

Subverting Electoral Competition: Elite Cooptation and Opposition Fragmentation

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12 October 2020

ABSTRACT

Multiparty elections are increasingly understood as institutional tools that incumbents can manipulate to retain power in electoral authoritarian regimes. We present a specific channel through which elections enable incumbents to prevent the emergence of a strong opposition. We present a formal model demonstrating that incumbents can strategically induce opposition fragmentation by appointing opposition candidates to cabinet positions. Once opposition politicians are given the opportunity to secure a cabinet position in the incumbent's government, they subsequently prefer to compete for office independently rather than coalescing into broad-based parties or electoral alliances in the hopes of securing a cabinet appointment. The model further shows that weaker incumbents are more likely to rely on this cooptation strategy. We corroborate the model's findings with original data on cabinet appointments across African countries in 1990-2010 and show that past cooptation of opposition politicians is associated with a larger number of opposition candidates in presidential elections.

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Introduction

Multiparty elections are increasingly understood as institutional tools that incumbents can manipulate to retain power in recently transitioned or electoral authoritarian regimes (Gandhi and Lust-Okar 2009; Schedler 2013; Knutsen et al. 2017). In this paper, we present a specific channel through which elections enable incumbents to prevent the emergence of a strong opposition that might otherwise dislodge them from power. We argue that incumbents who appoint opposition politicians to government (i.e., as cabinet ministers) are able to do more than buy off rivals; they can effectively weaken the opposition as a whole by inducing their fragmentation.

To minimize the likelihood of losing power, incumbents can strategically distribute government offices as political patronage in order to exacerbate the prisoner's dilemma in which office-seeking opposition politicians often find themselves. Incumbents can tempt opposition politicians to create splinter parties or to pursue independent candidacies — fragmenting the opposition vote in the process — by signaling their willingness to appoint them individually to ministerial positions in exchange for their temporary political allegiance. Incumbents who establish a history of making such opposition appointments over time gain even greater influence over the electoral behavior of their rivals. In this respect, rather than merely permitting democratic competition to take place through regularly scheduled elections, incumbents can instrumentalize those elections to “divide and conquer” their opponents by simply encouraging more of them to vie for office.

We formalize this logic through a game theoretic model. The model shows that when opposition candidates are weak relative to the incumbent, as they often are in democratizing or transitioning regimes, they prefer to run for office independently in the hopes of receiving a valuable cabinet position rather than attempting to defeat the incumbent as a united opposition.

The model specifies that *weak* incumbents are more likely to turn to a cooptation strategy, leading to a perverse equilibrium: as elections become more competitive, incumbents increasingly want to coopt the opposition.

The model's formulation helps to account for elite political behavior in regimes where informal patronage relationships continue to shape the competition for power despite the adoption of formal democratic institutions. The model underscores that the advantage incumbents derive from coopting opposition politicians is not in amalgamating their voting blocs with their own; it is in the partisan fragmentation that subsequently arises among the opposition. Leaders can deploy their patronage to divide the opposition, using selective incentives to encourage politicians to maintain their independent party labels rather than coalescing with their counterparts under a single banner. When leaders prove willing to allocate offices across partisan lines, their rivals find it difficult to lure away enough numbers to form an alternative coalition to the one in power.

We provide empirical evidence of these patronage dynamics using original data on presidential elections held across sub-Saharan African countries from 1990 through 2010. African leaders used patronage to cultivate support for one-party regimes that emerged soon after independence (Jackson and Rosberg 1982; Meng 2020), and their successors have also been able to use patronage to contend with the exigencies of competition in multiparty regimes (Daloz 1999; van de Walle 2007). Examining African presidential elections allows us to show that leaders who appoint opposition politicians to their ministerial cabinets face a more fragmented field in subsequent presidential elections. We estimate that appointing any opposition politician to the cabinet is associated with three additional presidential candidates in the next election, *ceteris paribus*. We find that this cooptation effect is magnified by each additional pre-election

opposition appointment to the cabinet. Furthermore, consistent with our formal model, we find that weaker reelected incumbents, as measured by vote share, are more likely to make opposition appointments to the cabinet.

This paper makes a number of contributions to studies of authoritarian durability, democratic consolidation, and party system institutionalization in developing countries. We build on literature focusing on elite cooptation within electoral authoritarianism (Lust-Okar 2005; Gandhi 2008; Gandhi and Buckles 2016; Buckles 2019) by providing empirical evidence of divide-and-conquer strategies and specifying the conditions under which they are likely to occur. We show that entrenched leaders can often stay in power even by respecting formal rules. Our theory suggests that leaders can exploit free and fair elections to amplify their incumbency advantages, and that they are able to do so even in the absence of fraud or explicit rule breaking. This insight suggests that truly democratic competition may not necessarily become institutionalized even when formal electoral institutions are in place.

We proceed by first describing how patronage dynamics shape elite cooptation and result in opposition fragmentation. This logic is then formalized in a game-theoretic model that demonstrates why opposition politicians are incentivized to favor cooptation over building a unified coalition, and outlines the conditions under which incumbents are more likely to use this strategy of divide and conquer. We then describe the data and methods used in the analysis before discussing the empirical results. We conclude by discussing the value of accounting for patronage dynamics in the analysis of electoral authoritarian and other hybrid regimes.

Opposition Fragmentation through Patronage

Incumbent leaders around the world have historically distributed political offices to stave off threats to their power (Huntington 1968; Scott 1969). They can induce support for their regimes by exploiting the financial weakness of rival politicians who often need ongoing access to resources in order to sustain their own followings. The politicians who accept patronage appointments — and can thereby redirect state resources to their followers — are then not merely neutralized by the incumbent; they are dissuaded from acting in concert with others to change the status quo. Once they have accepted patronage appointments, these politicians now have more to lose. Patronage-based cooptation, in this respect, enables incumbents to stabilize their regimes by impeding the coordination of broader opposition.

Patronage appointments have been particularly effective in allowing incumbents to subdue their opposition wherever elections have become normalized as part of politics. In the case of eighteenth-century Britain, for example, Robert Walpole overcame the instability that followed the Glorious Revolution by using the growth of executive offices to tame a fractious parliament and thereby engineer the extended period of Whig political dominance (O’Gorman 1975). Walpole understood that opposition Tories, facing rising costs to participate in elections along with growing intra-elite competition, could not resist patronage appointments to his government. Indeed, under Walpole’s tenure, “[i]t was patronage that cemented the political system, held it together, and made it an almost impregnable citadel, impervious to defeat” (Plumb 1967, 189).

Patronage-based cooptation, beyond permitting leaders to consolidate their regimes, encourages the fragmentation of opposition. This association between cooptation and fragmentation is especially likely where politicians can gain access to state resources without

being in the winning coalition. In Italy, where party system fragmentation has been conventionally attributed to the interaction between electoral rules and ideological polarization (Sartori 1976), the electoral calculus of politicians was inevitably driven by the established practice of *trasformismo*, the cooptation of opposition for the formation of ad hoc parliamentary majorities in which spoils were distributed across the ideological spectrum. Recognizing that ideological distance did not impede political accommodation, Italian politicians have had little incentive to coalesce into larger parties. The Christian Democrats, for example, were able to lock in their hold on power and gradually splinter their opposition on both Left and Right during the five decades following the Second World War (Di Palma 1977; Spotts and Wieser 1986; Hine 1993).

The patronage-based cooptation that facilitated regime stability and opposition fragmentation in historical cases continues to play out in countries that underwent political liberalization after the end of the Cold War. Among African countries, in particular, the patronage dynamics established during the era of one-party rule survived the transition to multiparty politics (van de Walle 2007). Under electoral competition, the discretionary allocation of offices allows elected African incumbents to exploit the financial vulnerability of their opposition rivals who must satisfy constituents' demands for resources. All politicians need to continuously engage in clientelistic outreach with constituents to reaffirm their commitment to distribute resources (Kramon 2016). A viable candidacy entails resource-intensive politicking: politicians must acquire the means not only to pay for mundane expenses associated with campaigning, but also to offer goods or money to constituents in exchange for their votes.¹ In such a context, "the distribution of banknotes or bags of rice goes far beyond being a purely

¹ The Afrobarometer survey conducted in 2005-2006 across 18 countries reveals that, on average, nearly three-quarters of voters "often" or "always" expect politicians to give gifts during election campaigns. The survey data are available at <http://www.afrobarometer.org/>.

material exchange. It demonstrates that the politician does recognize his/her local responsibilities” (Nugent 2007, 257).

The problem for African opposition politicians is that they must fend for themselves in financing their campaigns because the fundraising channels typically employed in established democracies are unavailable to them. The party itself is not a true electoral organization in most African countries. While ruling parties tap state coffers to subsidize their candidates, few opposition parties have the campaign war chest necessary to provide any substantive funding to their own candidates. Nor can businesses afford to serve as party donors in many cases because the persistence of policies means the government can manipulate the state’s ownership in large parts of the economy, along with other regulatory mechanisms, to punish any diversification of donations (van de Walle 2001; Arriola 2012).

The resource constraints of African politicians leave them vulnerable to patronage cooptation by the incumbent. Lacking other financing options, politicians will often trade the electoral support they command for a government appointment — to the cabinet, a parastatal, or any other official position — that will then enable them to transform public resources into targeted goods or services for their supporters. By accessing and diverting such resources, these politicians can retain their status as the putative leaders of their constituencies. Opposition politicians thus have an incentive to seek out and accept patronage appointments from those in power.

The Kenyan case provides an apposite example. Although President Daniel arap Moi was re-elected in 1997 against a field of rival candidates who divided the opposition vote along ethnic lines, he feared that opposition politicians might coordinate in the National Assembly, where his long ruling Kenya African National Union (KANU) held only a slight majority. Moi,

therefore, sought to coopt Raila Odinga, one of his challengers in the presidential race on the ticket of the opposition National Development Party (NDP). Their cooperation was formalized when Moi appointed Odinga to his cabinet in 2001. Odinga's appointment as a cabinet minister had an observable impact on his own campaign spending. His access to such resources can be estimated through donations his party made to *Harambees*, the mass rallies Kenyan politicians historically used to cultivate electoral support by publicly demonstrating their ability to deliver resources (Widner 1992). Disaggregating data on Harambee donations made in 2000-2002 allows us to show how the entry of an opposition party leader into government could affect his capacity to distribute such resources (Osendo and Gachucha 2003).² In the sixteen months prior to joining Moi's cabinet, Odinga's NDP donated a little over \$3000 per month to Harambee projects across the country. That monthly figure jumped by 80%, to over \$5500 per month, in the fifteen months after he became a cabinet minister. Joining the government enabled Odinga to become the country's second largest Harambee donor after Moi's own ruling party.

When an incumbent has a history of appointing opposition candidates to the cabinet, the possibility of obtaining a cabinet seat becomes more credible to opposition politicians. Rather than trying to win the election as part of an opposition coalition, politicians know that they have the option of securing access to state power and resources by negotiating themselves into the incumbent's government. This is especially true in regimes where incumbents retain a considerable electoral advantage and winning office, even as a unified opposition coalition, remains unlikely. In such a scenario, opposition candidates would face the possibility of losing out on state office even after having invested campaign resources on behalf of a larger coalition.

² The Harambee data were collected by the Kenya chapter of Transparency International.

This logic implies that incumbents, if they seek to encourage the fragmentation of the opposition, need to have a history of extending patronage across the political spectrum without regard to partisan affiliation. When opposition party leaders decide their electoral strategy, they will look to the incumbent's history of cabinet appointments to determine whether future cooptation is a possibility. Opposition party leaders might not expect to negotiate a credible patronage bargain with an incumbent who has only appointed members of the ruling party to the cabinet. But these party leaders could anticipate negotiating such a bargain with an incumbent who had previously appointed other opposition politicians to the cabinet. Since electoral competition creates a structure for repeated play, party leaders can anticipate if an incumbent is likely to renege on patronage promises (Myerson 2008). The ability of aggrieved opposition party leaders to respond in tit-for-tat fashion by coordinating in the next election, and thereby realizing the very outcome the incumbent had sought to prevent, could be a sufficient deterrent.

Altogether, this logic can explain why an entrenched incumbent like Cameroon's long-serving president, Paul Biya, routinely appoints opposition politicians to his cabinet despite having won every election since the introduction of multi-party elections in 1992. Biya is able to outspend his rivals with state funds, manipulate electoral rules, or use coercion whenever necessary. But the fragmentation of his opposition has been most effectively secured through regular cooptation. Recognizing that Biya appoints opposition politicians to his cabinet after every election, opposition party leaders have had little incentive to coordinate among themselves. When multi-party elections were first introduced, the National Union for Democracy and Progress (UNDP) was one of the largest opposition parties in Cameroon and one of the few that could challenge Biya nationwide. After the 1992 presidential election, Biya appointed eight members of the opposition to his cabinet, including members of the UNDP. Although the

subsequent 1997 presidential election was boycotted by much of the opposition, Biya still appointed five opposition members to his cabinet, including the leader of the UNDP. Even after winning the 2004 presidential election with more than two-thirds of the vote, Biya continued his practice of opposition cooptation by appointing five members of other parties to his cabinet. Over time, Biya's strategy proved to be extremely effective in fragmenting, and thereby weakening, his opposition. Whereas five opposition candidates contested in the 1992 presidential elections (with the median candidate winning 4% of the vote), 22 opposition candidates contested in the 2011 presidential elections (with the median candidate winning less than 1% of the vote).

When incumbents develop reputations for bringing the opposition into government, opposition candidates for executive office have a greater incentive to campaign individually rather than coordinate with other candidates under a single party. In this context, opposition candidates enter presidential races not because they expect to win outright, but instead to visibly demonstrate their ability to mobilize sufficient voter support in the hope of being offered a cabinet seat. Following the election, opposition candidates can leverage their respective voting blocs to negotiate with the incumbent over their entry into government. In Kenya, opposition politician Kalonzo Musyoka insisted on contesting the 2007 presidential election as an independent candidate rather than joining an opposition coalition. Not only did he lack the resources of the incumbent, Mwai Kibaki, or the major opposition candidate, Raila Odinga, but public polls had revealed well in advance that his candidacy was hopeless. Musyoka may have understood that he might well improve his electoral payoff, regardless of who else won, by demonstrating his capacity to win at least some share of the vote. In fact, Kibaki had appointed six members of the opposition to his outgoing government, prompting one of his longtime allies

to observe that the Kenyan presidency had become a “piece of sweet potato” that could be given to every “salivating mouth.”³ Musyoka’s gambit ultimately paid off: he was appointed as Kibaki’s vice president after winning about 9% of the vote.

A Theoretical Model of Opposition Fragmentation

We model the relationship between incumbent patronage and opposition fragmentation as an infinitely repeated sequence of election cycles involving an *incumbent*, who remains in office until losing an election, and two *opposition candidates*. At the beginning of each election cycle, the opposition candidates each make a decision to fragment or unify based on their common beliefs about how the incumbent will fill a cabinet position if he wins, namely, whether he will appoint someone from his own party or from an opposing party. These beliefs are formed on the basis of how the incumbent filled the position in the past.

The incumbent is more likely to win if the opposition is fragmented than if it is unified because, in the case of fragmentation, the votes the incumbent does not receive are spread across multiple candidates rather than received solely by the leader of a unified opposition. In each cycle, the winner of the election decides whether to give a cabinet position to someone outside the party, as a form of opposition patronage, or to give the position to someone from his own party. Opposition leaders are more likely to believe that they may receive an offer of a cabinet seat if the incumbent has a history of making outside appointments. This expectation makes opposition candidates more likely to fragment, which in turn increases the incumbent’s victory probability. However, offering a cabinet position to an opposition candidate is also costly for the

³ Quoted in John Kamau, “Karume Returns to the Fold,” *Sunday Standard* (Nairobi), 4 July 2004.

incumbent because it prevents him from being able to offer that position to someone from his *own* party or existing ruling coalition.

Model Setup

Formally, consider election cycle t , where each election is a three-period stage game of the infinitely repeated game. At the start of period 1, two *opposition candidates* appear. Both opposition candidates simultaneously choose either “fragment” (i.e., run separately against the incumbent through two distinct opposition parties) or “unify” (i.e., join forces and run against the incumbent in a single opposition party). These choices are made to maximize their respective payoffs from election t forward, based on beliefs about how the election winner will fill a cabinet vacancy, as explained shortly. If both choose “unify,” then unification occurs in election t , and otherwise fragmentation occurs.

For convenience and to simplify the analysis, we label one opposition candidate the *opposition leader* and the other the *opposition member*. It is important to note that the intuitive meanings of these labels only apply in the event of unification. In that case, the opposition leader runs as the sole candidate of the opposition coalition. The opposition member, in contrast, forgoes her opportunity to run as a candidate for that election in exchange for a guaranteed cabinet appointment in the event that the opposition leader wins the election. If the opposition candidates fragment, the *leader* enjoys no electoral advantage over the *member*; they run as separate equals against the *incumbent*.

Let q_{t-1} denote a binary variable equaling 1 if the cabinet appointment in the previous election $t-1$ was from outside the party and 0 if it was from inside the party. Let N_{t-1} be a binary variable equaling 1 if election $t-1$ was won by a new officeholder and equaling 0 if it was won by the incumbent. Both opposition candidates observe q_{t-1} and N_{t-1} at the start of period 1 and

consider this information when deciding whether to fragment or unify. Let $f_t^L(q_{t-1}, N_{t-1})$ and $f_t^M(q_{t-1}, N_{t-1})$ denote the period-1 choices of the leader and member, respectively, where both are binary variables equaling 1 if “fragment” is chosen and 0 if “unify” is chosen. Let $F_t(q_{t-1}, N_{t-1})$ be a binary indicator equaling 1 if the opposition fragments and 0 if it unifies in election t , so that $F_t(q_{t-1}, N_{t-1}) \equiv 1 - (1 - f_t^L(q_{t-1}, N_{t-1}))(1 - f_t^M(q_{t-1}, N_{t-1}))$.

In period 2, stochastic election results occur. The party receiving the highest vote share wins, and vote shares are independent across elections. Under fragmentation, there are three possible election results (incumbent wins, leader wins, or member wins), whereas under unification there are two possible results (incumbent wins or leader wins). Let $p_t(F_t(q_{t-1}, N_{t-1}))$ denote the incumbent’s probability of victory in election t . We assume $\frac{1}{2} \leq p_t(0) < p_t(1) < 1$, i.e., there is an incumbency advantage. The incumbent is more likely to win against a fragmented opposition than against a unified one. Recall that if the incumbent loses, the opposition leader and opposition member win the election with equal probability under fragmentation. The current holder of a cabinet post retires at the end of period 2, creating a vacancy.

In period 3, the election winner fills the cabinet post either with someone inside the party or with someone outside the party. For simplicity, we normalize the cost of making an inside appointment to zero. Let $D_t(q_t)$ be the winner’s cost of filling the cabinet vacancy in election cycle t , so that $D_t(0) = 0$ and $D_t(1) = d > 0$.

If the election winner was the incumbent, he is free to appoint either $q_t = 1$ or $q_t = 0$. In the case of fragmentation, if an opposition candidate wins, he is also free to appoint either $q_t = 1$ or $q_t = 0$. Here we assume that if the winner under fragmentation is an opposition candidate, she will appoint the other opposition candidate if she decides to appoint a candidate outside the party

(i.e., $q_t = 1$). We define winners who have the option of appointing someone from inside or outside the party as “unconstrained winners.”

In the case of a unified opposition, we assume that the winning opposition candidate (i.e., the leader) *must* choose $q_t = 0$ and uphold her commitment to appointing the opposition member to the cabinet post. This contract pertains only to the election cycle in which the newly elected incumbent first enters office; afterward, the incumbent can choose either $q_t = 1$ or $q_t = 0$ for as long as she keeps winning. We define winners who must choose $q_t = 0$ as “constrained winners.”

Following the choice of q_t , payoffs are received, and the opposition candidates who lost the election and received no cabinet appointment retire at the end of period 3. Post-election payoffs vary across three possible outcomes: winning the election, losing the election but getting a cabinet appointment, and losing the election and getting no cabinet appointment. The winner of the election receives a payoff of $R - D_t(q_t)$, representing the rents and returns to holding office. We assume that $R > d$ so that the value of winning office exceeds the cost of making an outside appointment. The candidate who loses the election but gets a cabinet appointment receives a payoff of u , where $0 < u < R$, representing utility gained from having a cabinet position. The payoff of losing the election and getting no appointment is normalized to zero.

If the incumbent wins and chooses $q_t = 0$, both opposition candidates get payoffs of zero. If the incumbent wins and chooses $q_t = 1$, and if the opposition is unified, then the opposition leader is granted the cabinet position with its payoff of u , and the opposition member receives zero payoff. If the incumbent wins and chooses $q_t = 1$, and the opposition is fragmented, then each opposition candidate is granted the cabinet post with equal probability: the candidate who gets the post receives a payoff of u , whereas the other candidate gets zero payoff. If the opposition is unified and the incumbent loses, then the opposition leader wins, receives a payoff

of R , and honors an enforceable contract by appointing the opposition member to the cabinet position with its payoff of u . If the opposition is fragmented and the incumbent loses, then each opposition candidate wins with equal probability, and the losing opposition candidate gets the cabinet post (with its payoff of u) if $q_t = 1$ and zero payoff if $q_t = 0$. We assume that the winning opposition candidate will not give the cabinet post to the previous incumbent. The payoffs are summarized in Appendix Table A1.

Patronage and Opposition Fragmentation

The problem is stationary in that all choice problems look the same at each election cycle, and for simplicity we assume no discounting of the future. Thus, the players' optimal choices are the same each period (given the parameters and state variables), though outcomes can vary in each election because vote shares are stochastic. Let V_t denote the expected payoff to an unconstrained winner from election cycle t forward. This can be represented recursively as

$$V_t = R - D_t(q_t) + p_{t+1}(F_{t+1}(q_t, N_t))V_{t+1}.$$

We now turn to the opposition candidates' beliefs concerning how the cabinet vacancy will be filled at the end of an election cycle. Let $\pi_t(q_{t-1}, N_{t-1}, N_t, F_t)$ denote each opposition candidate's subjective probability that the winner in election t will appoint a person outside the party (i.e., $q_t = 1$). Opposition candidates' expectations are rational, and in equilibrium subjective probabilities must equal actual probabilities, so $\pi_t = \text{Prob}(q_t = 1 | q_{t-1}, N_{t-1}, F_{t-1}, N_t, F_t)$. Opposition candidates can influence π_t via F_t , which reflects their joint decisions.

If a newcomer won the preceding election and filled the cabinet appointment from inside the party (i.e., $N_{t-1} = 1$ and $q_{t-1} = 0$), then what can be inferred by the opposition candidates regarding how the election- t cabinet appointment will be made in the event of an incumbent

victory (i.e., $N_t = 0$) depends on the circumstances under which the election- t incumbent came into power as a newcomer in cycle $t-1$ (i.e., it depends on the value of F_{t-1}). In particular, if the winner of the $t-1$ election was the leader of a unified opposition party (i.e., $F_{t-1} = 0$), then that winner was contractually obligated to appoint the opposition member (someone from his own party) to the cabinet office in election cycle $t-1$. So, if $q_{t-1} = 0$, $N_{t-1} = 1$, and $F_{t-1} = 0$, the opposition candidates recognize that $q_{t-1} = 0$ is contractually obligated and potentially a poor predictor of what the incumbent would do as an (unconstrained) winner of election cycle t . If, on the other hand, the winner of the $t-1$ election was a candidate in a fragmented opposition party (i.e., $F_{t-1} = 1$), then it can be inferred that $q_{t-1} = q_t$, because the winner was unconstrained in election $t-1$ as well as in election t and faced the same problem in both elections. The following proposition describes our first result.⁴

Proposition 1: *Opposition fragmentation in the current election is more likely to occur if the incumbent chose an outside appointment (i.e., opposition patronage strategy) rather than an inside appointment after the previous election.*

To establish the result that opposition fragmentation in election t is more likely to occur when $q_{t-1} = 1$ than when $q_{t-1} = 0$, we recall that fragmentation occurs as long as at least one opposition candidate plays “fragment.” We first observe that “fragment” is a weakly dominated strategy for the opposition leader. Under unification, the opposition leader has a higher probability of winning the election than under fragmentation. Even if she loses under unification, she would receive the cabinet appointment with certainty if the incumbent chooses to coopt. The opposition leader has no incentive to deviate to “fragment.”

⁴ All proofs are in the Appendix.

We therefore focus our attention on the opposition member. If the opposition member observes $q_{t-1} = 1$, she infers that the incumbent (having appointed an outside candidate in the past) would appoint an outside candidate again in the event of an incumbent victory. This means that, under fragmentation, if the member loses, she would have a higher probability of being appointed to the cabinet post (conditional on an incumbent victory) than if $q_{t-1} = 0$. The member faces the tradeoff that choosing fragmentation yields a greater (i.e., positive as opposed to zero) probability of victory at the cost of a lower probability of getting appointed to a cabinet post in the event of a loss. But this cost is smaller in the event of $q_{t-1} = 1$ than in the event of $q_{t-1} = 0$, making the member more inclined to choose “fragment.”

Equilibrium Analysis

We restrict our attention to subgame perfect Nash equilibria (SPNE) in pure strategies. Note that beliefs in equilibrium take a simple form. That is, conditional on q_{t-1} , N_{t-1} , F_{t-1} , N_t , and F_t , opposition candidates can infer with certainty how the election- t winner will fill the cabinet vacancy, i.e., π_t is always either zero or one.⁵ For technical reasons, we assume that the incumbent plays $q_t = 0$ whenever the opposition member plays off the equilibrium path in election cycle t when deciding whether to fragment.⁶ An interpretation (which is admittedly outside the scope of the model) is that the incumbent does not trust such an opposition candidate

⁵ We assume that $\frac{d}{u}$ is sufficiently small to ensure that a SPNE exists for all possible values of R . If $\frac{d}{u}$ becomes sufficiently large, the condition for the proposition fails, creating a region of non-existence of pure strategy SPNE for “intermediate” values of R ; as d continues to increase, this non-existence region expands and makes the fragmentation equilibrium less likely.

⁶ This assumption ensures, $F_{t+1}(0, N_t) = 0$, which is required in the proof of Proposition 2.

to be reliable, so the incumbent prefers to play it safe and make a cabinet appointment from within the party.

The equilibrium in the one-shot game is instructive and provides a useful benchmark. In that equilibrium, the election winner has no incentive to share power in period 3, so an appointment outside the party will never be made. The opposition leader anticipates this outcome and understands that whether the incumbent wins, or whether the opposition member wins (in the event of fragmentation), there is no chance that the opposition leader will ever be granted the cabinet position. With the cabinet position (and its payoff of u) off the table, the opposition leader's only chance at a positive payoff is to win the election, and that happens with higher probability under unification than under fragmentation. The opposition member plays "fragment" only when $p(0)$ is sufficiently high. Intuitively, when $p(0)$ is high, the incumbent is very likely to win, and in that case the opposition member would receive a payoff of zero. Thus, playing "fragment" gives the opposition member the best shot at a positive payoff. The bottom line is that the players know that patronage never occurs in the one-shot game with finite interactions among the players.

The situation changes in the case of infinite interactions because in that environment an incumbent reaps a future reward from sharing power in the present. That future reward takes the form of inducing opposition fragmentation in future election cycles, which in turn increases the incumbent's likelihood of retaining power. The following proposition states the main result.

Proposition 2:

(i) [Fragmentation Equilibrium] If the incumbent is weak and $\frac{d}{u}$ is sufficiently small, then an equilibrium exists in which the incumbent always pursues a strategy of opposition cooptation

and the opposition always fragments. Formally, if $p(0) \leq \frac{Rp(1)-d}{R-d}$ there exists a SPNE in pure strategies in which in every election t the leader plays the strategy “ $f_t^L = 0$; if $f_t^M = 0$ then $q_t = 0$, and if $f_t^M = 1$ then $q_t = 1$ ”; member plays “ $f_t^M = 1$; $q_t = 1$ ”, and the incumbent plays “ $q_t = 1$.”

(ii) [Unification Equilibrium] If the incumbent is strong and $\frac{d}{u}$ is sufficiently small, then an equilibrium exists in which the incumbent never chooses to coopt the opposition and the opposition always unifies. Formally, if $p(0) > \frac{Rp(1)-d}{R-d}$, there exists a SPNE in pure strategies in which in every election t the leader plays “ $f_t^L = 0$; $q_t = 0$ ”; the member plays “ $f_t^M = 0$ ”; and the incumbent plays “ $q_t = 0$ ”.

Proposition 2 identifies two SPNE. The fragmentation equilibrium involves the opposition fragmenting and the election winner appointing outside the party, whereas the unification equilibrium involves the opposition unifying and the election winner appointing from inside the party.⁷ Weak incumbents are incentivized to rely on the cooptation strategy, since doing so increases the likelihood that they will win the next election. This, in turn, induces opposition fragmentation, since past outside appointments incentivize the opposition member to defect from forming a coalition. Already strong incumbents, on the other hand, will not pursue

⁷ The condition involving $\frac{d}{u}$ that is referenced in footnote 5 is made more precise at the end of the proof presented in the Appendix. If the condition is not met, then a result similar to that in Proposition 2 holds, though for some (intermediate) values of R no SPNE in pure strategies exists. More precisely, if the condition involving $\frac{d}{u}$ fails to hold, then part (i) of Proposition 2 continues to hold; part (ii) continues to hold but with a lower threshold for R , namely $R < \frac{2(1-p(0))^2 u}{(1-p(1))(p(1)-p(0))}$; and no SPNE in pure strategies exists when R falls in the intermediate interval $\frac{2u(1-p(0))^2}{(1-p(1))(p(1)-p(0))} < R < \frac{d(1-p(0))}{p(1)-p(0)}$. Note that for a given value of $\frac{d}{u}$, the condition for $\frac{d}{u}$ fails if $p(1) - p(0)$ is sufficiently small, so existence of a pure-strategy SPNE for all possible values of R requires that fragmentation increase the incumbent’s probability of winning to a sufficiently large extent relative to unification.

the cooptation strategy because the cost of making an outside appointment does not outweigh the benefit of a higher probability of winning the election.

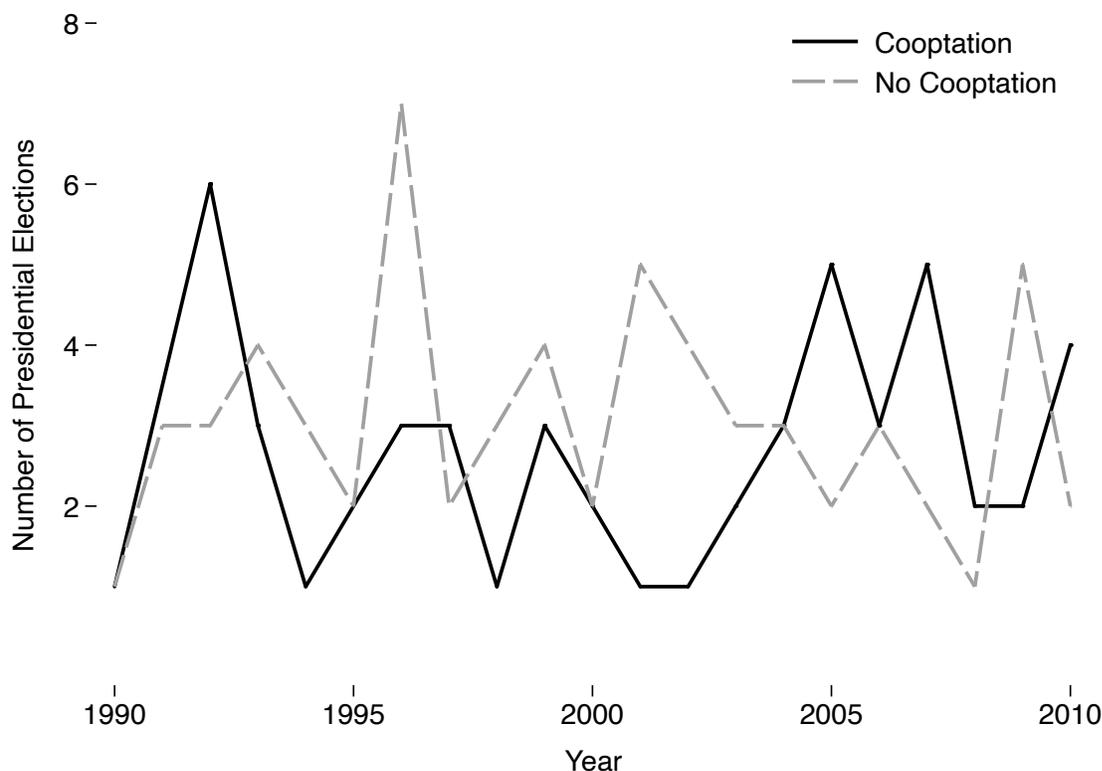
Data and Methods

We corroborate the patronage-based explanation for opposition fragmentation by empirically examining how politicians respond in electoral terms to an incumbent's history of cabinet appointments. The formal model presented in the previous section suggests that opposition politicians infer the likelihood that they may be coopted into government based on whether the incumbent has previously brought opposition politicians into the cabinet. If that is the case, opposition politicians should be more likely to compete for office independently, splintering off from established parties or running on minor party tickets, rather than coalescing into larger parties. This line of reasoning leads to a straightforward and testable hypothesis in executive elections: prior opposition appointments to the cabinet should be associated with a larger number of candidates vying for office in subsequent elections.

To assess this theoretical expectation, we draw on data from elections held in African countries that experienced political liberalization in the late 1980s and early 1990s. These countries exhibit considerable variation in levels of democracy as well as incumbent turnover. We examine presidential elections held across 32 African countries between 1990 and 2010, regardless of level of democracy, as long as multiple candidates were permitted to contest them.⁸ Figure 1 confirms that opposition cooptation occurs regularly following African presidential elections: 45% of executives (51 out of 113 elections) appoint a member of the opposition to the

⁸ The sample excludes Democratic Republic of Congo, Djibouti, Equatorial Guinea, Somalia, Sudan, and most island nations.

Figure 1. Opposition Cooptation Regularly Follows African Presidential Elections



Note: Episodes of opposition cooptation are identified through cabinet appointments in the year following a presidential election. Opposition politicians are identified if they are members of a party that competed in the election, and they are not members of the president's ruling party.

cabinet following an election. Notably, the frequency of opposition cooptation is unrelated to the institutional constraints that African executives themselves face. African presidents do not operate under Westminster-style parliamentarism, so their mandates are independent of the legislature. Their ability to remain head of government is guaranteed by a fixed term and does not depend on maintaining the confidence of the majority in the legislature, which typically has little influence over the president's appointments to, or dismissals from, the cabinet.⁹

⁹ Botswana, for example, has been among the rare African countries to impose a limit on the number of cabinet appointments made by the president, though the number has been gradually expanded over time. The legislature still plays no role in confirmation.

Nevertheless, the reelected incumbents who go on to appoint opposition members to their cabinets often do so despite winning a 61% vote share, on average.

Dependent Variable

The dependent variable is measured through the number of candidates who compete in a presidential election. The patronage-based argument implies that a larger number of candidates should be induced to contest an election if opposition politicians have been appointed to the cabinet of the outgoing government. Data on presidential candidate participation was compiled from print sources such as Nohlen et al. (1999) and online sources like the African Elections Database and news articles sourced from AllAfrica.com. The average number of presidential candidates is 8.7 and ranges from a minimum of 1 to a maximum of 26.

Independent Variable

We assess our main theoretical claim regarding the impact of prior cabinet appointments through two versions of the independent variable. One version is a dichotomous variable that indicates whether any member of the opposition was appointed to the cabinet prior to a presidential election. This variable is equal to 1 if at least one identifiable opposition member was appointed to a cabinet position; it is 0 otherwise. Politicians are identified as being in opposition if they are members of a party that competed in a prior election, and they are not members of the president's ruling party. Past opposition participation in government is expected to induce a larger number of candidates to vie for office. Thirty-seven percent of observations in the sample had opposition participation in the outgoing government.

A second version of the independent variable is a count of the number of opposition politicians appointed to the cabinet prior to a presidential election. Drawing on the logic outlined in the model, a larger number of opposition appointments signals to opposition members that cooptation is a greater possibility, leading more of them to compete as candidates in the subsequent presidential election. Data on individual opposition members appointed to the cabinet was compiled from annual volumes of *Africa South of the Sahara* and the *Political Handbook of the World* and corroborated through media searches in AllAfrica.com. The sample mean for opposition appointments to the cabinet is 1.4, ranging from 0 to 13.

Control Variables

We control for relevant explanatory variables highlighted in the party system literature. Models in the empirical analysis include measures typically used to estimate the effective number of presidential candidates (Cox 1997), namely, a dichotomous variable for countries that employ a runoff system, measures of ethnic fractionalization, and the interaction between these two variables. Runoff systems are thought to weaken the incentives for politicians to coalesce, so they are expected to be associated with a larger number of presidential candidates. Seventy-four percent of observations in the sample use runoff systems.

Greater ethnic heterogeneity is expected to be associated with a larger number of presidential candidates, as suggested by the literature. We use Fearon's (2003) measure of ethnic fractionalization. The average fractionalization score in the sample is 0.76, ranging from 0.33 to 0.95. Given the large differences across different fractionalization indices, we use Posner's (2004) measure for politically relevant ethnic groups (PREG) as an alternate measure. The average fractionalization score according to Posner's index is 0.41, ranging from 0 to 0.71.

Because political liberalization has yet to be consolidated in most African countries, the models also control for political rights and multiparty experience. The Freedom House score for political rights is added as a proxy for the extent to which individual freedoms are guaranteed, and the number of previous multiparty elections is a control for democratic experience.¹⁰ Additional controls are examined in Appendices 4-6.

Empirical Analysis

The results presented in Table 1 support the hypothesis that opposition appointments to the cabinet can be used to induce fragmentation.¹¹ The coefficient on opposition cooptation in the prior cabinet attains its expected positive sign and is statistically significant in all model specifications at conventional levels. Its substantive impact is also large: any prior opposition appointment to the cabinet is associated with three additional presidential candidates, holding all else constant. Based on these estimates, an incumbent seeking reelection could attract one-third more candidates to a presidential election — from the African regional mean of 8 to 11 candidates — by appointing at least one opposition politician to the cabinet. This strategic move would help ensure that the opposition further fragments its vote share.

The magnitude of past opposition cooptation is not undercut by the inclusion of other variables. Model 2 adds the runoff system, ethnic fractionalization, and their interaction. Model 3 shows the estimated effects of opposition cooptation once the controls for political rights and prior elections are included. The estimated coefficient on prior opposition cooptation retains its

¹⁰ Descriptive statistics for all variables are shown in Appendix 2.

¹¹ The sample in Table 1 includes all elections, whether or not they are boycotted by any segment of the opposition. Appendix 3 shows that results hold when such boycotted elections are dropped from the sample.

Table 1. Past Opposition Cooptation Increases Number of Candidates

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Opposition participation in prior cabinet	3.224** (1.448)	3.308** (1.445)	3.433** (1.483)			
Number of opposition ministers in prior cabinet				0.767** (0.287)	0.750** (0.285)	0.699** (0.302)
Runoff system		13.030* (6.947)	12.969** (6.322)		10.937* (6.089)	10.876* (5.748)
Ethnic fractionalization		15.977*** (3.533)	15.229*** (3.492)		12.154*** (2.620)	11.690*** (3.103)
Runoff system × ethnic fractionalization		-14.319 (8.921)	-14.185 (8.377)		-11.477 (7.876)	-11.397 (7.686)
Political rights			-0.530 (0.438)			-0.472 (0.420)
Number of previous multiparty elections			0.888 (0.647)			0.621 (0.644)
Constant	7.510*** (0.588)	-6.468** (2.777)	-5.573 (3.560)	7.596*** (0.723)	-3.426* (1.705)	-2.283 (3.099)
R ²	0.071	0.113	0.166	0.109	0.141	0.174
N	81	81	81	81	81	81

Note: OLS regression. Dependent variable is the total number of presidential candidates. Robust standard errors clustered by country in parentheses.

*** p<0.01, ** p<0.05, * p<0.10, two-tailed tests.

substantive and statistical significance across models, regardless of the inclusion of institutional or political variables. Notably, the effect of past opposition cooptation on the number of presidential candidates is larger than the joint effect of electoral rules and social diversity. The coefficients for runoff system and ethnic fractionalization are positive and statistically significant, indicating that each is individually associated with more candidates. Their interaction term, however, is negative, suggesting a combined reductive effect.

Models 4-6 in Table 1 further report the results when the main independent variable is switched to the number of opposition members appointed in the prior cabinet. Otherwise, the same set of control variables is used. The coefficient on the number of opposition ministers is consistently positive and statistically significant, indicating that each opposition appointment to the cabinet is associated with nearly one additional candidate (0.7 to 0.8) in the next election. As the differences in R^2 across models indicate, the number of opposition ministers explains more of the variation in the number of presidential candidates than electoral rules and ethnic fractionalization combined. In addition, we can confirm that the results in Table 1 are not driven by outliers among the number of prior opposition ministers.¹⁵ Even after dropping the six outliers, the coefficient on the number of opposition ministers not only remains positive and statistically significant at the 0.05 level, but the coefficient also increases in magnitude.

The addition or substitution of other control variables does not affect the analysis. Neither the Freedom House measure for political rights nor the number of previous multiparty elections attains statistical significance. As reported in Appendix 4, the substitution of Posner's PREG

¹⁵ Appendix 7 reports the results when dropping the following cases (opposition ministers in prior cabinet in parentheses): Malawi 1999 (6 ministers), Cote d'Ivoire 2010 (7 ministers), Senegal 2007 (7 ministers), Mali 2002 (8 ministers), Kenya 2007 (8 ministers), and Guinea-Bissau 2009 (13 ministers).

measure for ethnic fractionalization has no effect; the same is true when we substitute the V-Dem electoral democracy index for the Freedom House measure in Appendix 5. Adding controls for level of development and population size also has no impact.¹⁶ To the contrary, adding controls only increases the magnitude and significance of both versions of the independent variable.

In Table 2, we examine one implication from the theoretical model, namely, that weaker incumbents appoint a larger number of opposition members to the cabinet. To ensure that the signal conveyed by the election about the incumbent's relative strength is meaningful, the sample is limited to elections in which reelected incumbents (or their designated successors) faced no opposition boycott.¹⁷ Otherwise, a boycott would inflate the incumbent's vote share. The results in Table 2 corroborate the expectation regarding weaker incumbents: the estimated coefficients on incumbent president vote share move in the expected negative direction and are statistically significant at the 0.1 level. As their relative vote share decreases, reelected incumbents appear to increase the number of opposition appointments to the cabinet. Model 7 suggests that an incumbent who receives nearly 80% of the vote, which is about one standard deviation above the regional mean, is likely to make near zero opposition appointments to the cabinet. By contrast, an incumbent who receives 60% of the vote will make at least one opposition appointment. In Models 8 and 9, the runoff system, ethnic fractionalization, political rights, and the number of previous multiparty elections are all statistically insignificant.

¹⁶ See Appendices 4-6.

¹⁷ The sample excludes the governments of national unity appointed after the Kenya 2007 and Zimbabwe 2008 elections because those were produced through international pressure, which lies outside our theory. However, in the case of Kenya, the incumbent did appoint a cabinet prior to the start of internationally mediated negotiations. We use those appointments for Kenya 2007.

Table 2. Weaker Reelected Incumbents Appoint More Opposition Members to Cabinet

	Model 7	Model 8	Model 9
Incumbent president vote share	-4.065*	-5.361*	-5.938*
	(2.189)	(3.085)	(3.328)
Runoff system		7.949	12.070
		(7.160)	(8.908)
Ethnic fractionalization		7.939	12.013
		(6.961)	(8.345)
Runoff system × ethnic fractionalization		-9.114	-13.617
		(8.257)	(10.193)
Political rights			0.060
			(0.162)
Number of previous multiparty elections			0.433
			(0.276)
Constant	3.444**	-2.762	-7.137
	(1.527)	(5.267)	(6.208)
R ²	0.075	0.101	0.168
N	67	67	67

Note: OLS regression. Dependent variable is the number of opposition members appointed to the cabinet after election. Robust standard errors clustered by country in parentheses.

*** p<0.01, ** p<0.05, * p<0.10, two-tailed tests.

Conclusion

This paper has examined the extent to which patronage, long honed as an instrument of authoritarian rule, can continue to influence the development of political competition after the transition to multiparty elections. The formal theoretical and empirical analyses help explain why patronage politics often overshadow the influence of other institutional or structural variables in inducing partisan fragmentation among the opposition. In this respect, the findings on patronage-based cooptation complement previous research on electoral authoritarian regimes by illuminating a specific mechanism by which incumbents can manipulate how inchoate partisan competition evolves. We specifically show that entrenched incumbents can contain the threat posed by multiparty elections by encouraging more, rather than fewer, of their rivals to compete against them.

This study raises also questions that require further investigation concerning the costs of patronage-based cooptation. Incumbents with finite resources cannot afford to coopt all politicians willing to join their governments. A leader whose rule is based on the distribution of patronage most likely has already assembled an oversized electoral coalition, and further additions to that coalition may require the reallocation of resources, possibly from the patronage awarded to other regime allies or even redirected from a government's social programs. How incumbents manage the costs associated with this recurrent recalibration, without provoking a revolt among regime allies, is unknown. More importantly, the costs that such an intensive patronage strategy imposes on institutional development, social programs, and economic growth remain to be established.

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Appendix

Proof of Proposition 1: We first show that “fragment” is a weakly dominated strategy for the opposition leader, whereas the opposition member potentially has an incentive to defect to “fragment”. We then show that the opposition member’s expected payoff under fragmentation is larger when outside appointments were made in the past.

If the leader chooses $f_t^L = 1$, fragmentation occurs, and each opposition candidate’s expected payoff is:

$$0.5p_t(1)\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 1)u + \\ (1 - p_t(1))0.5[R - D_t(q_t) + p_{t+1}(F_{t+1}(q_t, 1))V_{t+1} + \pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)u].$$

If the leader chooses $f_t^L = 0$, then fragmentation occurs if $f_t^M = 1$, and unification occurs if $f_t^M = 0$.

Under unification, the opposition leader’s expected payoff is

$$p_t(0)\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 0)u + (1 - p_t(0))[R + p_{t+1}(F_{t+1}(0, 1))V_{t+1}].$$

We want to show that:

$$p_t(0)\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 0)u + (1 - p_t(0))[R + p_{t+1}(F_{t+1}(0, 1))V_{t+1}] > \\ 0.5p_t(1)\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 1)u + \\ (1 - p_t(1))0.5[R - D_t(q_t) + p_{t+1}(F_{t+1}(q_t, 1))V_{t+1} + \pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)u].$$

We note that $\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 0)$ and $\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 1)$ should be equal, given that the first 4 arguments of both expressions for π_t are identical and that the fourth argument is 0. The 4th argument being 0 means that election t is won by the incumbent, who is unconstrained in choosing q_t . Given the first 3 arguments of π_t , beliefs about what value a victorious incumbent in election cycle t would choose for q_t should not depend on whether fragmentation occurred or not in that election cycle. This means that the first term on the left-hand side (LHS) of the preceding

inequality exceeds the first term on the right-hand side (RHS) of the inequality, given that $0.5p_t(1) < 0.5 \leq p_t(0)$.

Thus, it is sufficient (but not necessary) to show that

$$(1 - p_t(0))[R + p_{t+1}(F_{t+1}(0,1))V_{t+1}] > (1 - p_t(1))0.5[R - D_t(q_t) + p_{t+1}(F_{t+1}(q_t,1))V_{t+1} + \pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)u].$$

Given that $p_t(0) < p_t(1)$, the first term of the product on the LHS of the preceding inequality exceeds the first term of the product on the RHS. What remains on the LHS is the payoff for winning the election as an opposition leader, and what remains on the RHS is the expected payoff that incorporates both the possibility of winning (as an opposition leader) and losing the election. That would seem to suggest that what remains of the LHS of the preceding inequality exceeds what remains of the RHS, particularly because the RHS subtracts $D_t(q_t)$ whereas the LHS does not. A potential problem, however, is that $p_{t+1}(F_{t+1}(0,1))$ is on the LHS whereas a different term $p_{t+1}(F_{t+1}(q_t,1))$ is on the RHS. There are only 4 possible combinations of values for these 2 terms, and 3 of those combinations imply that the preceding inequality is obviously satisfied. The only interesting case involves $p_{t+1}(F_{t+1}(0,1)) = p_{t+1}(0)$ and $p_{t+1}(F_{t+1}(q_t,1)) = p_{t+1}(1)$. In that case we can rewrite the preceding inequality as:

$$(1 - p_t(0))[R + p_{t+1}(0)V_{t+1}] > (1 - p_t(1))0.5[R - D_t(q_t) + p_{t+1}(1)V_{t+1} + \pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)u].$$

This can be rewritten as:

$$(1 + p_t(1))R + D_t(q_t) + (2p_t(0) + (p_t(1))^2)V_{t+1} + p_t(1)\pi u > 2p_t(0)R + p_t(1)D_t(q_t) + (2(p_t(0))^2 + p_t(1))V_{t+1} + \pi u$$

The coefficients of R , $D_t(q_t)$, and V_{t+1} on the LHS exceed those on the RHS. The opposite is true for the coefficient of u . But $R > u$, and the difference between the R coefficients on both

sides of the inequality exceeds the difference between the u coefficients, so the preceding inequality holds.

Under unification, the leader enjoys a higher probability of winning than under fragmentation, because he must only defeat one opponent rather than two. Moreover, conditional on losing, his chances of getting the administrative job are higher than under fragmentation; this is because if $q_t = 1$ the leader gets the position with certainty under unification but only with probability 0.5 under fragmentation. Thus, conditional on $f_t^M = 0$, the leader's expected payoff from choosing $f_t^L = 0$ is strictly higher than from choosing $f_t^L = 1$, thereby establishing that strategies involving $f_t^L = 1$ are weakly dominated.

Under fragmentation, the opposition member's expected payoff is:

$$0.5p_t(1)\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 1)u + (1 - p_t(1))0.5[R - D_t(q_t) + p_{t+1}(F_{t+1}(q_t, 1))V_{t+1} + \pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)u].$$

If the member observes $q_{t-1} = 1$, he infers that the incumbent would choose $q_t = 1$ in the event of an incumbent victory. Therefore, $\pi_t(1, N_{t-1}, F_{t-1}, 1, 1) > \pi_t(0, N_{t-1}, F_{t-1}, 1, 1)$. The opposition member's expected payoff under fragmentation is larger when the incumbent has made an outside appointment in the past, $q_{t-1} = 1$. This does not necessarily mean that the opposition member will choose to fragment – this proposition simply observes that opposition fragmentation is more likely when outside appointments were made in the past because the opposition member's expected payoff of fragmentation is larger when $q_{t-1} = 1$, compared to when $q_{t-1} = 0$.

Proof of Proposition 2:

We first address the *Fragmentation Equilibrium* and use backward induction. The problem in period 3 of election cycle t involves finding optimal choices for the election winner by solving a

discrete-time, stationary dynamic program. There are no constrained winners in a fragmentation equilibrium, so we focus only on unconstrained winners. The unconstrained winner chooses q_t to maximize V_t , where:

$$V_t = R - D_t(q_t) + p_{t+1}(F_{t+1}(q_t, N_t))V_{t+1}$$

Stationarity of the problem implies $V_t = V_{t+1}$, so $V_t = \frac{R - D_t(q_t)}{1 - p_{t+1}(F_{t+1}(q_t, N_t))}$.

Denoting V_t as a function of q_t , the unconstrained winner chooses $q_t = 1$ if $V_t(1) > V_t(0)$, or if:

$$\frac{R - d}{1 - p_{t+1}(F_{t+1}(1, N_t))} > \frac{R}{1 - p_{t+1}(F_{t+1}(0, N_t))}$$

Therefore, the unconstrained winner chooses $q_t = 0$ if $V_t(1) < V_t(0)$, or if:

$$\frac{R - d}{1 - p_{t+1}(F_{t+1}(1, N_t))} < \frac{R}{1 - p_{t+1}(F_{t+1}(0, N_t))}$$

Rewriting $V_t(1) > V_t(0)$ yields:

$$(R - d)[1 - p_{t+1}(F_{t+1}(0, N_t))] > R[1 - p_{t+1}(F_{t+1}(1, N_t))].$$

In order for the inequality to hold, it needs to be the case that $F_{t+1}(1, N_t) = 1$ and $F_{t+1}(0, N_t) = 0$.¹⁸

There are 4 possible combinations of values for $F_{t+1}(1, N_t)$ and $F_{t+1}(0, N_t)$, and 3 of them lead to failure of the preceding inequality. If $F_{t+1}(1, N_t)$ and $F_{t+1}(0, N_t)$ are either both 0 or both 1, then the terms in square brackets on both sides of the preceding inequality are identical and drop out, giving $R - d > R$, which is false. The preceding inequality also fails if $F_{t+1}(1, N_t) = 0$ and $F_{t+1}(0, N_t) = 1$. It only holds when $1 - p_{t+1}(1)$ appears in the square brackets in the inequality's RHS and $1 - p_{t+1}(0)$ appears in the square brackets in the inequality's LHS, a situation which is ensured by $F_{t+1}(1, N_t) = 1$ and $F_{t+1}(0, N_t) = 0$, two conditions to be discussed shortly.

¹⁸ The required conditions for $F_{t+1}(1, N_t) = 1$ and $F_{t+1}(0, N_t) = 0$ are stated at the end of the portion of the proof that concerns the fragmentation equilibrium. The discussion is deferred until then because it relies on period-1 actions, which are not covered until the end of the backward induction argument.

Using this fact and the stationarity of the problem, the preceding inequality simplifies to

$$p(0) \leq \frac{Rp(1) - d}{R - d}$$

Since there are no choice problems in period 2, consider period 1. We assume the leader's weakly dominated strategy will not be played in equilibrium, so we restrict our attention to $f_t^L = 0$, meaning that the member's decision determines whether the opposition fragments or unifies, i.e., $F_t(q_{t-1}, N_{t-1}) = f_t^M$. The member chooses $f_t^M = 1$ if:

$$0.5p_t(1)\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 1)u +$$

$$(1 - p_t(1))0.5[R - D_t(q_t) + p_{t+1}(F_{t+1}(q_t, 1))V_{t+1} + \pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)u] \geq (1 - p_t(0))u.$$

This condition can be rewritten based on the following four facts. First, $q_t = 1$ in the equilibrium in part (i), so $D_t(q_t) = d$. Second, $F_{t+1}(q_t, 1) = 1$ on the LHS of the preceding inequality, since the member faces the same choice problem in each election cycle, so that if $f_t^M = F_t = 1$ is optimal in election t it must also be optimal in election $t+1$, so $p_{t+1}(F_{t+1}(q_t, 1)) = p(1)$. Third,

$$V_{t+1} = \frac{R - D_{t+1}(q_{t+1})}{1 - p_{t+2}(F_{t+2}(q_{t+1}, N_{t+1}))}$$

or

$$V_{t+1} = \frac{R - d}{1 - p_{t+2}(1)}$$

using earlier facts.

Fourth, $\pi_t(1, N_{t-1}, F_{t-1}, 0, 1) = \pi_t(1, N_{t-1}, F_{t-1}, 1, 1) = 1$ in the equilibrium, because all election winners are unconstrained, so if they choose $q_{t-1} = 1$ they will also choose $q_t = 1$. Using these four facts along with the stationarity of the problem, the condition for $f_t^M = 1$ can be rewritten as:

$$0.5p(1)u + (1 - p(1))0.5 \left[R - d + u + \frac{p(1)(R - d)}{1 - p(1)} \right] \geq (1 - p(0))u$$

which simplifies to:

$R \geq d + (1 - 2p(0))u$. Therefore, the condition ensuring that unconstrained winners choose $q_t = 1$ and that members choose $f_t^M = 1$ (so that fragmentation occurs) is:

$$R \geq \max \left[\frac{d(1 - p(0))}{p(1) - p(0)}, d + (1 - 2p(0))u \right]$$

Given that $p(0) \geq 1/2$, this condition reduces to

$$p(0) \leq \frac{Rp(1) - d}{R - d}$$

Finally, and before turning to the unification equilibrium, consider the conditions required for $F_{t+1}(1, N_t) = 1$ and $F_{t+1}(0, N_t) = 0$. The first of these expressions says that, regardless of who wins election t , if that unconstrained winner chooses to appoint outside the party in election t then fragmentation will occur in election $t+1$. Fragmentation in election $t+1$ requires that the opposition member played “fragment”, so we must verify that this choice will indeed be made given that the opposition leader plays “unify”.

The member chooses $f_{t+1}^M = 1$ if (substituting $q_t = 1$ into the expression below):

$$0.5p_{t+1}(1)\pi_{t+1}(1, N_t, F_t, 0, 1)u + (1 - p_{t+1}(1))0.5[R - D_{t+1}(q_{t+1}) + p_{t+2}(F_{t+2}(q_{t+1}, 1))V_{t+2} + \pi_{t+1}(1, N_t, F_t, 1, 1)u] \geq (1 - p_{t+1}(0))u.$$

All election winners are unconstrained, so if they choose $q_{t-1} = 1$ then $q_t = 1$. Thus,

$\pi_{t+1}(1, N_t, F_t, 0, 1) = 1$, which implies that the first term on the LHS of the preceding inequality is at least as large as the RHS, so $F_{t+1}(1, N_t) = 1$.

The second expression, i.e., $F_{t+1}(0, N_t) = 0$, is less straightforward because it involves the off-the-equilibrium-path move $q_t = 0$. The expression must hold both for $N_t = 1$ and for $N_t = 0$. If the off-path move $q_t = 0$ is played, then it must be (given the stated equilibrium profile) that the opposition member plays the off-path move $f_t^M = 0$. Given the opposition leader’s behavior in

the equilibrium profile (i.e., $f_t^L = 0$), we then have $F_t = 0$. If $N_t = 1$, the rules of the game require $q_t = 0$. This yields $F_{t+1}(0,1) = 0$, so the expression of interest holds when $N_t = 1$. But if $N_t = 0$, then the equilibrium profile requires a choice of $q_t = 1$ rather than $q_t = 0$, so in the absence of further assumptions nothing could be said about $F_{t+1}(0,0)$. We therefore assume, as noted earlier, that whenever the opposition member plays off the equilibrium path in election cycle t , the incumbent plays $q_t = 0$. This assumption ensures $F_{t+1}(0,0) = 0$, and therefore $F_{t+1}(0, N_t) = 0$.

Now we address the *Unification Equilibrium*. The condition required for unconstrained winners to choose $q_t = 0$ is:

$$(R - d)[1 - p_{t+1}(F_{t+1}(0, N_t))] < R[1 - p_{t+1}(F_{t+1}(1, N_t))].$$

When does this inequality hold? F_{t+1} must be either 1 or 0, so there are 4 possible combinations of values for the terms in square brackets on both sides of the inequality:

Combination	LHS term in [] is ...	RHS term in [] is ...	Inequality
1	$1 - p_{t+1}(1)$	$1 - p_{t+1}(1)$	Holds (reduces to $R - d < R$)
2	$1 - p_{t+1}(1)$	$1 - p_{t+1}(0)$	Holds
3	$1 - p_{t+1}(0)$	$1 - p_{t+1}(1)$	Holds if $d > \left(\frac{p(1)-p(0)}{1-p(0)}\right)R$.
4	$1 - p_{t+1}(0)$	$1 - p_{t+1}(0)$	Holds (reduces to $R - d < R$)

Therefore, the inequality holds if d is sufficiently large.

The member chooses $f_t^M = 0$ if:

$$0.5p_t(1)\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 1)u +$$

$$(1 - p_t(1))0.5[R - D_t(q_t) + p_{t+1}(F_{t+1}(q_t, 1))V_{t+1} + \pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)u] < (1 - p_t(0))u.$$

This condition can be rewritten based on the following three facts. First, $q_t = 0$ in the equilibrium in part (ii), so $D_t(q_t) = 0$. Second, $F_{t+1}(q_t, 1) = 0$ since the member faces the same choice problem in each election, so that if $f_t^M = F_t = 0$ is optimal in election cycle t it must also be optimal in $t+1$, so $p_{t+1}(F_{t+1}(q_t, 1)) = p(0)$. Third,

$$V_{t+1} = \frac{R - D_{t+1}(q_{t+1})}{1 - p_{t+2}(F_{t+2}(q_{t+1}, N_{t+1}))}$$

or

$$V_{t+1} = \frac{R}{1 - p_{t+2}(0)}$$

using earlier facts. Using these three facts along with the stationarity of the problem, the condition for $f_t^M = 0$ can be simplified to:

$$\begin{aligned} p_t(1)\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 1)u + (1 - p_t(1)) \left[R + \frac{p_{t+1}(0)R}{1 - p_{t+2}(0)} + \pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)u \right] \\ < 2(1 - p_t(0))u \end{aligned}$$

This can be simplified further by noting that $\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 0, 1) = \pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)$ given that in both cases the winner is unconstrained. So we have:

$$R(1 - p_t(1)) \left[1 + \frac{p_{t+1}(0)}{1 - p_{t+2}(0)} \right] < [2(1 - p_t(0)) - (1 + p_t(1))\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)]u$$

Recognizing the stationarity of the problem, this can be rewritten as:

$$\frac{R}{u} < \frac{2(1 - p(0)) - (1 + p(1))\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)}{(1 - p(1)) \left[1 + \frac{p(0)}{1 - p(0)} \right]}$$

Recall that the condition ensuring that unconstrained winners choose $q_t = 0$ is

$$(R - d)[1 - p_{t+1}(F_{t+1}(0, N_t))] < R[1 - p_{t+1}(F_{t+1}(1, N_t))], \text{ or}$$

$$R[p_{t+1}(F_{t+1}(1, N_t)) - p_{t+1}(F_{t+1}(0, N_t))] < d[1 - p_{t+1}(F_{t+1}(0, N_t))].$$

Combining the two conditions on R yields the following condition required for existence of the SPNE described in (ii):

$$R < \min[k_1, k_2] \text{ where}$$

$$k_1 = \frac{u[2(1-p(0)) - (1-p(1))\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)]}{(1-p(1))\left[1 + \frac{p(0)}{1-p(0)}\right]}$$

and

$$k_2 = \frac{d[1 - p_{t+1}(F_{t+1}(0, N_t))]}{p_{t+1}(F_{t+1}(1, N_t)) - p_{t+1}(F_{t+1}(0, N_t))}$$

Note that

$$k_2 = \frac{d[1 - p_{t+1}(F_{t+1}(0, N_t))]}{p_{t+1}(F_{t+1}(1, N_t)) - p_{t+1}(F_{t+1}(0, N_t))}$$

is identical to the condition $d > \left(\frac{p(1)-p(0)}{1-p(0)}\right)R$ specified earlier.

If $k_2 \leq k_1$ then the thresholds for R in parts (i) and (ii) coincide, whereas they differ if $k_2 > k_1$, with no SPNE in pure strategies existing for values of R in the interval $k_1 < R < k_2$. Proposition 2's condition that $\frac{d}{u}$ be sufficiently small guarantees that $k_1 < k_2$. The specific condition, which ensures that the SPNE exists, is as follows:

$$\frac{d}{u} > \frac{[2(1-p(0)) - (1-p(1))\pi_t(q_{t-1}, N_{t-1}, F_{t-1}, 1, 1)][p_{t+1}(F_{t+1}(1, N_t)) - p_{t+1}(F_{t+1}(0, N_t))]}{(1-p(1))\left[1 + \frac{p(0)}{1-p(0)}\right][1 - p_{t+1}(F_{t+1}(0, N_t))]}$$

Q.E.D.

Appendix 1

Table A1. Summary of Per-Election Payoffs

	Incumbent (I)	Opposition Leader (L)	Opposition Member (M)
UNIFICATION			
I win, appoint L	$R - d$	u	0
I win, inside appointment	R	0	0
L win, appoint M	0	R	u
FRAGMENTATION			
I win, appoint L	$R - d$	u	0
I win, appoint M	$R - d$	0	u
I win, inside appointment	R	0	0
L win, appoint M	0	$R - d$	u
L win, inside appointment	0	R	0
M win, appoint L	0	u	$R - d$
M win, inside appointment	0	0	R

Note: $0 < \max[d, u] < R$.

Appendix 2

Table A2. Descriptive Statistics

	Mean	SD	Min	Max	N
Presidential candidates	8.704	5.872	1	26	81
Opposition participation in prior cabinet	0.370	0.486	0	1	81
# opposition ministers in prior cabinet	1.444	2.530	0	13	81
Runoff system	0.741	0.441	0	1	81
Ethnic fractionalization (Fearon)	0.764	0.128	0.328	0.953	81
Politically relevant ethnic groups (Posner)	0.407	0.213	0	0.71	81
Political rights (Freedom House)	4.309	1.586	1	7	81
Electoral democracy index (V-Dem)	0.481	0.129	0.200	0.785	81
Number of previous multiparty elections	2.123	1.029	1	5	81
Ln(level of development)	6.887	0.521	6.112	8.526	74
Ln(total population)	16.001	1.050	13.946	18.811	81

Appendix 3

Table A3. Past Opposition Cooptation Increases Number of Candidates
 [Sample Excludes Elections with Opposition Boycotts]

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Opposition participation in prior cabinet	3.980** (1.800)	4.051** (1.839)	3.986** (1.865)			
Number of opposition ministers in prior cabinet				0.750** (0.315)	0.777** (0.316)	0.740** (0.334)
Runoff system		15.458 (9.891)	18.508 (11.003)		15.755 (9.761)	17.682 (11.080)
Ethnic fractionalization		10.964 (8.266)	15.151 (10.699)		10.991 (8.269)	13.741 (10.564)
Runoff system × ethnic fractionalization		-17.938 (12.195)	-21.242 (13.255)		-17.515 (11.980)	-19.621 (13.263)
Political rights			-0.342 (0.478)			-0.250 (0.438)
Number of previous multiparty elections			0.650 (0.791)			0.400 (0.819)
Constant	7.780*** (0.729)	-2.155 (6.978)	-5.851 (10.550)	8.117*** (0.808)	-2.305 (6.992)	-4.504 (10.397)
R ²	0.104	0.123	0.143	0.112	0.138	0.146
N	66	66	66	66	66	66

Note: OLS regression. Dependent variable is the total number of presidential candidates. Robust standard errors clustered by country in parentheses.

*** p<0.01, ** p<0.05, * p<0.10, two-tailed tests.

Appendix 4

Table A4. Past Opposition Cooptation Increases Number of Candidates

[Substitutes Posner's Politically Relevant Ethnic Groups]

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Opposition participation in prior cabinet	3.224** (1.448)	3.292* (1.619)	3.519** (1.663)			
Number of opposition ministers in prior cabinet				0.767** (0.287)	0.812** (0.336)	0.788** (0.344)
Runoff system		-0.612 (4.160)	-1.074 (4.172)		-1.380 (3.607)	-1.855 (3.758)
Ethnic fractionalization		-4.483 (5.966)	-4.232 (6.212)		-5.531 (5.393)	-5.479 (5.617)
Runoff system × ethnic fractionalization		2.784 (7.888)	4.163 (7.971)		5.295 (7.117)	6.465 (7.422)
Political rights			-0.550 (0.450)			-0.501 (0.434)
Number of previous multiparty elections			0.744 (0.658)			0.428 (0.645)
Constant	7.510*** (0.588)	8.902** (3.690)	9.450* (4.809)	7.596*** (0.723)	9.270*** (3.292)	10.548** (4.510)
R ²	0.071	0.098	0.142	0.109	0.142	0.169
N	81	78	78	81	78	78

Note: OLS regression. Dependent variable is the total number of presidential candidates. Robust standard errors clustered by country in parentheses.

*** p<0.01, ** p<0.05, * p<0.10, two-tailed tests.

Appendix 5

Table A5. Past Opposition Cooptation Increases Number of Candidates
 [Substitutes V-Dem Electoral Democracy Index]

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Opposition participation in prior cabinet	3.224** (1.448)	3.308** (1.445)	3.465** (1.479)			
Number of opposition ministers in prior cabinet				0.767** (0.287)	0.750** (0.285)	0.701** (0.301)
Runoff system		13.030* (6.947)	11.090* (5.841)		10.937* (6.089)	9.220* (5.268)
Ethnic fractionalization		15.977*** (3.533)	14.125*** (3.291)		12.154*** (2.620)	10.722*** (2.892)
Runoff system × ethnic fractionalization		-14.319 (8.921)	-11.862 (7.780)		-11.477 (7.876)	-9.336 (7.094)
Electoral democracy index			6.703 (6.209)			5.740 (5.851)
Number of previous multiparty elections			0.776 (0.663)			0.530 (0.652)
Constant	7.510*** (0.588)	-6.468** (2.777)	-9.904*** (3.049)	7.596*** (0.723)	-3.426* (1.705)	-6.056** (2.460)
R ²	0.071	0.113	0.166	0.109	0.141	0.173
N	81	81	81	81	81	81

Note: OLS regression. Dependent variable is the total number of presidential candidates. Robust standard errors clustered by country in parentheses.

*** p<0.01, ** p<0.05, * p<0.10, two-tailed tests.

Appendix 6

Table A6. Past Opposition Cooptation Increases Number of Candidates

[Adds Controls for Level of Development and Total Population]

	Model 1	Model 2
Opposition participation in prior cabinet	4.487*** (1.545)	
Number of opposition ministers in prior cabinet		1.074*** (0.344)
Runoff system	9.233 (8.604)	9.955 (9.206)
Ethnic fractionalization	11.112 (7.928)	10.344 (8.475)
Runoff system × ethnic fractionalization	-10.361 (10.572)	-10.341 (11.003)
Political rights	-0.714* (0.390)	-0.631 (0.387)
Number of previous multiparty elections	0.361 (0.587)	0.189 (0.553)
Ln(level of development)	-33.028 (20.052)	-25.945 (19.146)
Ln(total population)	238.936 (144.796)	185.798 (137.688)
Constant	-233.592 (139.797)	-179.730 (133.932)
R ²	0.247	0.275
N	74	74

Note: OLS regression. Dependent variable is the total number of presidential candidates. Robust standard errors clustered by country in parentheses. *** p<0.01, ** p<0.05, * p<0.10, two-tailed tests.

Appendix 7

Table A7. Past Opposition Cooptation Increases Number of Candidates
 [Sample Excludes 6 Outliers on Number of Opposition Ministers]

	Model 4	Model 5	Model 6
Number of opposition ministers in prior cabinet	1.129** (0.456)	1.100** (0.454)	1.142** (0.491)
Runoff system		10.849* (6.150)	10.982* (5.821)
Ethnic fractionalization		12.424*** (3.139)	11.798*** (3.255)
Runoff system × ethnic fractionalization		-12.263 (7.889)	-12.367 (7.687)
Political rights			-0.486 (0.438)
Number of previous multiparty elections			0.668 (0.765)
Constant	7.363*** (0.680)	-3.360 (2.040)	-2.226 (3.220)
R ²	0.100	0.127	0.163
N	75	75	75

Note: OLS regression. Dependent variable is the total number of presidential candidates. Robust standard errors clustered by country in parentheses. *** p<0.01, ** p<0.05, * p<0.10, two-tailed tests.