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MINISTER TURNOVER, CRITICAL EVENTS,
AND THE ELECTORAL CALENDAR IN
PRESIDENTIAL DEMOCRACIES

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Minister Turnover, Critical Events, and the Electoral Calendar in Presidential Democracies ¹

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This article examines why and when presidents remove members of the cabinet in response to critical events. We propose a formal model that underscores the complex interplay of political shocks, the electoral calendar, and constitutional term limits to explain cabinet turnover in presidential regimes. Our theory suggests that protests against an activist minister and corruption scandals represent critical events with different political dynamics. While presidents may choose to protect an activist minister in order to deliver successful policy outcomes, there is little to be gained in the long run from recurrent scandals. At the same time, presidents discount long-term electoral payoffs when elections are close and when they are starting a lame-duck period. We test these predictions using survival analysis with an original dataset for 12 Latin American democracies between 1979 and 2007.

O artigo examina porque e quando os presidentes removem membros do gabinete em resposta a eventos críticos. Propomos um modelo formal que considera a interação complexa entre os conflitos políticos, o calendário eleitoral e os limites constitucionais do mandato para explicar a redistribuição de ministérios em gabinetes presidenciais. A nossa teoria sugere que as protestas e os escândalos de corrupção representam eventos críticos com diferentes dinâmicas políticas. Testamos o modelo usando *survival analysis* com uma base de dados original para 12 democracias Latino-Americanas entre 1979 e 2007.

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Confronted with unexpected critical events, presidents and prime ministers often respond by replacing cabinet members. Although media coverage suggests that this is a common political strategy, there is little systematic knowledge on the subject. Why, and under what circumstances, chief executives replace their ministers in order to defuse political conflicts? Which types of political shocks are more likely to promote minister turnover?

In order to address those questions, our paper is structured into five sections. In the first section we underscore the theoretical relevance of this issue and explore the relationship between democracy, political conflicts, and portfolio allocation. The second section develops a formal model of minister turnover in presidential regimes. Presidential regimes present an optimal setting to explore this issue because presidents have considerable leeway to appoint and dismiss ministers, and because the duration of the administration is independent from the duration of particular cabinets. The model involves two players, the president and a minister. Confronted with a critical event—a protest against the administration or a media scandal—the president may remove or protect the minister, and the minister, if not dismissed, may resign or stay in office. The choices made by these players affect their capacity to secure the support of different blocs of voters in the short run and over the long run. The corollaries of our theory indicate that presidents may protect an activist minister besieged by protests, in the hope that good policy outcomes will reverse public perceptions in the long run, but they have fewer incentives to protect ministers besieged by corruption scandals. However, these choices are mediated by the electoral calendar (i.e., the time left to the end of the term) and by the imposition of term limits. We derive four empirical hypotheses emphasizing how the impact of different types of conflicts is mediated by the electoral calendar and by rules about reelection.

The third section introduces our data and method. Using original data on minister tenure and political conflicts for 12 Latin American democracies over the period 1978-2007, we apply survival analysis to test our hypotheses. The fourth section presents our results and the last section concludes. Consistent with our theory, the empirical findings indicate that media scandals are likely to trigger minister turnover early in the

presidential term, when the president has enough time to recover from a cabinet reshuffle, while mass protests against the administration's policies are likely to trigger minister turnover late in the term, when the president cannot wait for controversial policies to deliver outcomes. However, these patterns are altered when presidents confront term limits.

Portfolio Allocation and Conflicts

The allocation of cabinet portfolios constitutes a key moment of the democratic process as it involves the distribution of the highest positions in an elected government. Heads of government can use portfolio allocation to promote governability in different ways; for instance, they may craft coalitions to secure legislative support, and they may replace unpopular ministers to preserve public approval.¹

Coalitional cabinets and legislative majorities have been largely studied by the literature on government duration in parliamentary democracies (for summaries see Martin and Stevenson 2001; Laver 2003).² A more recent but growing literature has also shown that successful coalitional politics also takes place under presidentialism (Altman 2000; Altman and Castiglioni 2010; Amorim Neto 2006; Chasquetti 2001; Chasquetti 2008; Cheibub 2002; Cheibub and Limongi 2002; Cheibub, Przeworski, and Saiegh 2004; Dehesa 1998; Mejía 2009; Negretto 2006).³

By contrast, the use of cabinet portfolios to preserve public approval when governments confront unexpected conflicts has received less attention. Heads of governments may sacrifice key ministers as a “relief valve” to decompress turbulent situations, blaming the salient minister but preserving the credibility of the cabinet. Although journalistic sources provide anecdotal evidence of this strategy, there is little compelling empirical proof of the uses of portfolio allocation *during* the life cycle of parliamentary governments or presidential administrations.⁴ The extent to which conflicts influence minister replacement, as well as the circumstances under which such influence is likely to occur, are not well known, especially in presidential democracies.

There is almost no cross-national comparative analysis of the relationship between portfolio allocation and political conflicts (for a valuable exception, see Martínez-Gallardo 2011).⁵ However, students of the British case have presented the most elaborate studies of this topic. Dewan and Dowding (2005) argue that portfolios are used as a tool to confront decreasing of popularity resulting from problems such as policy failure, incompetence, or scandals. The authors identify critical events in which ministers faced calls for resignation or confronted severe criticisms from Parliament, organizations outside parliament, or the media, and distinguish between ministers that resigned and those that remained in office. Their results for the United Kingdom during 1955-98 suggest that the reallocation of portfolios, when used to address serious issues capturing media attention, may preserve and even improve government popularity. Berlinsky, Dewan and Dowding (2010) conceive portfolio allocation as a Prime Minister's tool to promote better performance, removing incompetent ministers and keeping competent ones. By distinguishing minister performance (individual calls for resignation) from government performance (cumulative number of individual calls), they show that a minister's tenure depends not only on his or her own results but also on other colleagues' performance, indicating that ministers share collective responsibility "in a real sense."

Dewan and Myatt (2007) develop a formal model in which scandals are positively related to policy activism. Thus, the presence of scandals is not necessarily an indicator of corruption, but the result of political reactions against a proactive minister. In this model, proactive ministers face greater risks of a resignation call, which in turn may discourage policy activism. The Prime Minister can use portfolio reallocation to protect ministers from such attacks and to encourage them to take risks. The model sustains that "whereas the promise of protection enhances the activism of those who are free from scandal, the same promise encourages tainted ministers to sit tight. Ministers who suffer from an exogenously higher risk of scandal or who have past exposures and have little chance of recovery are more likely to be policy active" (Dewan and Myatt 2007: 74).⁶

In principle, similar dynamics to those present in the British case could occur in presidential democracies. Both prime ministers and presidents are concerned with their popularity (which is critical to promote their policy agendas and to secure votes at the next election), with the tenure of their ministers (who often shirk to advance their own

political careers), and with the threat of exogenous shocks (which may undermine supports for the government). However, presidential democracies have some distinctive institutional features that need to be stressed.

First, presidential constitutions establish fixed terms in office for the chief executive (Linz 1990), imposing a distinctive timing to the quest for public support. The absence of regular dismissal procedures, such as the vote of no confidence, often makes presidents willing to adopt unpopular policies early in the term, in the expectation that voters will have enough time to update their beliefs about the administration's program and support the president at the next election (Stokes 2001).⁷

Second, most presidential constitutions impose some form of term limits. In Latin America, some democracies do not allow presidential reelection at all (Guatemala, Honduras, Mexico and Paraguay); some allow reelection but not for consecutive terms (Chile, Costa Rica, El Salvador, Panama, Peru and Uruguay); and some allow consecutive reelection but just once (Argentina, Bolivia, Brazil, Colombia and Ecuador). Unrestricted reelection, a common feature in European democracies, is only allowed by one Latin American country (Venezuela). Thus, while direct election of the chief executive makes extensive public support a necessary condition for political survival, incentives to mobilize voter support towards the end of the term change considerably if the president is a lame duck.

Third, presidential constitutions usually grant the chief executive greater autonomy to appoint and dismiss ministers, creating a cyclical pattern of alignment between presidents and their cabinets. When presidents are popular, likely to be reelected, and they control the party, moral hazard problems (i.e., ministers running against the president's interests) are rare. There are no significant payoffs in going against strong presidents. On the contrary, when presidents are weak or cannot run for reelection, ministers' incentives to follow self-interested strategies become much stronger than in parliamentary democracies. Because the resignation of ministers has no immediate consequence for the survival of the government or the legislature, members of the coalition may simply abandon the cabinet (Altman 2000; Chasquetti 2008). In turn, ministers of the ruling party may seek to consolidate public support and build their own

factions as the party searches for new leaders (for a similar logic of “strategic defection” among judges, see Helmke 2005).

In the next section we develop a theory of the circumstances under which presidents use portfolio allocation in response to conflicts. We argue that different political shocks promote different strategic reactions from presidents and ministers, conditioned by the moment at which those conflicts occur and by the opportunity structure of individual careers. In order to observe different conflict dynamics we consider two kinds of events, namely social protest and media scandals. Following Dewan and Myatt (2007) we interpret *social protests* as a challenge against active ministers. New policies introduce changes to the status quo, producing adherents and detractors. If policies prove to be successful in the long run, the government may eventually consolidate the support of adherents and convince some of the initial detractors. Following Dewan and Dowding (2005) and Berlinsky et al. (2010), we interpret *media scandals* as claims against questionable performance—illegal or reprehensible behavior related to corruption or abuse of power. Such accusations tend to enlarge the number of detractors but are unlikely to capture new adherents. If proven true, the revelations will taint the credibility of the government and impose political costs.

Therefore, although both represent “critical events,” protests and scandals constitute different strategic challenges. Actions in response to protests or scandals may involve different payoffs, for presidents as well as for their ministers. Moreover, our previous discussion indicates that the consequences of these choices will be mediated by two factors, the electoral calendar and constitutional rules about term limits. The *electoral calendar* reflects the time left for the administration to deliver policy outcomes—or for investigators to prove a minister guilty of corruption—before the end of the term. Rules about *reelection* alter career opportunities for both presidents and ministers. As Strøm (2000) has argued, presidents are better equipped to deal with problems of moral hazard than prime ministers. However, this advantage tends to vanish when they cannot run for reelection. In those circumstances, presidents may concentrate on their historical “legacies” while ministers follow self-interested strategies in order to preserve their careers in the near future.

Crises and Turnover in Presidential Systems

In this section we introduce a theory of minister turnover. We show that protests and scandals represent critical events with different consequences. Presidents who aspire to reelection may protect an activist minister in order to deliver successful policy outcomes in the future, but they have fewer incentives to protect ministers who are exposed to scandals in the long run. However, presidents discount these long term payoffs when elections are close and when they face term limits. The predictions of our model underscore the interaction of critical events, the electoral calendar, and reelection rules to determine cabinet turnover.

Players and Payoffs

Our model involves two actors, the president and a minister (for clarity in the exposition, we use the female pronoun for the president and the male pronoun for the minister). Confronted with protests against an activist minister or with scandals that compromise his position, the president may remove the minister or protect him and keep him in office. In turn, the minister may resign or stay on the job. Observationally, these choices are hard to disentangle—ministers often resign when the president asks them to do so—but they should be distinguished for analytical purposes. Such actions have consequences for both players in terms of public approval and voter support, which ultimately define their payoffs.

A president who was elected with a proportion of the total vote, $v \in [0, 1]$, will seek to expand her electoral capital in order to mobilize support for her policies and to campaign for reelection. A minister who is backed by a particular faction within this coalition, $m \in [0, v]$, will seek to expand his following among the president's electorate. In most cases, we expect m to constitute a small proportion of v (at the outset, ministers are unlikely to command a large share of the president's electoral bloc). Consolidation of the minister's faction is particularly important to secure the minister's career when the president confronts term limits.

Some choices produce political results without delay while others yield benefits (or costs) in the long run. Short-term actions elicit an immediate response from citizens, while long-term actions require that players wait for the payoffs to be realized. Players value future payoffs according to factor φ_i and immediate payoffs according to $(1 - \varphi_i)$, where $i \in \{P, M\}$ is a sub-index to identify the player (president or minister), and $0 \leq \varphi \leq 1$ indicates how much deferred payoffs are valued vis-à-vis short-term increases in public approval or electoral support.

Protests versus Scandals

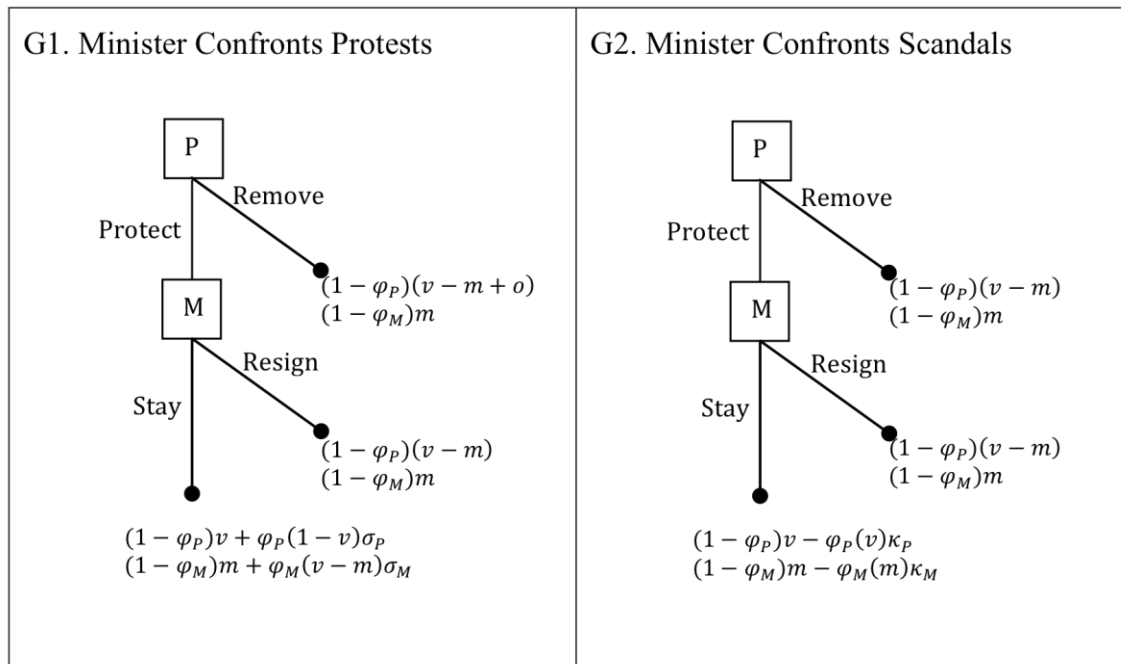
We contend that in most presidential systems protests and scandals should be distinguished because the payoff structure and thus the impact of the electoral calendar on each critical event are potentially different. In the long run, activist ministers may deliver successful policies, attracting new voters to the president's coalition, while corrupt ministers may deliver new scandals, undermining public support. However, in the short run the dismissal of an activist minister may be functional to re-orient policies and construct new electoral coalitions, while the firing of a corrupt minister is unlikely to seduce additional voters.

When the president appoints an activist minister to address a pressing policy P (we subscript sigma to allow for the possibility that the president and the minister hold different beliefs). For the president, policy success represents the possibility of capturing a proportion of voters $1 - v$ outside her initial coalition. For the minister, it means an opportunity to consolidate his position in the ruling bloc, gaining support among $v - m$ party followers. In the short run, however, firing the minister may attract to the president's coalition a new segment of the opposition $o < (1 - v)$, which is mobilized against the minister's policies. It also means, unfortunately, losing the support of the minister's following (m) and relinquishing the possibility of claiming credit for his policy success in the future.

The first panel of Figure 1 summarizes the situation of both players in extensive form. If the president yields to the opposition, she secures a proportion of votes $v - m + o$ in the short run. If she protects the minister but the minister ultimately decides to resign, he takes m voters with him into the splinter and the opposition interprets the outcome as a

triumph over the administration. By contrast, if the president protects the minister and he stays in office, the president preserves her coalition of size v intact in the short run, and captures a new segment of the electorate $1 - v$ with probability σ_P into the future. Similarly, the minister preserves the support of m voters and captures a new faction of the party $(v - m)$ with probability σ_M in the future. In all cases, the payoffs are weighted according to the value that players assign to the present vis-à-vis the future, represented by parameter ϕ . We discuss this factor in greater detail in the next section.

Figure 1. Two Games of Cabinet Removal



By contrast, when a minister is besieged by scandals, the president expects that further disclosures will prove the minister to be corrupt with probability K_P (the minister in turn assesses his risk with probability K_M). Public condemnation could lead the president to lose her coalition of size v , and the minister to lose his command over m party followers. A strategy of *damage control* involves firing the minister, sacrificing the minister's faction (m) in the short run but minimizing the drain of votes over the long-run.

The second panel of Figure 1 represents this situation. If the president yields to public opinion pressures, she secures a proportion of votes $v - m$. If she protects the minister but the minister resigns, the outcome is similar because he takes m voters into the splinter but the episode is closed. If the president protects the minister and he stays in office, the president preserves her coalition of size v intact in the short run but risks the collapse of her electorate's trust with probability K_P into the future. Similarly, the minister risks losing m supporters with probability K_M in the future.

Elections and Time Horizons

Presidents and ministers need to mobilize public support in order to foster their policy agendas at the present and in order to secure their reelection in the future. Therefore, the value players assign to future payoffs, represented by ϕ , depends on two conditions: whether the administration is early or late in the term and whether presidential reelection is allowed or not. In order to represent the electoral calendar, we use T to denote the proportion of the period left until the end of the term, with $T = 1$ indicating the moment right after the inauguration and $T = 0$ indicating the moment preceding the next inauguration.

When *presidential reelection is allowed* and the administration has been just inaugurated ($T = 1$), the president values current public support as much as future support, because she will need votes to secure her reelection at $T = 0$. We represent this need to balance short-term and long-term public approval as $\phi_P = .5$. To the extent that the president can be reelected, ministers also want to preserve their position in the ruling coalition throughout the presidential term ($\phi_M = .5$). Yet, as the next presidential election approaches at $T = 0$, the president increasingly values the immediate electoral outcome and discounts the long-run, because a victory is absolutely necessary to remain in office (at the limit, $\phi_P = 0$). Ministers whose careers are generally tied to the president's will $/2T$.

By contrast, if presidential reelection is *not allowed*, the president will value public approval after her inauguration, in order to promote her agenda, but she will discount future payoffs because term limits will make voter support irrelevant towards the end of the term (thus $\phi_P = 0$). In fact, by the end of the term the lame-duck president

will have little use for electoral support and she will be mostly concerned about her long-term legacy (Anderson 2010; Murphy and Stuckey 2002). We represent anxiety about securing a place in history at that point as $\varphi_P = 1$. Thus, when the president confronts term limits, $\varphi_P = 1 - T$.

In the midst of this process, the minister will need to secure his future career. Early in the administration, public support will be critical to position himself for the succession contest, and late in the term it will be necessary to carve a role for himself in the next government. Therefore, he will seek to balance short-term and long-term electoral goals ($\varphi_S = .5$). From the perspective of the model, it is irrelevant whether a minister secures his future by mobilizing his voters in a party primary or by breaking with the incumbent to run at the general election. When ministers know that the president

2. Table 1 summarizes the structure of discounts for each player under two institutional settings and for the two polar moments during the presidential term.

Table 1. Value of Future Payoffs for the President and her Ministers in Four Scenarios

	Reelection allowed		Reelection not allowed	
	T = 1 (early)	T = 0 (late)	T = 1 (early)	T = 0 (late)
President	$\varphi_P = .5$	$\varphi_P = 0$	$\varphi_P = 0$	$\varphi_P = 1$
Minister	$\varphi_M = .5$	$\varphi_M = 0$	$\varphi_M = .5$	$\varphi_M = .5$

Hypotheses

Given this setup, we are able to define the equilibria for G1 and G2 and the empirical implications of the theory for cabinet removal. We solve the games at the poles of the electoral calendar, $T = 1$ and $T = 0$, using sub-game perfection as the equilibrium concept. In game G1, the activist minister has no incentive to resign. Therefore, the president removes the minister from office if

$$(1 - \varphi_P) \frac{\sigma - m}{1 - v} > \varphi_P \sigma_P .$$

This equilibrium condition implies four corollaries:

a) The president will only remove an activist minister if the size of the coalition mobilized against his policy is greater than the number of policy supporters.

b) When $\varphi_P = \frac{1}{2}$ (i.e., early in a term with possibility of future reelection), the president will fire an activist minister only when the net electoral gain among potential new voters is greater than the expected probability of policy success. This situation appears to be unlikely unless the policy is very prone to failure, or protests become widespread.

c) When $\varphi_P = 0$ (i.e., late in the term with possibility of reelection, or early in the final term), the president will fire an activist minister whenever the protest is stronger than the minister's base ($o > m$). This appears to be a common situation.

d) When $\varphi_P = 1$ (i.e., late in the last term), the president will not fire an activist minister.

These corollaries suggest two hypotheses about the interaction of protests, institutional design, and the electoral calendar:

Hypothesis 1A. When reelection is allowed, protests will promote minister turnover late in the term, but not early during the term.

Hypothesis 1B. When reelection is not allowed, protests will promote minister turnover early in the term, but not late in the term.

In game G2, by contrast, the president is willing to remove the minister if

$$\varphi_P \kappa_P > (1 - \varphi_P) \frac{m}{v}.$$

It follows that:

a) When $\varphi_P = \frac{1}{2}$ (i.e., early in a term with possibility of future reelection), the president will fire a minister if the risk of him being proven guilty is greater than the relative weight of his faction within the president's coalition.

b) When $\varphi_P = 0$ (i.e., late in the term with possibility of reelection, or early in the final term), the president will not fire a minister charged with corruption, either because the election is too close, or because further disclosures cannot affect the president's reelection, which is already banned.

c) When $\varphi_P = 1$ (i.e., late in the last term), the president will fire a potentially corrupt minister unless she trusts him completely, $K_P = 0$.

Notice, however, that in G2 the minister may be willing to resign in order to avoid the cost of future disclosures. This will happen whenever $\varphi_M K_M m > 0$. This situation is

likely, unless the minister has, politically speaking, nothing to lose ($m = 0$), unless he is completely convinced of his innocence ($K_M = 0$), or—more important for our argument—unless $\varphi_M = 0$, that is, the administration is late in the term and the president will run for reelection. We therefore advance two additional hypotheses:

Hypothesis 2A. When reelection is allowed, scandals will promote minister turnover early in the term, but not towards the end of the term.

Hypothesis 2B. When reelection is not allowed, scandals will promote minister turnover early *and* late in the term. Albeit incentives for the president to remove ministers are strong towards the end of the term, incentives for ministers to resign are consistent throughout the term.

Data and Method

To test the four hypotheses we consider all ministers in office in 12 Latin American countries from 1978 (or the year of the democratic transition) to 2007. Our dataset includes 82 administrations, some 1,234 portfolios, and 2,625 ministers.⁸ We analyze the length of time a minister occupied a specific portfolio. Because we are interested in the use of portfolio allocation *during* the administration's life cycle, we treated all ministers leaving the portfolio at the end of the administration as censored cases. We identified 1,627 ministers leaving the portfolio during the life time of an administration (out of 2,625). The boundaries of administrations are defined by presidents' inauguration dates.

In order to capture critical events, we expanded the dataset developed by Lodola et al. (2007), which relies on the *Latin American Weekly Report* to document the timing of two types of political shocks, namely social protests and media scandals. The variable *protests* is a dichotomous indicator that registers whether a protest affected a given administration during each month under study. As defined by the original source, episodes of protest refer to contentious mobilization in the streets targeted at the government, and could involve looting and riots, roadblocks, invasions of land, occupations of public or private buildings, and marches and demonstrations. We observed an average of 32.4 protest events per administration for the whole period. The

variable *scandals* measures the occurrence of a media scandal in which the president's party, members of the cabinet, the president's family or friends, or the president him or herself were involved in a given month. Scandals could refer to administrative corruption, abuse of power, or character issues such as sex scandals. We observed an average of 17.4 scandal events per administration for the whole period. As the temporal impact of these conflicts is hard to establish precisely, we assigned a lag effect of two months to both protests and scandals.

Our hypotheses anticipate that presidents and ministers will respond strategically to those events, conditional on the moment at which conflicts take place and on whether reelection is allowed. Our variable *calendar* measures the number of days left to the constitutional date of the next presidential inauguration. Note that this variable is substantively different from the duration of a particular *minister* in office (a minister may enter or leave the cabinet at any point in the electoral calendar). In turn, *reeligible* indicates whether the president can run for immediate reelection. This dichotomous variable measures the specific situation of an incumbent, given the constitutional rule. For instance, Brazilian President Lula da Silva was re-eligible in his first administration but not in his second administration, because he confronted a two-term limit. We observed 12 re-eligible presidents out of 82.

In principle, heads of government in presidential regimes have fixed terms and are popularly elected. Nevertheless, there were some cases in our sample of early resignations, which also meant that the subsequent caretakers took office without being popularly elected. Of 82 administrations, we identified 15 interrupted presidencies and 12 presidents taking office without a prior election. Because minister stability may vary under those special circumstances, we captured these two features of the administration using dichotomous control variables (*anticipated*, for presidents that eventually left office before the end of the term, and *interim* for non-elected caretakers).⁹ Two presidents (Duhalde of Argentina and Mesa of Bolivia) were coded as 1 for are both *interim* and *anticipated*; only one president with an anticipated exit (Alfonsín of Argentina) was not followed by an interim.

We consider two standard institutional attributes as additional control variables. *Minority* reflects whether the president enjoys minority support in any of the legislative

chambers. We observed that condition for 64 of the 82 administrations (78%). About 83% of the reeligible presidents and 77% of the non-reeligible presidents had legislative minorities. *Coalition* registers whether the cabinet includes members of parties other than the president's. About 49% of the observed cabinets were coalitional, and the distribution was quite similar for reeligible and non-reeligible presidents (50% and 49% respectively).

The last two control variables reflect the general macro-economic context in any given year (Martínez-Gallardo 2011). We include *inflation* and *economic growth* from the World Development Indicators. The average inflation was 6.8% for reeligible presidents and 424.8% for non-reeligible presidents; average economic growth was 3.9% and 2.7%, respectively.

We model the duration of ministers in office using a Cox proportional hazards model. Event history analysis allows us to estimate the probability that a minister will exit the portfolio at time t . Additionally, the semi-parametric model allows us to analyze this phenomenon without assuming a specific shape for the hazard function (Blossfeld et al., 2007; Box-Steffensmeier and Jones 2004). Our model specification tests whether protests and scandals affect the hazard rate of minister turnover, conditional on the electoral calendar and reeligibility.

Because of unobserved conditions, countries may present a different baseline hazard for ministers in office. Moreover, specific portfolios show significant variation regarding departmental functions, budgets, and personnel. There is no conclusive empirical evidence on how the characteristics of different portfolios influence their allocation in response to conflicts. However, we have good reasons to suspect that not every cabinet position is equally sensitive (Dull and Roberts 2009). In order to control for unobserved sources of heterogeneity in national conditions and executive departments, we estimate a frailty model in which latent frailties are assumed to vary by country-portfolio.

Findings

Table 2 presents the results of the analysis. The effect of each covariate is shown in the table as a hazard ratio. A hazard ratio of 1.5 indicates that an one-unit increase in the

covariate will, *ceteris paribus*, increase the probability of a minister leaving the portfolio by half, while a hazard ratio of 0.5 indicates that a unit increase in the covariate will decrease the current probability of a minister leaving office by half.

Table 2. Proportional Hazard Models of Minister Duration

	All Presidents		Reeligible		Non-Reeligible	
	I	II	III	IV	V	VI
Protests	1.238*** (.067)	1.020 (.127)	2.039** (.537)	2.081** (.552)	1.057 (.131)	1.052 (.130)
Scandals	1.383*** (.085)	1.544** (.211)	.976 (.269)	.977 (.271)	1.540** (.208)	1.595** (.215)
Reeligible	.863* (.062)	.657* (.125)				
Calendar (days left in the term)	1.000 (.000)	.999 (.000)	1.000* (.000)	1.000* (.000)	.999 (.000)	.999 (.000)
Protests*Calendar		1.000^ (.000)	.999* (.000)	.999* (.000)	1.000 (.000)	1.000 (.000)
Scandals*Calendar		.999 (.000)	1.000 (.000)	1.000 (.000)	.999 (.000)	.999 (.000)
Calendar*Reeligible		1.000* (.000)				
Scandals*Reeligible		.560 (.171)				
Protests*Reeligible		2.003* (.582)	1.573* (.331)	1.587* (.334)	1.101 (.093)	.958 (.081)
Protests*Calendar*Reeligible		.999** (.000)	.826 (.121)	.788 (.119)	1.231** (.088)	1.134 (.081)
Scandals*Calendar*Reeligible		1.000 (.000)				
Type of Government						
Minority	1.120 (.084)	1.114 (.085)	1.573* (.331)	1.587* (.334)	1.101 (.093)	.958 (.081)
Coalition	1.198** (.077)	1.215 (.078)	.826 (.121)	.788 (.119)	1.231** (.088)	1.134^ (.081)
Macro-Economic Context						
Economic Growth	.959*** (.005)	.959*** (.005)	.943*** (.012)	.946*** (.013)	.962*** (.006)	.966*** (.006)
Inflation	1.000* (.000)	1.000^ (.000)	1.000 (.000)	1.000 (.000)	1.000^ (.000)	1.000 (.000)
Type of Administration						
Anticipated ending				1.439 (.420)		2.107*** (.182)
Interim						2.249*** (.168)
Wald Chi ²	[8] 131.51	[15] 146.75	[9] 40.83	[10] 42.70	[9] 105.53	[11] 297.58
Log likelihood	-11526.6	-11518.9	-1446.3	-1445.6	-9368.9	-9281.0
Theta	.276 (.048)	.269 (.048)	.163 (.100)	.157 (.096)	.240 (.048)	.235 (.047)
Observations	87,854	87,854	16,151	16,151	71,703	71,703
Groups (country-portfolios)	234	234	121	121	228	228
Subjects (ministers)	2,625	2,625	438	438	2,227	2,227

Entries are hazard ratios (standard errors in parentheses); ^ p<.10, *p<.05, **p<.01, ***p<.001

Our analysis proceeds in two steps. The first two models are estimated for all observations, while models III-IV and V-VI are estimated for sub-samples of reeligible and non-reeligible presidents, respectively. Model I reports the unconditional effect of the main variables in our theory (*scandals*, *protests*, *electoral calendar* and *reeligible*), controlling for institutional attributes (*coalition* and *minority*), and economic conditions (*economic growth* and *inflation*). The results indicate that, when all observations are considered, conflicts increase the risk of a minister leaving office.

Specifically, the presence of protests increases the hazard rate of minister turnover by about 24%, while scandals increase that risk by about 38%. Variable *reeligible* has a negative and significant effect on minister turnover, indicating that the risk of leaving a portfolio decreases when reelection is allowed. In turn, *calendar* (i.e., the days left to the end of the term) has no significant effect on the hazard rate. Regarding institutional attributes, *coalitional* cabinets increase the rate of cabinet turnover by about 20%. *Minority* legislative support has no significant consequences for cabinet turnover in most models. Moving to the economic variables, a percent point increase in *economic growth* reduces the risk of minister turnover by about 4% while *inflation* has a marginal positive effect.

Our theory indicates that presidents react to political shocks depending on the time left to the next presidential election and on their possibility of running for reelection. In order to assess the conditional effects anticipated by our four hypotheses, Model II includes interactions for *protests*calendar* and *scandals*calendar*, plus two triple interactions for *protests*calendar*reeligible* and *scandals*calendar*reeligible*. To achieve full specification, model also includes the set of related interactions: *protests*reeligible*, *scandals*reeligible*, and *calendar*reeligible*. The large number of interactions makes the results hard to interpret, but some empirical findings can be directly gleaned from the table. First, the coefficient for *protests*—which in this equation represents the effect of protests when the administration is coming to an end and when the president cannot be reelected—is not significant, albeit the estimate for *protests*calendar* suggests that this effect tends to increase as the end of the term is more distant. This result is consistent with hypothesis 1B. Second, the coefficient for *scandals*—reflecting the impact of exposés when the administration is ending and the

president cannot be reelected—is positive and significant. The interaction *scandals*calendar* suggests that this effect may decline when time horizons are longer, but this coefficient is insignificant. This pattern is generally consistent with hypothesis 2B.

A nuanced interpretation of the results, however, requires a systematic analysis of marginal effects. Moreover, hypotheses 1A and 1B condition the influence of protests and scandals on the possibility of presidential reelection. The significant effect of the first triple interaction in Model II underscores the convenience of splitting the sample in two groups—reeligious and non-reeligious presidents—in order to facilitate the interpretation.

In Models III and IV we analyze minister turnover only when reelection is allowed. Model III estimates the interactive effect of conflicts and the electoral calendar. Model IV adds one control variable (*anticipated* exit). Finally, in the last two models we analyze minister turnover when reelection is banned. Models V and VI repeat the specifications of the previous two models, with the additional inclusion of an *interim* president dummy in the last model.¹⁰

The theory anticipates that political shocks should significantly increase the risk of turnover only during certain moments of the presidential term. In order to assess our hypotheses more explicitly, we calculated the marginal effects of protests and scandals for each day in a hypothetical four-year term. Table 3 reports the temporal intervals during which each variable produces a significant increase in the hazard rate, based on the results presented in models III and V.

Table 3. Significant Increases in the Hazard of Turnover (Days Left in the Term)

	Reelection Allowed	Reelection Banned
Protests	700-0 (late)	1460-510 (early)
Scandals	1460-1050 (early)	1460-0 (early and late)

Entries reflect the interval during which the effect of scandals or protests is statistically significant ($p < 0.05$). For instance, 700-0 indicates that protests have a significant effect in the last 700 days before the end of the term. Calculation of marginal effects is based on models III and V. We assumed a four-year term to determine the upper bound in the number of days left in the term.

Hypothesis 1A. Model III examines minister turnover when reelection is allowed. The coefficient for *protest* captures the effect of demonstrations when the calendar is at

day 0, i.e., at the end of the administration. As shown in the table, this effect is significant and positive. The interaction *protests*calendar* reflects the (decreasing) marginal change in the effect of protests for each additional day left in the term. This estimate is also significant. As shown in Table 3, the conditional coefficient for *protests* (that is, the effect of protests when *calendar* > 0) is significant only for the last 700 days of the administration, with an increasing hazard ratio from 1.33 (at day -700) to 2.01 (at day 0). That is, towards the end of an administration, protests increase the risk of minister turnover by over 100%. Model IV shows that the results remain stable with the inclusion of a new covariate. When reelection is allowed, protests increase the hazard rate of minister turnover at the end but not at the beginning of the administration.

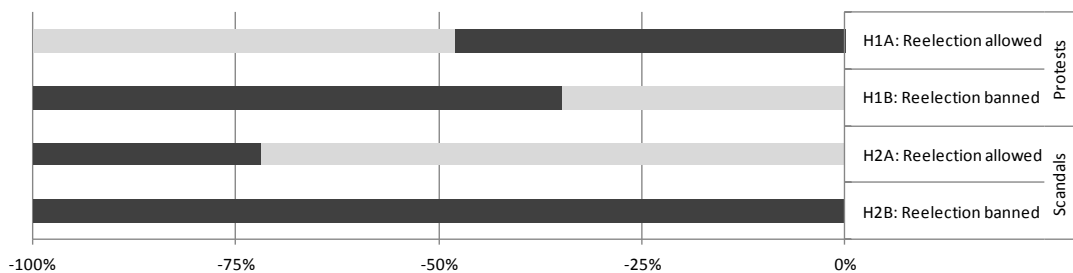
Hypothesis 2A. Interestingly, the presence of scandals presents the opposite dynamic. Both *scandals* and its interaction with *calendar* show a non-significant effect. However, the analysis of the conditional coefficient (that is, the effect of scandals when *calendar* > 0), indicates that scandals significantly increase the risk of minister turnover earlier than 1050 days before the end of the term, with a hazard that decreases from 1.52 at day -1460 to 1.34 at day -1050. That is, scandals increase the risk of minister turnover by about 52% at the start of a four-year administration, with a significant effect during only the first 14 months of the term. Model IV shows that the results remain stable and almost identical with the inclusion of new control variables. In sum, when reelection is allowed, scandals increase the hazard rate of minister turnover during the early days of the administration but not at the end.

Hypothesis 1B. Model V examines minister turnover when presidents cannot run for immediate reelection. Under this circumstance, both *protests* and the interaction with *calendar* show a non-significant effect. However, when testing for the conditional coefficient, *protests* is significant from the beginning of the administration until 510 days before the administration's end, with a decreasing hazard rate that moves from 1.37 in the first day of a four-year term to 1.16 at day -510. That is, when reelection is banned, protest increases the risk of minister turnover by about 37% *early* in the administration. Model VI shows equivalent results: when reelection is banned, protests increase the hazard rate of minister turnover at the beginning but not at the end of the term.

Hypothesis 2B. Again, the presence of scandals displays a different dynamic. The main term for media scandals has a significant and positive effect while the coefficient for the interaction of *scandals* and *calendar* is not significant. When we estimate conditional coefficients, scandals have a significant effect from the beginning (-1460 days) to the last day of the administration, with a hazard rate ranging from 1.37 to 1.16. That is, when reelection is banned, scandals increase the risk of minister turnover by 26% on average during the whole four-year term. Model VI shows that the result remains almost identical with additional control variables: scandals seem to increase the risk of minister turnover throughout the term.

The estimates provided by the models are consistent with our theoretical predictions. Protests and scandals promote minister turnover, but they operate in different ways and their effects are conditional on the presence of term limits and the electoral calendar. We provide a graphic representation of the conditional effects reported in the table in Figure 2. When immediate reelection is possible, protests increase the risk for ministers in the second half of the term while scandals increase that risk early in the term; when reelection is not allowed, protests affect turnover during the first half of the term while scandals do so for the whole period.

Figure 2. Periods During Which Scandals and Protests Destabilize Ministers



Horizontal bars represent a four-year presidential term (percentages reflect the countdown to the end of the term). Dark intervals indicate the portion of the term for which the effect of scandals or protests is statistically significant ($p < .05$, see Table 3). Calculation of marginal effects is based on models III and V.

The coefficients for our control variables not only confirm previous findings in the literature, but also offer additional insights and suggest possible hypotheses. Recent

studies have argued that ministers serving minority presidents confront a higher risk of turnover (e.g., Martínez-Gallardo 2011). Our models suggest that *minority* legislative support increases the risk of turnover only when presidents can run for reelection. By contrast, our results show that *coalition* cabinets tend to increase the risk of turnover when re-election is banned. This result is consistent with theories claiming that coalition members abandon the cabinet when individual presidents approach the end of their rule. Authors have traditionally interpreted this problem in terms of the electoral calendar, but our results indicate the need to place additional emphasis on the question of term limits (Altman 2000; Chasquetti 2008). The effects of macroeconomic variables are consistent across models. *Economic growth* reduces the risk of turnover while *inflation* has no significant effects. Finally, variables related to extraordinary events (an administration subject to pressures leading to its *anticipated* termination and an *interim* president) map into an increasing hazard rate for ministers.

Discussion and Conclusions

Our empirical findings for 12 Latin American countries support the predictions derived from the theoretical model: political shocks increase the risk of minister turnover, but their effects are conditioned by strategic considerations and institutional factors. If presidents aspire to reelection, they are willing to remove cabinet ministers enveloped by media exposés early in their terms, when there is enough time to clean the administration's image, but they are prone to remove ministers weakened by mass protests late in their terms, when they lack enough time to convince voters that policies are successful. By contrast, presidents confronting term limits are likely to remove ministers embattled by protests early on and those tainted by scandals later in the term. In the latter case, however, collaborators affected by exposés in the first months of the administration have incentives to withdraw from the cabinet in order to minimize the duration of the scandal and protect their future political careers.

These complex effects underscore the importance of expanding the study of executive politics, integrating lessons of presidential and parliamentary systems. Classic studies of cabinet politics focused on the formation and dissolution of parliamentary governments, without much attention to the politics of ministerial posts in between government crises (e.g., Laver and Shepsle 1996). Yet, over the past few years an emerging line of research has emphasized the study of cabinets during the life cycle of parliamentary governments (Dowding and Dumont 2009; Huber and Martinez-Gallardo 2008; Indridason and Kam 2008). As part of this movement, recent studies have shown that critical events not only trigger the downfall of governments but also incite the exit of individual ministers (Berlinsky et al. 2010; Dewan and Dowding 2005; Dewan and Myatt 2007).

Our study contributes to this literature by demonstrating that the label “critical events” covers a heterogeneous set of shocks that may have very different causal effects. We have documented that media investigations and social mobilization affect cabinet stability at different points in the political cycle. In the same vein, it is possible that different types of protests (e.g., those related to living conditions or to civil rights) will

affect different types of portfolios, or that shocks of different nature (e.g., bursts of inflation or unemployment) will undermine ministers of different ideological persuasions. Unpacking this broad category is one of the pending tasks for studies of presidential and parliamentary systems.

Our findings also suggest some distinctive lessons for students of presidentialism. Over the past decade, comparative studies of presidential governments focused on the formation of cabinets, either to explain minister profiles (Escobar-Lemmon and Taylor-Robinson 2005; 2009) or to explain the formation and collapse of inter-party coalitions (Altman 2000; Chasquetti 2008; Martínez Gallardo 2012). In response to Linz's (1990) classic critique of presidential systems, studies of coalition formation explored the conditions under which minority presidents can articulate legislative majorities. And even though these studies naturally stressed the similarities of coalition politics under presidentialism and parliamentarism, scholars in this group were cognizant of unique political dynamics created by presidential constitutions, such as the "tyranny" of the electoral calendar (Altman 2000; Chasquetti 2008). The results presented in this paper indicate that early studies of presidential cabinets may have downplayed the importance of term limits as a distinctive feature of presidential constitutions. Our empirical findings suggest that constitutional constraints on executive reelection alter the strategic consequences of critical events such as protests and scandals, and may also condition the effect of more conventional factors invoked to explain cabinet turnover such as the minority status of presidents. Term limits were for the most part ignored by a literature inspired in early studies of parliamentary systems, but they should not be ignored in future studies of cabinet politics in Latin America, the United States, and many African countries.

NOTES

¹ We will use *presidents* and *primer ministers* to distinguish heads of government of presidential and parliamentary systems, respectively.

² Government duration or cabinet stability has been used as an indicator of regime stability and, since the first systematic studies of government survival in the early 1970s, also as an indicator of good performance. Basically, a government that endures is a government that has the support of the parliament and encourages aspects such as the increasing of executive expertise, the control of the bureaucracy, the electoral accountability, and the commitment to international actors.

³ While the literature on parliamentarism has studied cabinet formation, duration and termination, the literature on presidentialism is still developing on cabinet formation. A first cross-national analysis on cabinet termination under presidentialism is provided by Martínez-Gallardo (2012).

⁴ Portfolio allocation *within* cabinets or *during* the administration life cycle fits within the literature on minister turnover. This field derives from—and is still highly related to—studies of cabinet stability and it is still in its infancy. Only recently, Huber and Martínez-Gallardo (2008) have shown that the variables used for explaining cabinet stability were not sufficient for explaining minister turnover (for in depth cases studies in Europe see Dowding and Dumont 2009).

⁵ For comparative studies on the determinants of individual portfolio allocation under presidentialism, see Escobar-Lemmon and Taylor Robison (2005 and 2009).

⁶ For another way to observe portfolio reallocation as a tool to improve the policy making process, see Indridason and Kam (2008).

⁷ The forced resignation of presidents (without democratic breakdown) is possible and represents one of the most significant phenomena of current Latin American democracies. However, these are cases of extraordinary politics, mostly related to extremely acute social crises (see Llanos and Marsteintredet, eds., 2010; Pérez Liñán, 2007).

⁸ The countries and periods covered include Argentina 1983-2007, Bolivia 1982-2007, Brazil 1985-2007, Chile 1990-2007, Colombia 1978-2007, Costa Rica 1978-2007, Ecuador 1979-2007, Mexico 1976-2007, Paraguay 1989-2007, Peru 1980-2007, Uruguay 1985-2007, and Venezuela 1979-2007. The data was gathered using the Keesing's World News Archive and multiple national sources.

⁹ We considered all presidents who took office and lasted for more than one week. We ignored interim presidents who were in office for less than a week, because the turnover of ministers in such cases (if new ministers are ever appointed) does not provide any relevant information for testing our hypotheses.

¹⁰ The variable *interim* was not included in Model IV because we coded all interim presidents as being (legally or *de facto*) unable to run for reelection. In some cases (e.g., Eduardo Duhalde in Argentina) even though reelection was legally possible, there was an explicit plea of the interim president not to run.

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