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LEADER SURVIVAL AND CABINET CHANGE

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Political leaders face both internal and external threats to their tenure as leaders. To retain office leaders need mass support, for instance to win elections. However, they also need to deal with potential internal party rivals. Using a game theoretic model, we examine how the incentives created by these competing pressures affect the retention of ministers across different political systems. Since non-democratic leaders face relatively little threat from the masses, their concern is to reduce internal party risk. Therefore, they remove high performing ministers and retain mediocre and poor performers. As it becomes easier for the masses to replace the party in power, leaders must tradeoff internal and external threats. Retaining competent leaders improves party performance but generates an internal party rival.

1. INTRODUCTION

POLITICAL LEADERS need ministers to help them rule. However, these ministers are also potential internal political rivals. Leaders face competing incentives. They prefer high performing ministers because it helps them retain the support of the masses and so enable their party to win elections. Yet, precisely because of their ability to garner mass support, high performing ministers become attractive to members of the party as future leaders. Leaders must tradeoff the value of retaining a vote-winning minister against the risk of losing control of the party. Political institutions strongly influence this tradeoff and so effect the tenure and performance of ministers.

In non-democratic systems, elections, or other mass participation events which affect the choice of government, are stacked in favor of the incumbent party. The masses find it costly to replace the incumbent leader and her party. Under these circumstances, leaders focus on diminishing the threat posed by internal party rivals. As a result, leaders keep mediocre, but loyal, ministers and have an incentive to replace those ministers who distinguish themselves as highly capable.

Democratic leaders face competitive elections. Therefore, these leaders cannot simply adopt an autocrat's method of disposing of all highly competent internal rivals because her party needs the performance of these individuals to help it win the next election. Democratic leaders face competing incentives between constructing the most competent government possible, so as to keep the party in power, and remaining at the head of the party. Democratic institutions affect the rate at which leaders tradeoff between these threats. The easier it is for the party elite to replace leaders, the more concerned leaders are with the internal party threat. Thus, prime ministers in parliamentary systems find survival doubly difficult. This is particularly the case when the party leader is chosen by the mass membership of the party rather than by a small group of party elites. The voters can easily replace the incumbent party at an election and this makes the party liable to switch and promote another minister should she

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appear more electorable than the prime minister. This encourages a prime minister to weed out underperforming ministers as well as the most competent – and therefore the most threatening – ministers. The threat of internal party deposition is less pertinent for directly elected presidents as it is harder for their party to replace them. As a consequence, they focus on retaining the most talented cabinet members.

Political leaders can reshuffle their cabinet for many reasons. Often, cabinet change is used as a tool to solve adverse selection and moral hazard problems (Huber and Gallardo, 2008; Indridason and Kam, 2008; Kam and Indridason, 2005; Martin and Vanberg, 2004). Leaders can also modify the cabinet to match an individual's ability with the demands of a particular portfolio and implement policy (Dewan and Hortalla-Vallve, 2009), to improve electoral prospects when ministers find themselves involved in a scandal (Dewan and Dowding, 2005; Dewan and Myatt, 2007), or to encourage better ministerial performance (Dewan and Myatt, 2010). Some leaders might even have incentives to make changes to the cabinet to give potential rivals a poisoned chalice, that is, a portfolio that is likely to tarnish their image (Kam and Indridason, 2005). Cabinet changes and reshuffles can also result from coalition dynamics, particularly in multiparty cabinet governments (Diermeier and Stevenson, 1999; King et al., 1990; Laver and Shepsle, 1994a, 1996; Warwick, 1994). The scale and timing of reshuffles can also be determined by elections, administrative impact, and the parliamentary time table, among others factors (Alderman and Cross, 1987). These and many other motivations have been offered to explain cabinet changes. Unfortunately, integrating all these different motives into a single model is intractable. Therefore, we restrict our primary focus to examining how competition for mass support and competition within the ruling elite shape leaders' incentives to retain or replace ministers across different political systems.

In our interpretation, cabinet change is an additional strategy in a leader's toolbox of political survival. Unlike previous work that investigates cabinet reshuffles in democratic parliamentary systems, our focus is comparative. There are great differences between political systems. However, all leaders face internal party and mass participation threats. In non-democratic systems these mass threats may not take the form of competitive elections, but the masses can, and sometimes do, depose leaders. Within democracies, there is great variation in the ease with which cabinet members and party elites can replace the party leader. Our objective is to explore the consequences of these institutional differences. The theory generates predictions as to how institutions affect the relationship between policy, performance, and the retention of ministers.

2. LITERATURE REVIEW

There is a large number of studies of the cabinet. Most of this work is country-specific and, altogether, covers a diverse set of nations, from Thailand and Brazil to the United States and Egypt (Amorim Neto, 2002; Anene, 1997; Cohen, 1986, 1988; Cooper, 1982; Dogan, 1979; Fairlie, 1913; Fenno, 1958, 1959; Huber and Gallardo, 2004; Mann and Smith, 1981; Nicholls, 1991; Polsby, 1978; Riggs, 1981; Sisson, 1981; Tomita *et al.*, 1981). Several studies focus on the role of cabinets during particular historical episodes, often related to war (Baker, 2001; Herkless, 1975; Livingston Schuyler, 1918, 1920; MacGregor, 1939); or explore personal accounts of ministerial life (Farrar, 1980; Jones, 1992; Loss, 1974).

Comprehensive as this literature is, it has not produced a theory of cabinet change that is applicable to different political regimes. This is partly explained by the belief

that cabinet ministers automatically follow the orders of their principal – the leader. Unfortunately, this approach to the cabinet fails to recognize not only its historical evolution – marked by competition between branches of government – but also the fact that ministers are ambitious politicians with their own political and administrative agendas, administration styles, and who respond to different constituencies and interests that may not coincide with those of the leader or the voters. The importance of cabinet members resides precisely in the tension produced by their duty to their principal and the pursuit of their own political goals; and hence the need for an account of the cabinet that emphasizes the influence, autonomy, and ambition of cabinet ministers (Fenno, 1958; Laver and Shepsle, 1994a).

In this light, there are at least three factors that determine the importance of the cabinet. First, leaders cannot rule alone and hence appoint cabinet secretaries to help them run departments and agencies. In this capacity, cabinet members are essential in determining policy coordination and management, formulating and implementing policy, and signaling an administration's policy preferences, among others. Second, in helping leaders to rule, cabinet ministers might produce agency problems caused by their administration styles and the fact that they represent numerous interests, including other branches of government. Most explanations of cabinet change suggest that the deposition of ministers aims at solving these agency problems. Finally, cabinet secretaries are ambitious and might ultimately aim at becoming leaders. This is a centerpiece of the theory advanced in this paper.

As suggested by Modeleski (1970), ministers across political systems are strategically placed for exercising influence over the formulation and implementation of policy. This strategic position is a minister's most valuable asset and it can be traced to the fact that leaders delegate many of their functions to their ministers. This delegation of power has endowed ministers with administrative and political control over a large proportion of key operations of the state (Lynn and Smith, 1982). At the same time, leaders also use cabinet ministers as signals of their future intentions (Laver and Shepsle, 1994b; Polsby, 1978). In a different approach, Mattozzi and Merlo (2008) examine the incentives for politicians to move between the private and public sectors.

In their capacity as agents of a leader, ministers are responsible for the efficient administration of public affairs. This is particularly important in parliamentary democracies, where ministers play a central role in policy formulation and implementation (Huber and Gallardo, 2008), and in military governments, which tend to rely on civilians to run the government more efficiently (Anene, 1997) and satisfy the needs of powerful bureaucracies (Riggs, 1981). In this framework, cabinet change must be carried out carefully to keep the smooth functioning of the administration, as the dismissal of ministers might affect policy coordination and management (Cohen, 1986; Huber, 1998).

A second reason to study the cabinet is the fact that many cabinet members tend to replace their leaders. In the United States, Presidents Thomas Jefferson, James Madison, James Monroe, John Q. Adams, and Martin Van Buren all occupied the position of Secretary of State. However, with the exception of Herbert Hoover – Secretary of Commerce from 1921 to 1928 and President from 1929–1933 – cabinet membership has not led to higher office in the twentieth century; although it often leads to a successful career in business (Nicholls, 1991). Yet, the recent appointment of Hilary Clinton as Secretary of State for the Obama administration has renewed interest in cabinet members that are potential presidential candidates.

The most interesting aspect of this type of "upward mobility" is that, often, cabinet members do not simply succeed their leader, but in fact contribute to her deposition. For instance, Francisco Leon de la Barra, Mexican Minister of Foreign Affairs in the 1910s, directly planned the deposition of President Francisco Madero. In a more recent example, in January 2010, two former cabinet members attempted to organize a secret ballot to depose Gordon Brown as leader of the Labor Party. If the secret ballot had taken place, it could have deposed Gordon Brown as leader of the party and Prime Minister.

A minister's incentives to pursue her own goals is at the center of hypotheses of cabinet change in democratic parliamentary systems that highlight problems of moral hazard and adverse selection. These agency problems can be minimized by a series of measures, such as mechanism design and institutional checks (Martin and Vanberg, 2004; Strom, 1994). Cabinet change is another tool used to solve the adverse selection and moral hazard problems produced during the selection of ministers (Huber and Gallardo, 2008). Indridason and Kam (2008) and Kam and Indridason (2005) also stress these agency problems as reasons for cabinet reshuffles, but further show that prime ministers make changes to their cabinets to win elections and prevent intraparty threats of deposition. These threats vary across political systems (Weller, 1994) and party types.

The emphasis on agency problems in parliamentary systems echoes the concern for the extrapresidential activities of cabinet members in the United States. Fenno (1958) contends that a cabinet secretary participates in a multiplicity of non-presidential, and hence non-cabinet relationships better characterized by a pluralistic, quasi-feudal system. These non-presidential activities are further strengthened by the fact that cabinet members also tend to represent social, political, geographical, or economic forces and trends. These political and economic forces that pull ministers in different directions sometimes compel them to publicly show positions opposite to those of their leader (Bertelli and Grose, 2007), which can lead to the dismissal of the secretaries or to their voluntary resignation.

In an effort to extend the study of cabinet ministers beyond parliamentary democracies, Blondel (1985) produced the most comprehensive examination of cabinet members. At the center of his study is the "ministerial condition," a term that describes the short tenure of cabinet ministers. In his account, this condition is explained by the "traditions of the country and by the institutional structure indirectly, as well as by what appears to be a need to set up an effective and credible government." In spite of the breadth of Blondel's investigation, this hypothesis did not explain cabinet change. However, recent research has begun to follow-up on his study and has taken important steps toward a theory that addresses both the strategic interaction between leaders and ministers, and how it changes as a function of different political systems (Quiroz Flores, 2009). We contribute to this research agenda by developing a game theory model of cabinet change.

3. A MODEL OF CABINET CHANGE

We present a simple model of cabinet reshuffles. Our model is not the first formalization of cabinet reshuffles. However, it is the first model that explicitly explores the relationship between leader survival and cabinet change in a comparative context. In our interpretation, cabinet change is an additional strategy in a leader's toolbox of

political survival. Other formal models highlight cabinet change as a leader's response to her decline in popularity caused by ministerial scandal (Dewan and Myatt, 2007), cabinet reshuffles as a means to reduce ministerial drift from a leader's ideal position in the policy space, which is closely connected to promises made to the voters and the party or coalition (Indridason and Kam, 2008), or cabinet change as a means to promote performance, which is necessary for success in government (Dewan and Myatt, 2010). Although these investigations implicitly connect cabinet reshuffles to survival, they do not explain it as a strategic tool to maximize tenure in office, as we do here. We focus on how perceptions of a minister's competence and policy position affects a leader's incentives to replace him and how this relationship changes across different political institutions.

The citizens of a nation care about two aspects of government performance: competence and policy positions. In analyzing the results we focus mainly on the competence dimension. In the model, government is composed of a leader (l) – the prime minister, president, or dictator depending upon the system – and a single minister ($m1$). The incumbent government implements policy and generates public goods. From these outcomes, the citizens learn about the ability of government ministers and the overall policy position of the government. The leader then decides whether to replace the existing minister $m1$ with a new minister $m2$. By doing so, the leader wipes away part of her government's legacy – whether it be good or bad – and replaces the known minister with a relatively unknown quantity. After a reshuffle the incumbent leader faces reselection first by the party and then by the public. Although leaders might care about competence and policy, we assume that their predominant concern is to retain office. Our primary question is how institutional differences affect the interplay between reshuffles, party retention, and elections.

Ministers are responsible for running and managing their ministries. Ministers differ in their managerial capacity. Competent, capable ministers are likely to produce high levels of public goods and run their bureaucracies efficiently. In contrast, less competent ministers risk more scandals, failed policies, and wasted resources. We assume that all politicians have a level of ministerial competence a, which is assumed to be distributed according to a standard uniform distribution. As ministers serve in office, the citizens update their beliefs about the ministers' competence. Those who run their office well and produce many public goods are revealed to be competent; therefore, they are likely to produce more public goods in the future. The original 1988 Mexican cabinet was considered as one of the most talented governments in postrevolutionary Mexico; its most prominent members negotiated NAFTA, paved the way toward democratization, and went on to serve as cabinet members in future governments. Dewan and Myatt (2010) motivate their study of cabinet performance by making a reference to the outstanding quality of the cabinets of George Washington in the United States and the Liberal government of 1908–1914 in Great Britain. Although this updating could be explicitly modeled, for simplicity we assume that the voters learn ministerial and leader competence. In our model, ministers are treated as non-strategic actors. The relative benefit of a competent government is α. Thus, if the expected competence of the leader and minister are a_l and a_{m1}, then citizens receive benefits worth $\alpha(\lambda a_l + (1 - \lambda)a_{m1})$, where $\lambda \in [\frac{1}{2}, 1]$ reflects the influence of the leader relative to a minister. If a member of the government is replaced, either through a reshuffle, internal party deposition, or an election, then the competence of the new cabinet member

is unknown. Until they have their abilities revealed, untried cabinet members have expected competence of 1/2, since their ability is uniformly distributed on [0,1].

Politicians and citizens care about policy. Each person has an ideal point z_i in the interval -1 to 1. We assume that the citizens are evenly distributed over this interval such that the median voter has ideal point $z_v = 0$. The incumbent party is assumed to be on the right wing, with its members uniformly distributed on the unit interval [0,1]. The median party decision-maker is located at $z_R = \frac{1}{2}$. By analogous construction, the opposition party contains party members with ideal points between -1 and 0.

The effective policy of the government is the result of internal cabinet bargains. It also requires implementation by multiple members of government; even if both the leader and a minister agree to a common policy, each will try to shift policy toward their ideal point at the implementation stage. We do not explicitly model this bargaining and instead assume that government policy is the average policy position of the leader and a cabinet minister. If the leader has ideal point z_l and the minister has ideal point z_{m1}, then the effective government policy is $\frac{z_l + z_{m1}}{2}$. That is, we assume leaders and ministers have equal influence over policy. This could be readily generalized. We assume quadratic preferences such that a person with ideal point z_i receives a policy payoff of $-p(z_i - \frac{z_l + z_{m1}}{2})^2$ from the implementation of government policy, where $p > 0$ is the salience of policy position.

Since our focus is on cabinet change, we take policy positions as given rather than examine their strategic choice. Although this is a limitation that we hope to relax in future work, this assumption is standard to formal studies of cabinet change that typically examine strategic choice on one of several possible dimensions. For instance, Dewan and Myatt (2007) look at ministers' level of activism, defined as the number of new policy initiatives implemented. Dewan and Myatt (2010) explore ministers' level of performance, which is costly for ministers but beneficial for governments; performance is interpreted as the ministers' opportunity cost of not pursuing their own personal agenda. Indridason and Kam (2008) explore ministers' strategic selection of a policy position. However, they focus on cabinet reshuffles (i.e. the permutation of ministers in the cabinet) and not the strategic adoption of policy positions in the first place.

The citizens and party elites care about competence and policy. In addition, we assume that party elites receive office benefits related to their standing in the party. Specifically, they receive a payoff of φ from remaining a privileged member of the ruling party. Leaders are predominantly office seeking. They seek to maximize their probability of remaining national leader.

Political leaders face retention decisions by both the party and the masses. In democratic systems, the mass retention decision takes the form of an election in which the voters compare the expected policy and competence of the incumbent party with that of the opposition. Elections often also occur in non-democratic systems, although they are rarely free and fair. This does not mean that the incumbent is completely free from the risk of deposition by the masses. Rather, this means that it is much harder for the masses to depose the incumbent and so they are less likely to take such action unless conditions are dire. However, revolutions do occur. We refer to this stage as an election by the voters, although in non-democratic systems it might entail protest and rebellion. To model the extent to which the incumbent is beholden to the masses, we assume that citizens pay a cost $D - \chi$ to replace the incumbent, where D is a fixed cost that reflects the overall difficulty of removing the incumbent and χ is a random

variable that reflects variations in these costs and the relative benefits of the incumbent and opposition on dimensions other than those explicitly modeled. The variable χ is drawn from a distribution $F(x)$ at the time of the election, such that $F(x) = \Pr(\chi < x)$. The voters base their decision to retain the incumbent on the relative benefits they expect to receive from the incumbent relative to the opposition, and the cost of removing the incumbent party. The decision of the median voter characterizes the decision of a majority of the voters and therefore the outcome of the electoral stage depends upon the median voter's decision.

Leaders can also be deposed by the ruling party. In democratic systems, this takes the form of internal party leadership battles, which often entails elections within the party membership or within the parliamentary members of the party. The equivalent mechanism within non-democracies is a coup. The members of the party can replace the incumbent leader with another leading politician from the party. The decision is made by members of the party elite. We assume that the median member of this group has policy ideal point $z_R = \frac{1}{2}$. The party members pay a cost $\Lambda - \mu$ to depose the incumbent, where Λ represents the average cost of internal deposition and μ is a random variable which represents the variance in this cost: μ is distributed $G(x) = \Pr(\mu < x)$.

In addition to the cost associated with replacing leaders, party elites potentially jeopardize their access to privileges within the party when leader change occurs. New leaders can reorganize the hierarchy of the party, promoting some members and demoting others. To capture this risk, suppose that there are S potential candidates for each elite party position, and that these elite party members receive benefits φ. If the party decision is decided by a small group of elite party members, then φ is likely to be large. However, if the mass membership votes, few of these members receive perks and so φ is small. Bueno de Mesquita et al. (2003) refer to S as the selectorate, the pool of potential supporters from which a winning coalition is drawn. Here the situation is slightly more complex, as the leader requires support at both the party and the mass levels. Since a new leader reorganizes the party to promote her friends, the existing party elite cannot be certain of being included in the new leader's inner circle. If they are excluded, they lose the rewards of being elite influential members of the party. Since there are S potential candidates for each elite position, the expected benefits for the existing party elite under a new leader is φ/S. Naturally, the nature of internal party competition shapes S. In a parliamentary system, senior party members are often restricted to the party's members of parliament and so S is comparatively small. In presidential systems, party elites are drawn from a wider pool and so S is larger. The pool from which the elite is drawn can also vary greatly in non-democratic systems. For instance, in military juntas, elite membership is typically restricted to a small number of senior military officers. In contrast, S is much larger in a corrupt electoral system as virtually anyone can, with a very small probability, be promoted to executive office.[1]

In summary, voter i cares about government competence $(\alpha\lambda E[a_l] + \alpha(1 - \lambda)E[a_m])$ and government policy $\left(-pE[(z_i - \frac{z_l + z_m}{2})^2]\right)$ in an additively separable manner. In addition, voters and party elites receive the following benefits and costs associated with removing and retaining leaders. Each voter i pays the cost $D - \chi$ if the govern-

[1]Dewan and Myatt (2010) implicitly examine the size of party elites when modeling the talent pool. In parliamentary systems, ministers are drawn from the legislature which is a much smaller pool than in presidential systems.

ment is replaced at election. If the incumbent leader retains office at both the party and general election then party elites receive a benefit φ. If the party elites replace their leader and the new party leader wins the general election then party elites receive expected rewards $\varphi/S - \Lambda + \mu$, where φ/S is the expected private rewards under a new leader and $\Lambda - \mu$ is the cost of leader replacement. If party elites replace the party leader who then loses the election then party elites pay the leader replacement cost ($\Lambda - \mu$).

We assume leaders are primarily motivated to retain office, that is, they maximize their probability of retaining office. Leaders, party elites, and voters play the following game.

Game.

1. *Performance*: The leader (l) and minister ($m1$) govern. Everyone sees the policy positions of the leader and minister and everyone learns about their abilities to produce public goods.
2. *Cabinet reshuffle*: The leader decides whether to reshuffle. If she does so, then a new minister ($m2$) takes office. This untried minister has ideal point $z_{m_2} \sim U[0,1]$ and competence $a_{m2} \sim U[0,1]$.
3. *Internal party competition*: The party observes a random variable μ associated with the costs of deposing the incumbent. The party then decides whether to internally depose their leader at cost $\Lambda - \mu$. If they do so, then the minister (either $m1$ or $m2$) becomes leader. The new leader then draws another minister, m_3, from the pool of potential candidates. This untried minister has ideal point $z_{m_3} \sim U[0,1]$ and competence $a_{m3} \sim U[0,1]$.
4. *Mass political competition*: The voters observe a random variable χ and decide whether to retain the incumbent party or replace it with the opposition at a cost $D - \chi$.

We now characterize the subgame perfect equilibrium of this game.

4. RESHUFFLES, INTERNAL PARTY POLITICS, AND ELECTIONS

4.1 *Electoral Decisions*

The voters receive payoffs according to the expected competence and policies of the party they elect. They also pay electoral costs if they replace the ruling party. Suppose the voters elect the opposition party. In this case, the opposition party leader and minister (represented by ol and om) form the government. The opposition's competence (a_{ol}, a_{om}) and policy positions (z_{ol}, z_{om}) are unknown. However, given their distribution, the median voter's expected payoff from electing the opposition is

$$\begin{aligned}&\alpha\lambda E[a_{ol}] + \alpha(1-\lambda)E[a_{om}] - E\left[p\left(\frac{z_{ol}+z_{om}}{2}\right)^2\right] - D + \chi \\ &= \frac{\alpha}{2} - p\int_{-1}^{0}\int_{-1}^{0}\left(\frac{z_{ol}+z_{om}}{2}\right)^2 dz_{ol}dz_{om} - D + \chi = \frac{\alpha}{2} - \frac{7}{24}p - D + \chi.\end{aligned}$$

The first term corresponds to the expected competence of an opposition government and the second corresponds to the expected policy payoff. The final terms ($-D + \chi$) relate to the cost of replacing the incumbent.

The voters' reward from retaining the incumbent depends upon their knowledge of the cabinet's ability and policy positions. If the original leader and minister comprise the cabinet, then their policy positions and competence are known (case 1). The median voter's payoff from retaining these known entities is therefore $\alpha(\lambda a_l + (1-\lambda)a_{m1}) - p\left(\frac{z_l + z_{m1}}{2}\right)^2$. These terms correspond to government competence and policy position. The voters retain the government if $\alpha(\lambda a_l + (1-\lambda)a_{m1}) - p\left(\frac{z_l + z_{m1}}{2}\right)^2 \geq \frac{\alpha}{2} - \frac{7}{24}p - D + \chi$. Given the distribution of χ, this occurs with probability $F(Q_1)$, where

$$Q_1 = \alpha(\lambda a_l + (1-\lambda)a_{m1}) - p\left(\frac{z_l + z_{m1}}{2}\right)^2 - \frac{\alpha}{2} + \frac{7}{24}p + D. \quad (1)$$

If a shuffle or an internal party deposition has occurred, then the voters know comparatively less about the incumbent government. Suppose the leader has reshuffled her cabinet and has been retained by the party. At the election, the incumbent cabinet is composed of l and $m2$ (case 2). In this setting the leader's characteristics are known, but the minister's are relatively unknown. The median voter's payoff from retaining the incumbent is

$$\begin{aligned}\alpha\lambda a_l + \alpha(1-\lambda)E[a_{m2}] - Ep\left(\frac{z_l + z_{m2}}{2}\right)^2 &= \alpha\lambda a_l + \alpha(1-\lambda)\frac{1}{2} - p\int_0^1 \left(\frac{z_l + z_{m2}}{2}\right)^2 dz_{m2} \\ &= \alpha\left(\lambda a_l + \frac{1}{2}(1-\lambda)\right) - p\left(\frac{1}{4}z_l + \frac{1}{4}z_l^2 + \frac{1}{12}\right),\end{aligned}$$

where the terms correspond to competence and policy position, respectively. Therefore, the probability that the incumbent party wins the election is $F(Q_2)$, where

$$Q_2 = \alpha\left(\lambda a_l + \frac{1}{2}(1-\lambda)\right) - p\left(\frac{1}{4}z_l + \frac{1}{4}z_l^2 + \frac{1}{12}\right) - \frac{\alpha}{2} + \frac{7}{24}p + D. \quad (2)$$

Suppose the party promotes the minister $m1$ to leader. This means that $m1$ picks a new (and therefore unknown) minister $m3$ (case 3). The median voter's payoff from retaining this government is

$$\begin{aligned}\alpha\lambda a_{m1} + \alpha(1-\lambda)E[a_{m3}] - Ep\left(\frac{z_{m1} + z_{m3}}{2}\right)^2 &= \alpha\left(\lambda a_{m1} + (1-\lambda)\frac{1}{2}\right) \\ &\quad - p\left(\frac{1}{4}z_{m1} + \frac{1}{4}z_{m1}^2 + \frac{1}{12}\right).\end{aligned}$$

In this scenario, the incumbent party wins the election with probability $F(Q_3)$, where

$$Q_3 = \alpha\left(\lambda a_{m1} + \frac{1}{2}(1-\lambda)\right) - p\left(\frac{1}{4}z_{m1} + \frac{1}{4}z_{m1}^2 + \frac{1}{12}\right) - \frac{\alpha}{2} + \frac{7}{24}p + D. \quad (3)$$

Finally if a reshuffle has occurred, hence bringing $m2$ into the cabinet, the party can also promote $m2$ as party leader (case 4). The median voter's payoff from retaining this incumbent government is

$$\begin{aligned}&\alpha\lambda E[a_{m2}] + \alpha(1-\lambda)E[a_{m3}] - E\left[p\left(\frac{z_{m2} + z_{m3}}{2}\right)^2\right] \\ &= \frac{\alpha}{2} - p\int_0^1\int_0^1 \left(\frac{z_{m2} + z_{m3}}{2}\right)^2 dz_{m2}dz_{m3} = \alpha - \frac{7}{24}p.\end{aligned}$$

In this case, the probability of reelection is $F(Q_4)$, where

$$Q_4 = \frac{\alpha}{2} - \frac{7}{24}p - \frac{\alpha}{2} + \frac{7}{24}p + D = D. \tag{4}$$

The voters' decision rule and the probability of reelection are summarized in Table 1.

4.2 *Internal Party Deposition*

The party elite can replace the incumbent leader. Several factors affect their decision. First, changing the leader alters the "electability" of their party. Second, a new leadership alters the competence and policy of the government. This is precisely why a change in leader affects electorability. Third, party elites potentially jeopardize their access to rewards as influential party members, as the new party leader might choose to replace them.

If the opposition party wins the election, then the opposition party leader and minister (represented by *ol* and *om*) form the government. Thus, the party elite median member's payoff is

$$\begin{aligned} &\alpha\lambda E[a_{ol}] + \alpha(1-\lambda)E[a_{om}] - E\left[p\left(\frac{1}{2} - \frac{z_{ol}+z_{om}}{2}\right)^2\right] \\ &= \frac{\alpha}{2} - p\int_{-1}^{0}\int_{-1}^{0}\left(\frac{z_{m1}+z_{m2}}{2} - \frac{1}{2}\right)^2 dz_{m2}dz_{m1} = \frac{\alpha}{2} - \frac{25}{24}p. \end{aligned} \tag{5}$$

If the median party elite retains the leader (l) and minister ($m1$) and the party wins the election, then its payoff is $\alpha(\lambda a_l + (1-\lambda)a_{m1}) - p(\frac{z_l+z_{m1}}{2} - \frac{1}{2})^2 + \varphi$. The terms correspond to the value of government competence, policy, and private rewards as members of the party elite. The expected value of retaining l and $m1$ depends upon these payoffs weighted by the electoral probabilities:

$$\begin{aligned} &F(Q_1)(\alpha(\lambda a_l + (1-\lambda)a_{m1}) - p\left(\frac{z_l+z_{m1}}{2} - \frac{1}{2}\right)^2 + \varphi) \\ &+ (1 - F(Q_1))\left(\frac{\alpha}{2} - \frac{25}{24}p\right) = F(Q_1)\left(\alpha(\lambda a_l + (1-\lambda)a_{m1}) - p\left(\frac{z_l+z_{m1}}{2} - \frac{1}{2}\right)^2\right. \\ &\left. + \varphi - \left(\frac{\alpha}{2} - \frac{25}{24}p\right)\right) + \left(\frac{\alpha}{2} - \frac{25}{24}p\right). \end{aligned} \tag{6}$$

TABLE 1 VOTER'S DECISION RULE

Case	Composition of government	Reelect incumbent party iff	Probability of reelection
1	l, $m1$	$Q_1 = \alpha(\lambda a_l + (1-\lambda)a_{m1}) - p(\frac{z_l+z_{m1}}{2})^2 - \frac{\alpha}{2} + \frac{7}{24}p + D \geq \chi$	$F(Q_1)$
2	l, $m2$	$Q_2 = \alpha(\lambda a_l + \frac{1}{2}(1-\lambda)) - p(\frac{1}{4}z_l + \frac{1}{4}z_l^2 + \frac{1}{12}) - \frac{\alpha}{2} + \frac{7}{24}p + D \geq \chi$	$F(Q_2)$
3	$m1$, $m3$	$Q_3 = \alpha(\lambda a_{m1} + \frac{1}{2}(1-\lambda)) - p(\frac{1}{4}z_{m1} + \frac{1}{4}z_{m1}^2 + \frac{1}{12}) - \frac{\alpha}{2} + \frac{7}{24}p + D) \geq \chi$	$F(Q_3)$
4	$m2$, $m3$	$Q_4 = D \geq \chi$	$F(Q_4)$

It costs the median party elite $\Lambda - \mu$ to depose the incumbent and promote $m1$. If the party does so, then the party wins the next election with probability $F(Q_3)$ and receives benefits

$$\alpha(\lambda a_{m1} + (1-\lambda)E[a_{m3}]) - E\left[p\left(\frac{z_{m1}+z_{m3}}{2} - \frac{1}{2}\right)^2\right] + \frac{\varphi}{S}$$
$$= \alpha\left(\lambda a_{m1} + \frac{1}{2}(1-\lambda)\right) - p\left(\frac{1}{4}z_{m1}^2 - \frac{1}{4}z_{m1} + \frac{1}{12}\right) + \frac{\varphi}{S}.$$

Therefore, the expected payoff from deposing the party leader is

$$F(Q_3)\left(\alpha\left(\lambda a_{m1} + (1-\lambda)\frac{1}{2}\right) - p\left(\frac{1}{4}z_{m1}^2 - \frac{1}{4}z_{m1} + \frac{1}{12}\right) + \frac{\varphi}{S}\right) + (1-F(Q_3))\left(\frac{\alpha}{2} - \frac{25}{24}p\right)$$
$$-(\Lambda-\mu)$$
$$= F(Q_3)\left(\alpha\left(\lambda a_{m1} + (1-\lambda)\frac{1}{2}\right) - p\left(\frac{1}{4}z_{m1}^2 - \frac{1}{4}z_{m1} + \frac{1}{12}\right) + \frac{\varphi}{S} - \left(\frac{\alpha}{2} - \frac{25}{24}p\right)\right)$$
$$+\left(\frac{\alpha}{2} - \frac{25}{24}p\right) - (\Lambda-\mu).$$

The median party elite retains the party leader if the expected value of doing so is greater than that of promoting $m1$. This occurs with probability

$$\rho_1 = G\left(F(Q_1)\left(\alpha(\lambda a_l + (1-\lambda)a_{m1}) - p\left(\frac{z_l + z_{m1}}{2} - \frac{1}{2}\right)^2 + \varphi - \left(\frac{\alpha}{2} - \frac{25}{24}p\right)\right)\right.$$
$$- F(Q_3)\left(\alpha\left(\lambda a_{m1} + (1-\lambda)\frac{1}{2}\right) - p\left(\frac{1}{4}z_{m1}^2 - \frac{1}{4}z_{m1} + \frac{1}{12}\right)\right. \qquad (7)$$
$$\left.\left. + \frac{\varphi}{S} - \left(\frac{\alpha}{2} - \frac{25}{24}p\right)\right) + \Lambda\right).$$

The median party elite's decision changes if a reshuffle has occurred, since comparatively less is known about the prospective party rival ($m2$). If the party retains the leader, then the median party elite's payoff is

$$F(Q_2)\left(\alpha\left(\lambda a_1 + (1-\lambda)\frac{1}{2}\right) - p\left(\frac{1}{4}z_l^2 - \frac{1}{4}z_l + \frac{1}{12}\right) + \varphi\right) + (1-F(Q_2))\left(\frac{\alpha}{2} - \frac{25}{24}p\right)$$
$$= F(Q_2)\left(\alpha\left(\lambda a_l + (1-\lambda)\frac{1}{2}\right) - p\left(\frac{1}{4}z_l^2 - \frac{1}{4}z_l + \frac{1}{12}\right) + \varphi - \left(\frac{\alpha}{2} - \frac{25}{24}p\right)\right) + \left(\frac{\alpha}{2} - \frac{25}{24}p\right).$$

However, if the party replaces the leader, then the median party elite's expected payoff is

$$F(Q_4)\left(\frac{\alpha}{2} - \frac{1}{24}p + \frac{\varphi}{S}\right) + (1-F(Q_4))\left(\frac{\alpha}{2} - \frac{25}{24}p\right) - (\Lambda-\mu)$$
$$= F(Q_4)\left(\frac{\alpha}{2} - \frac{1}{24}p + \frac{\varphi}{S} - \left(\frac{\alpha}{2} - \frac{25}{24}p\right)\right)$$
$$+\left(\frac{\alpha}{2} - \frac{25}{24}p\right) - (\Lambda-\mu).$$

The party leader is retained when the former is greater than the latter, which occurs with probability

$$\rho_2 = G\left(F(Q_2)\left(\alpha\left(\lambda a_l + (1-\lambda)\frac{1}{2}\right) - p\left(\frac{1}{4}z_l^2 - \frac{1}{4}z_l + \frac{1}{12}\right)\right.\right.$$
$$\left.\left. + \varphi - \left(\frac{\alpha}{2} - \frac{25}{24}p\right)\right) - F\left(Q_4\right)\left(p + \frac{\varphi}{S}\right) + \Lambda\right). \tag{8}$$

4.3 *Reshuffle*

The aforegiven analysis characterizes the probability that the incumbent leader survives the internal party selection and the election. We assume that the leader is primarily motivated to retain office. If she retains minister $m1$, then her probability of survival is $\rho_1 F(Q_1)$. Alternatively, if she reshuffles and replaces $m1$ with $m2$, then her probability of survival is $\rho_2 F(Q_2)$. The leader decides whether to reshuffle so as to maximize her probability of survival.

The subgame perfect equilibrium of the game follows directly from the aforesaid characterization.

Proposition. In the subgame perfect equilibrium of the game:

1. The leader reshuffles if $\rho_2 F(Q_2) > \rho_1 F(Q_1)$, given by equations (1), (2), (7), and (8); otherwise, she retains minister $m1$.
2. If the government is composed of l and $m1$, then the median party elite retains the party leader with probability ρ_1 (equation (7)). If the leader has previously reshuffled, then the median party elite retains the party leader with probability ρ_2 (equation (8)).
3. The median voter uses the electoral strategy characterized in Table 1.

5. RESHUFFLES AS A MEANS TO SURVIVE

In this model, voters have the power to remove parties from government and the party has the power to replace a leader. A leader can replace cabinet ministers. Since each decision depends on a large number of parameters, the analysis is relatively complicated. It therefore makes sense to start by considering some limiting cases that illustrate political survival in autocracies and democratic presidential and parliamentary systems.

5.1 *Autocracies*

The first limiting case assumes that elections are non-competitive. The key assumption is that the voters' cost of deposing a leader is so large that the incumbent's probability of being reelected into office is very close to 1. This means that $F(Q_1) \approx F(Q_2) \approx 1$. Thus, a leader reshuffles her cabinet only when it reduces the probability of internal party deposition: $\rho_2 > \rho_1$. The probability of internal deposition depends, partly, on the elite party members' access to privileges. If elite party members do not remove the leader, they will enjoy a stream of benefits with certainty. However, if they decide to remove the leader, then their access to these benefits is probabilistic. This probability depends on the size of the pool of potential elite party members for each elite position,

which we denoted as S. The size of the pool, and therefore loyalty toward a leader, varies across autocracies. For instance, in a military junta, elite membership is limited to a small number of senior military officers, whereas in systems with corrupt elections the pool is much larger. Since S is small in political systems ruled by a military junta, there is not much loyalty toward a leader. This is because any new leader faces the same pool of potential junta members. Systems based on rigged elections have a larger pool of potential elite party members. Therefore, the probability that these members receive benefits from a new administration is relatively small. Leaders in these systems have more loyal elite party members.

Under these assumptions, and after some algebraic manipulation, a leader deposes her minister if $\alpha\left(\frac{1}{2}\right)(2\lambda - 1)(2a_m - 1) - \frac{1}{8}(-p)(2z_l - 1)(2z_m - 1) > 0$. Recall that a minister's competence is a random variable uniformly distributed between 0 and 1. Clearly, this expression decreases as the minister's competence declines. This suggests that, in autocracies, leaders tend to keep incompetent ministers in their cabinet to increase their own tenure in office. As an illustration, suppose that competence in the provision of goods is the only factor that determines whether a party will depose a leader. A leader deposes her minister if $\alpha\left(\frac{1}{2}\right)(2\lambda - 1)(2a_m - 1) > 0$. Evidently, if a_m is below the average (i.e., $\frac{1}{2}$), then the expression on the left is negative, which indicates that a leader will keep a minister who performs poorly. In contrast, the leader reshuffles ministers whose production is above average to reduce the threat from internal rivals.

The importance of incompetent cabinet ministers for the survival of autocrats is well illustrated by a passage by Ryszard Kapuscinski in his book about Haile Selassie, Emperor of Ethiopia for 43 years (1983, p. 33):

> The King of Kings preferred bad ministers. And the King of Kings preferred them because he liked to appear in a favorable light by contrast. How could he show himself favorably if he were surrounded by good ministers? The people would be disoriented. Where would they look for help? On whose wisdom and kindness would they depend? Everyone would have been good and wise. What disorder would have broken out in the Empire then! Instead of one sun, fifty would be shining, and everyone would pay homage to a privately chosen planet. No, my dear friend, you cannot expose the people to such disastrous freedom. There can be only one sun. Such is the order of nature, and anything else is a heresy.

Haile Selassie's strategy did not promote the welfare of the people. However, it did enable him to survive for 43 years as emperor until overtaken by decrepitude.

Policy also influences internal party competition and hence affects turnover of cabinet members. Effective government policy depends upon the position of both the minister and leader. On the basis of policy preferences, the leader enhances her position if the effective government policy is close to the party elite median position ($\frac{1}{2}$). Therefore, if the leader is on the left wing of the party, a right wing minister will help her survive the internal party selection process.

5.2 Presidential Democracies

The second limiting case assumes that party elites find it difficult to depose a leader. This is representative of democratic presidential systems, where leaders face little prospects of internal party deposition by cabinet members during their administration. In this case, the key assumption is that the party's cost of deposing a leader (Λ) is large

so that the probability of being internally deposed is very close to 0. This means that $\rho_1 \approx \rho_2 \approx 1$; therefore, the leader decides whether to reshuffle on the basis of maximizing electoral support. In particular, she reshuffles her cabinet if $Q_2 > Q_1$. Under these assumptions, and after some algebraic manipulation, a leader deposes her minister if $-\frac{1}{2}\alpha(1 - \lambda)(2a_m - 1) + \frac{1}{12}p(6z_l z_m - 3z_l + 3z_m^2 - 1) > 0$.

It is worthwhile separating this expression into its constituent parts. Leaders are relatively immune from internal party deposition. Thus, in terms of competence, they reshuffle their cabinet when $-\frac{1}{2}\alpha(1 - \lambda)(2a_{m1} - 1) > 0$. This expression is decreasing in ministerial ability, which implies that the leader keeps capable ministers and replaces those who fail. A competent cabinet enables the leader's party to win the election. Democratic presidential systems promote the retention of competent cabinets which promotes government performance. Unfortunately, the difficulty of internal party replacement makes it difficult to replace poorly performing leaders which diminishes government output.

John F. Kennedy was elected President after winning one of the closest elections in American history. Often, once a president has been elected, attention switches to the members of the new cabinet. This makes the selection of cabinet members a matter of upmost importance. In his book *The Best and the Brightest*, David Halberstam (1972) describes the selection of cabinet members for the new Kennedy administration. The author begins with a narrative of an encounter between President-elect Kennedy and Robert A. Lovett, a "representative of the best of the breed." According to Halberstam, the purpose of this December meeting of 1960 was to recruit Lovett as a cabinet member. Although Kennedy failed to do so, both men discussed potential secretaries for the Kennedy administration. By the time Kennedy took office in 1961, he had assembled a cabinet that was composed of the best America had to offer. Robert McNamara, Secretary of Defense, was the President of Ford. McGeorge Bundy, National Security Advisor, was Dean of the Harvard's Faculty of Arts and Sciences. Dean Rusk, Secretary of State, was President of the Rockefeller Foundation. As described by Halberstam (1972, p. 41), members of the Kennedy cabinet

> Carried with them an exciting sense of American elitism, a sense that the best men had been summoned forth from the country to harness this dream to a new American nationalism, bringing a new, strong, dynamic spirit to our historic role in world affairs, not necessarily to bring the American dream to reality here at home, but to bring it to reality elsewhere in the world.

The legacy of Kennedy and his star cabinet began to form during the short Kennedy administration and consolidated during the Johnson years. The legacy of the Kennedy cabinet contributed to the election of President Johnson, who took over as president after Kennedy's assassination; and remains as one of the most famous administrations in the United States.

5.3 Parliamentary Democracies

The analysis of parliamentary democracies is more complicated because leaders face both internal and external threats of deposition. Leaders seeking to remain in power must tradeoff between these competing risks. For instance, retaining competent ministers helps win elections. However, it also increases the risk of internal party deposition. Leaders therefore face a dilemma: to remove a competent minister to prevent

internal deposition but increase the prospects of electoral defeat, or to keep the minister and risk deposition by the party. There are competing incentives in the case of parliamentary democracies and so it is useful to walk carefully through these motivations using simple examples. We focus on the impact of leader and minister competence.

Figure 1 plots how the probability that the voters retain the incumbent party varies with government competence and whether a reshuffle occurred. The horizontal axis refers to the competence of the original minister a_{m1}. There are six lines in the graph. The graphs are constructed assuming $F()$ and $G()$ are standard normal distributions, $\Lambda = 0$, $D = 0$, $\lambda = \frac{3}{4}$, $\alpha = 2$, $p = 1$, $z_l = \frac{1}{2}$, and $z_{m1} = \frac{1}{2}$. The three upwards sloping lines correspond to reelection probabilities if no reshuffle occurs and the election is contested by a government composed of the original leader and minister ($F(Q_1)$). The three different types of lines correspond to different levels of leader competence. Specifically, the black solid lines refer to the case of an incompetent incumbent leader ($a_l = 0$); the red dotted lines refer to a moderately competent incumbent leader ($a_l = \frac{1}{2}$); and the blue dashed lines refer to a highly competent incumbent ($a_l = 1$). The flat lines in Figure 1 correspond to electoral probabilities if the leader reshuffles the minister (i.e., $F(Q_2)$). These lines are flat because the new minister's competence does not contribute to the government's quality at the time of the election, since it is (relatively) unknown. As expected, the voters reelect more competent governments and so the blue dashed lines are higher than the red dotted lines, which are higher than the solid black ones. The reelection probabilities when the minister is retained and when the minister is replaced are equal at about $a_{m1} = \frac{1}{2}$, as this is the expected competence of any new minister. We now turn to the party's leadership decision.

A key component of the party's decision to retain or replace its leader is "electability." Competent leaders with competent ministers are more likely to be reelected. It is therefore not surprising that competent leaders are more likely to be retained by their party. This is shown in Figure 2a,b. We discuss the differences between these figures in a moment. This figure plots the probability that the leader is retained by the party depending upon whether the leader has retained her original minister or replaced her with a new one (ρ_1 or ρ_2, respectively). The latter case, in which the known minister is replaced by a relative unknown minister, corresponds to the flat lines in the figure.

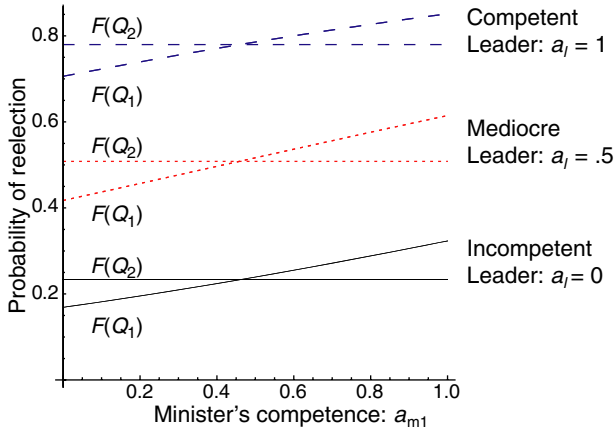

Figure 1. Probability of reelection.

The figure uses the same legend as that of Figure 1. When the leader retains the minister, the probability that the party keeps its leader (ρ_1) decreases in the competence of the minister. This is demonstrated by the downward sloping lines in Figure 2a,b. Competent ministers make attractive leaders. To survive the party retention step, leaders have incentives to remove competent ministers and retain incompetent ones. This was the incentive that dominated in the autocratic case. Yet, retaining incompetent ministers reduces the party's electability. To increase the party's electability, the leader should retain competent ministers.

Electability is a key factor in the party's leadership decision. Nevertheless, it is not the only significant factor. The election procedure within the party affects the party's retention decision, and therefore the leader's decision to reshuffle. The members of the party who pick leaders often have important positions within the party; and they might lose the perks associated with their position should a new party leader reorganize the party and reallocate party positions. In the model, these perks are worth φ. There are S potential candidates to fill each party seat. When the perks are valuable, the party members who receive them are reluctant to pick a new leader. Figure 2a,b shows the difference that these private goods make. Figure 2a assumes that the party-level decision-makers receive few private goods, $\varphi = 0$. In contrast, the influential party-level decision-makers in Figure 2b receive substantial private goods, $\varphi = 5$ and $S = 2$.

Party election rules affect leader retention and reshuffles. The British Conservative Party has used a variety of rules to choose party leader. Prior to 1965 there was no routinized election procedure. Rather, the leader was chosen by a consensus of the party elite. In 1965, the selection rule was changed to allow for the election of the party leader by the Conservative Members of Parliament. It was through the use of this rule that Margaret Thatcher challenged and defeated the incumbent party leader Edward Heath in 1975. Having become prime minister in 1979, she was herself deposed by the party in 1990. In 1998, the party further reformed its rules such that the party leader is now chosen by the mass membership of the party.

The actual electoral procedures used by the Conservatives are complicated and can involve numerous runoff elections (see Heppell, 2008, appendix, for a full description).

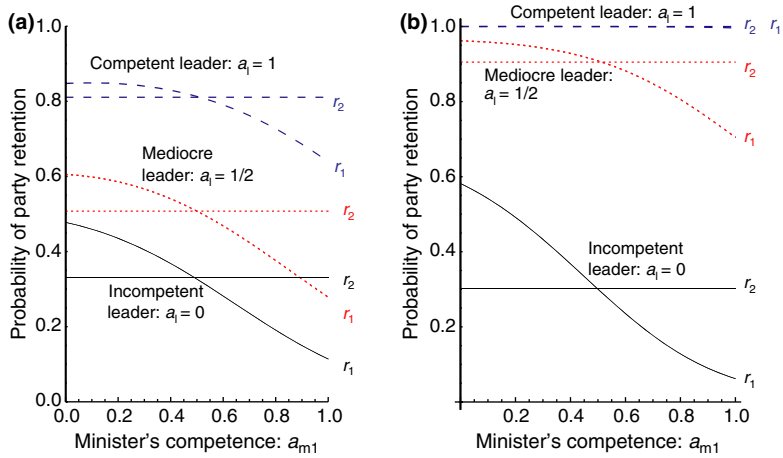

Figure 2. Probability of party retention. (a) No private goods; (b) private goods.

However, within the context of the model, the selection rule in the Conservative Party shows a clear progression. After 1998, the selection has been made by the mass membership of the party. Few of these individuals receive private benefits or perks due to their standing in the party, and as a result they risk little when they replace the party leader. This case is illustrated in Figure 2a. Incompetent leaders are removed with a high probability. Government electability is thus the dominant incentive in the choice of the party leader. In the last 10 years, the Conservatives have had four party leaders and perceptions of low electability have precipitated removal (Heppell, 2008).

In the 120 years prior to the rules change in 1965, the Conservatives had only 10 party leaders and the party leadership was only contested thrice (in 1911, 1923, and 1957). In each of these three cases, the contest followed the resignation of the sitting party leader. This situation is more reminiscent of Figure 2b. Party elites chose the leader. These elites enjoy the benefits and perks of high office. If they switch party leader, then these elites risk jeopardizing their access to perks. This makes it easier for the party leader to survive, as it can be seen in the comparison of parts a and b of Figure 2. In Figure 2b, moderately capable leaders ($a_l = \frac{1}{2}$) have high party survival probabilities, while in the absence of private goods their survival rate in the party competition is around 50%. This is not to say that electorability is irrelevant in the second circumstance. In fact, low competence leaders stand little chance of surviving even when the leadership choice is made by privileged party insiders. Although these insiders jeopardize their private benefits by replacing the leader, they will lose many of these perks anyway if the party is defeated at the election. Although the pre-1965 period did not experience the Conservative party leadership contests observed over the last 10 years, prime ministers with failed policies resigned. For example, Anthony Eden and Neville Chamberlain resigned after the failed foreign policies of the Suez invasion of Egypt in 1956 and the appeasement of Nazi Germany in the late 1930s.

To survive, leaders need to be retained by the party and reelected by the voters. Ministerial competence effects these decisions in opposite ways. Whether leaders reshuffle depends upon whether or not it enhances their overall survival. This decision is shown in Figure 3a,b. These graphs plot the overall probability of the leader

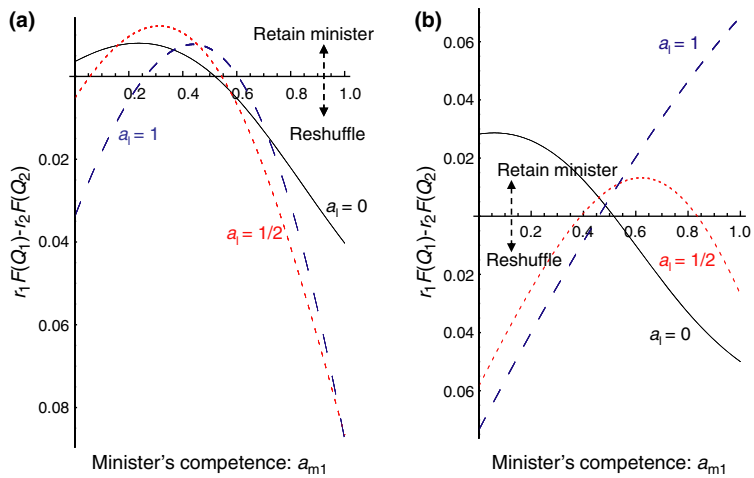

Figure 3. Cabinet reshuffle. (a) No private goods; (b) private goods.

surviving if she retains her minister minus the probability of her survival if she reshuffles: $\rho_1 F(Q_1) - \rho_2 F(Q_2)$. If $\rho_1 F(Q_1) - \rho_2 F(Q_2)$ is positive, then the leader retains her minister. However, when it is negative, she reshuffles.

Figure 3a,b shows both similarities and differences. In the first case, the members of the party choosing the leader receive few perks and so the leader is not advantaged in the leadership election. As a result, all leaders, regardless of their competence, replace highly competent ministers to prevent them from becoming rivals in the party competition. Nonetheless, leaders also have an incentive to replace highly incompetent leaders to improve the party's electoral prospects. Leaders retain those ministers with moderate ability. These ministers present relatively small leadership threats and yet are not disastrous for the party's electability. The range of ministers that a leader retains depends upon the leader's ability. The more capable the leader becomes, the less she has to worry about rivals and the more she can focus on improving the party's electorability. As can be seen in Figure 3a, as the competence of the leader improves, the range of ministers that the leader retains shifts to the right, which means that she retains more competent ministers.

In Figure 3b, the incumbent leader is advantaged in the party election because of the private goods that internal party decision-makers receive. This advantage indicates that the party leader has less to fear from internal party rivals, and so the range of ministers that each leader retains shifts to the right. This shift toward retaining more competent ministers is most dramatic for more competent leaders. The party election advantage that accrues from private goods is small for the least competent type of leader since under such a leader the party elites are likely to lose their perks anyway at the main election.

Beyond the big changes in 1965 and 1998, the Conservatives in Britain have tinkered with their party electoral rules on a number of occasions. Usually, these changes have followed in the wake of perceived failures using the previous rule. Each of the rules faces a tradeoff. Opening the leadership election to the mass party membership made it easier to replace a poorly performing leader, which is good for both the party's electorability and performance in office. However, such gains come at increasing the incentives for party leaders to stymie the careers of potential rivals. Naturally, this reduces the average quality of cabinets, which at the same time reduces party electorability and performance. There is significant variation in party rules both within and across countries (Weller, 1994). For instance, the British Labour Party allows about four times more people to participate in leadership elections than the Conservative. Shifting the party's leadership election rules emphasizes one benefit at the expense of the other. However, it cannot simultaneously promote the ease of leader removal and the retention of competent ministers.

There are three additional results in parliamentary democracies under these exogenous conditions. First, regardless of the structure of goods provided to elite party members, incompetent leaders always retain incompetent ministers, while leaders with average or above-average competence always replace incompetent ministers. Second, regardless of the structure of goods provided to elite party members, leaders with average or below-average ability always replace highly competent ministers. Finally, highly competent leaders replace highly competent ministers if elite party members do not receive private rewards (i.e., there is not much loyalty toward the leader), while highly competent leaders keep highly competent ministers in the cabinet if elite party members receive private rewards (i.e., there is significant loyalty toward the leader).

6. CONCLUSION

Political leaders face both internal and external threats to their tenure. To survive, they must both win elections and prevent internal threats of deposition. This paper explores how leaders strategically retain and fire ministers when confronted with these dual threats to their tenure. Our analysis characterizes the types of behavior we expect to observe under different political institutions. It also allows us to make welfare comparisons across these systems.

In autocratic systems, elections are not free and fair. Therefore, the more salient threat to a leader's survival is from within a leader's own party or ruling coalition. Given that the salient threat is internal and not mass based, leaders take action to ameliorate the growth of rivals. In particular, leaders remove highly competent ministers and retain those less able. By doing so, the leader not only places herself in a favorable light, but also keeps ministers who have little prospects of retaining ministerial power under alternative leadership, and so are loyal to her. On average, this results in poorer government performance. Autocratic governments are led by paranoid leaders and their incompetent, but loyal, ministers.

This paranoia can be reduced and more competent ministers retained only if there is a commitment mechanism via which ministers can be excluded from holding the top job. In this regard, many leaders pick a second in command who is for some reason ineligible or unlikely to become leader. For instance, Saddam Hussein, Iraq's former leader, chose Tariq Aziz as his second in command. Aziz was the international spokesman of the regime, and as such had the difficult task of defending his leader's policies. According to Krasno and Sutterlin (2003, p. 109), during negotiations with the United Nations, Aziz played a prominent role where

> His competency, linguistic fluency, and total loyalty to Saddam Hussein were known quantities before [Executive Chairman of United Nations Special Commission or UNSCOM] Rolf Ekeus, and subsequently Richard Butler, came face-to-face with him on UNSCOM matters.

Evidently, Aziz's background could not be matched by any other Iraqi minister. Nevertheless, since Aziz, originally named Mikhail Yuhanna, is an Assyrian Christian, he would have had problems as a leader of a predominately Muslim country. This made him ineligible as leader and hence he was not a rival to Saddam Hussein. In the Byzantine empire, it was common for the emperor to employ eunuchs as administrators. The emperor could not be "spoiled," which meant that eunuchs were not political rivals. The empire benefited from the retention of high-quality ministers (Norwich, 1997).

In democratic presidential systems the main threat to a leader's tenure is electoral defeat. Political parties typically find it hard to replace the president, at least compared with parliamentary systems. Given the low salience of internal threats of deposition, leaders focus on maximizing their chances of being reelected into office by the masses. To improve electorability they dismiss incompetent ministers and retain capable ones. Presidential leaders seek capable and qualified ministers. For instance, when Robert Rubin resigned as Secretary of the Treasury in 1999, President Clinton announced that Lawrence Summers would replace him as head of the Department. Clinton described Summers as "brilliant, able, and deeply knowledgeable." Clinton added that "rarely has any individual been so well-prepared" to take over the Department (Martin and Buerkle, 1999). Given these incentives to maintain competent

ministers, cabinets tend to perform better in presidential systems than in autocracies. This results in a larger provision of public goods and national wealth. However, while presidential systems encourage the promotion of capable ministers, they make it relatively difficult for the party to remove poorly performing presidents.

Parliamentary systems provide a mechanism through which the party can remove a poorly performing leader. On one dimension this increases their performance relative to a presidential system, where the leader is relatively immune from internal party deposition. Yet, this improvement comes at a cost. Since leaders realize they are at risk of being replaced by more talented ministers, prime ministers stunt the careers of such potential rivals. Hence, while parliamentary government makes it easier to remove poorly performing leaders, it does so at the cost of recruiting less capable ministers.

In terms of expected performance, presidential systems dominate autocratic ones. Presidents retain competent leaders and sack poorly performing ones, while autocrats do the opposite. Further more, incompetent presidents are likely to be removed by the electorate, while poorly performing autocrats are not. While the party might remove such an autocrat, these party competitions are generally less competitive than mass elections. Further more, the replacement pool is of low quality. The comparison between parliamentary and presidential systems is less clear. As we say in the discussion of party leadership election rules, making leader removal easier encourages the leader to reshuffle to reduce the internal party threat posed by capable ministers. Parliamentarianism improves prime ministerial quality but at the cost of lowering cabinet quality.

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