism	33.574	4.831 **	45.557	10.937 **
	Constant	-35.753	4.422 **	-48.095	10.378 **
Spline4	Parliamentarism	-44.686	6.906 **	-49.723	11.704 **
	Constant	47.338	6.426 **	52.097	11.235 **
Spline5	Parliamentarism	15.287	3.250 **	16.149	4.578 **
	Constant	-16.165	3.129 **	-16.731	4.495 **
Parent Distribution		odds		odds	
Number of Knots		4		4	
<i>N</i>		17770		17805	
Log-likelihood		-288.35		-203.98	

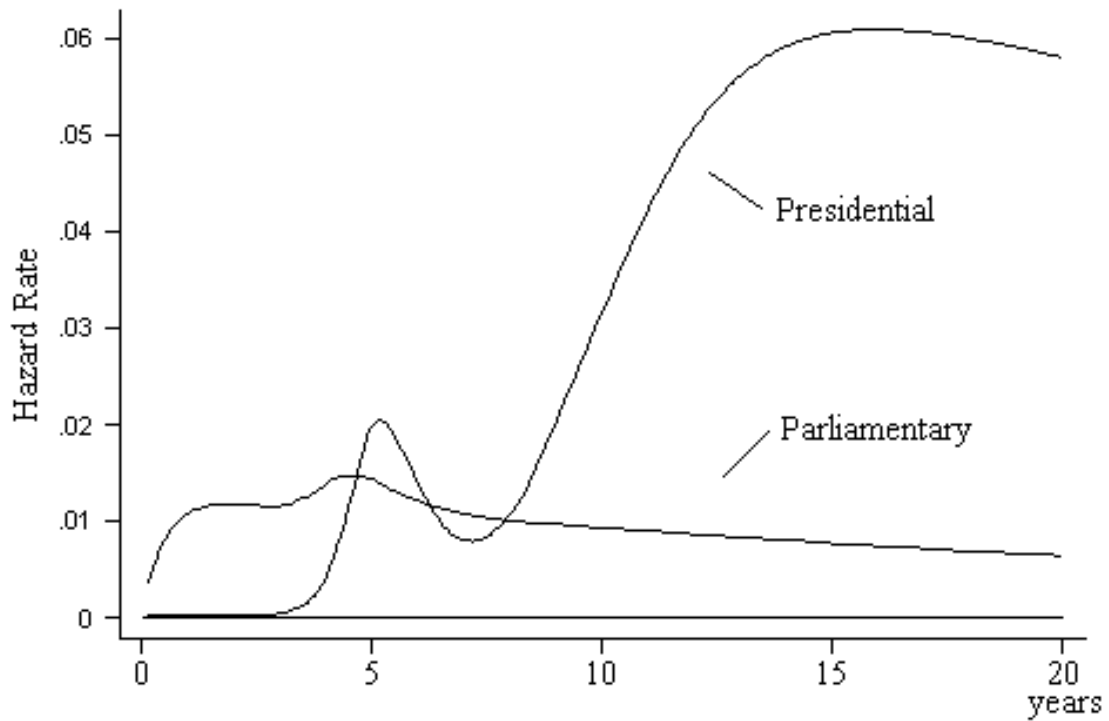
* p<.05, ** p<.01.

Figure 1: Estimated Hazard Rates in Presidential and Parliamentary Systems

1-a: From Model (1) ---Alternation in party control defined by chief executive's party



1-b: From Model (2) ---Alternation in party control defined by GCI > 50



Appendix: The Government Change Index

The GCI is the mean of (1) the proportion of the parties that left the coalition in the total seats of the old cabinet and (2) the proportion of the parties that joined in the new coalition in the total seats of the new coalition. In a mathematical formula, it is:

$$GCI = \frac{\left(\frac{\text{Seats of the departing parties}}{\text{Total seats of the old cabinet}} + \frac{\text{Seats of the incoming parties}}{\text{Total seats of the new cabinet}} \right)}{2} * 100$$

As an illustration, in Germany in 1969, the CDU/CSU (245 seats) and the SPD (202 seats) maintained a coalition government. After the general elections in September, the SPD (224 seats) formed a new coalition with the FDP (30 seats). In this case, the CDU/CSU is the party that left the coalition, the FDP is the incoming party of the coalition, and the SPD is the party that stayed through the change. The GCI is calculated as follows:

$$GCI = \frac{\left(\frac{245}{245 + 202} + \frac{30}{224 + 30} \right)}{2} * 100 = 33.31$$

When 100% of the government party is replaced (e.g., a single party government is replaced by another single party government), the value for the GCI is 100. Similarly, if a single party government remains in power after an election, the value for the GCI is zero.

We realize that it is also possible to create a similar index using not the seat shares of coalition parties but the number of cabinet portfolios each party possesses, and it would indeed be a better measure in capturing the relative importance of the parties in the government. We however elected to use the seat shares of parties because (1) it has been empirically shown that the allocation of portfolios is correlated with the number of legislative seats of cabinet parties to a remarkably high degree (e.g., Browne & Franklin, 1973, report a correlation coefficient of 0.926) and (2) the data for portfolio allocation are not easily available outside of the OECD

countries. Indeed, Strom (1990b) creates a similar index as ours by using the seats shares of parties, not the portfolio allocation.

¹ The case of Japan is a good example to support our argument. While the Liberal Democratic Party (LDP) continuously stayed in power between 1955 and 1993, the number of prime ministers and cabinets has reached 15 and 27 respectively. Therefore, in terms of leadership or cabinet duration, Japan's post-war politics was very unstable. Yet, most observers of Japan would agree that postwar Japanese politics is characterized as *overstability*, which stems from the status of the LDP as the dominant party. Indeed, when the non-LDP coalition came to power in 1993, major policy changes took place, such as the electoral system reform and the elimination of import restrictions on rice.

² Indeed, Stokes (1999) and Samuels (2002) point out the lack of scholarly attention on the impact of parliamentary and presidential systems on political parties.

³ We thank an anonymous reviewer for bringing this point to our attention.

⁴ Unlike the other three sources, POLITY does not classify democracies categorically but gives numerical ratings. We utilize the scores of POLITY in two different ways. One is to follow the cutting points used by POLITY to distinguish democracies from non-democracies. That is, we select countries in which "Competitiveness of Executive Recruitment" is coded 2 or 3; "Openness of Executive Recruitment" is 3 or 4; "Constraint on Chief Executive" is 4, 5, 6, or 7; and "Competitiveness of Political Participation" is 3, 4, or 5. Similar criteria are used by Doorenspleet (2000). The other way is to consider the countries with overall scores of 7 or higher as democracies. These two operational rules produce similar but different sets of democracies. Along with other three sources, we compare five lists of democracies to select our sample countries.

⁵ The excluded countries are Botswana, Finland, France (after 1958 only), Gambia (after 1970 only), Iceland, Lithuania, Mali, Mongolia, Mozambique, Madagascar, Niger, Poland, Portugal, Romania, South Africa, Taiwan, Switzerland, and Israel (after 1992 only). For the classifications, we consulted Siaroff (2003) and Golder (2004).

⁶ These countries are Czechoslovakia (1990-92), Guatemala (1945-54), Indonesia (1955-57), Laos (1958-59), Malaysia (1957-69), Mauritius (1968-), Moldova (1993-), Myanmar (1948-62), Nepal (1991-), Papua New Guinea (1975-), Somalia (1960-69), Sudan (1956-58, 65-69, and 86-89), Thailand (1975-76 and 92-), Trinidad & Tobago (1962-), and Ukraine.

⁷ The data for government changes are collected from various sources including Woldendorp, Keman, and Budge (2000) and several web sites such as “World Political Leaders, 1945-2004” (<http://www.terra.es/personal2/monolith/00index.htm>) and “World Statesmen” (<http://www.worldstatesmen.org/>). One complication in measuring government duration is about caretaker governments. Our operational rules are as follows. If the government composition before and after the caretaker government did not change, we treated it as if the government continued during that time. If the government changed before and after, we treated the time under the caretaker government as a long transition time, that is, the previous government terminated when the caretaker government started and the new government began when it took office.

⁸ The data for Germany 1961-70 and Uruguay 1972-73 are missing in the version 6.1 and filled by using the version 5.6.

⁹ The data were obtained from Golder (2004).

¹⁰ That is why the output of the Cox model does not have a constant term. It is incorporated into the unknown, unspecified baseline function.

¹¹ When only one spline is allowed, log cumulative hazard and log cumulative odds distributions reduce to Weibull and log-logistic distributions, respectively.

¹² For more detailed explanations of this method, see Royston & Parmar (2002). Royston (2001) shows how this model is implemented in STATA, and Box-Steffensmeier and Jones (2004) discuss this model and when it may be useful.

¹³ Polity is 9, Age of Democracy is 24 years, Length of Term is 4.36 years, no term limit on the executive, and GDP growth rate is 2.33%.

Biography

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Acknowledgement

Previous versions of this paper were presented at the 2003 Southwestern Political Science Association Meeting and the 2002 Midwest Political Science Association Meeting. The authors would like to thank the members of the panels in these two conferences. The authors also would like to thank Michael Crespín, Justin Fox, Wonjae Hwang, Mark Jones, Michelle Kuenzi, Dennis Patterson, Brian Silver, Nicolas van de Walle, and anonymous reviewers for their helpful comments. The authors' names are in alphabetical order reflecting equal co-authorship.