The Threat-Enhancing Effect of Authoritarian Power Sharing

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Abstract

Power-sharing deals can potentially solve the commitment problem inherent to autocratic bargaining, but often fail to prevent conflict. This paper develops a formal-theoretic model to examine a largely overlooked friction to successful power sharing—the threat-enhancing effect. Sharing power improves the opposition's ability to defend its control over promised concessions; alternatively, though, an empowered opposition can initiate an offensive against the ruler. The consequent threat-enhancing effect creates three distinct frictions. First, the opposition cannot commit to refrain from leveraging its enhanced threat. Consequently, the ruler might prefer to incur a revolt than to peacefully share power. Second, the opposition faces a time-inconsistency problem. Its temptation to wait for a future power-sharing deal risks conflict at present. Third, the ruler is more prone to reverse power-sharing deals when the opposition wins a revolt with higher probability. Strong defensive capabilities for the opposition counteract some deleterious consequences of the threat-enhancing effect.

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1 Introduction

Autocrats are often compelled to share power with opposition actors. Power-sharing deals are common following civil war (Nomikos 2021), both in cases of negotiated settlements (Hartzell and Hoddie 2003) and rebel victory (Clarke et al. 2025). For example, Chad's civil war ended in 1979 with the formation of a transitional government in which the leaders of the three main factions held the top three positions in the government: Goukouni Oueddei as president (FAP rebel group), Wadel Abdelkader Kamougu as vice president (leader of prior government), and Hissène Habré as Minister of Defense (FAN rebel group). Popular uprisings and unexpectedly strong electoral performances by the opposition can also prompt negotiations that yield high-ranking positions for opposition leaders, even if they do not gain the executive post. For example, following the contested 2008 election in Zimbabwe, President Robert Mugabe (ZANU) struck a deal to name opposition leader Morgan Tsvangirai (MDC-T) to the newly created post of Prime Minister.

Power-sharing deals carry the potential to solve the commitment problem inherent to bargaining with autocrats. At times the opposition poses a high threat, it can compel the ruler to offer valued policy concessions (e.g., public-sector jobs, subsidies, preferred cultural policies).[1] But opportunities to remove an autocrat are inherently transitory. Once a moment of vulnerability has passed, the ruler lacks incentives to perpetuate policy concessions. This creates the autocrat's commitment problem. A forward-looking opposition actor recognizes that the ruler cannot commit to future redistribution. Therefore, the opposition might reject *temporary* concessions offered during a fleeting moment in the sun. Instead, the autocrat's commitment problem prompts the opposition to demand access to political power, for example, in the form of high-level political positions. Such power-sharing deals facilitate more *durable* concessions.[2]

Despite this potential, authoritarian power-sharing arrangements often fail. Empirically, deals of-

[1]See, for example, the response of the Saudi state to Arab Spring protesters in 2011; https://www.irishtimes.com/news/saudi-king-announces-huge-spending-to-stem-dissent-1.576600.

[2]This is the core mechanism in models like Acemoglu and Robinson (2000, 2001, 2006) and Castañeda Dower et al. (2018), although the type of institutional reform on which they focus is franchise expansion and elections that determine agenda-setting powers, as opposed to sharing power within the incumbent regime. I expand upon this difference later in the Introduction and in the Conclusion.

ten break down into conflict and/or consolidation by one side. For example, after the fall of the Chinese Qing Empire in 1912, new president Yuan Shikai initially shared power with a KMT majority in the newly created National Assembly. However, he had the prime-minister-to-be Song Jiaoren assassinated, and defeated a subsequent rebellion led by the KMT. Alternatively, rulers frequently refuse to share power in the first place even at the cost of violent conflict. For example, since 1945, members of ethnic groups that are systematically excluded from central political power are substantially less likely to initiate civil wars than members of groups with access to power (Cederman et al. 2013).

In this paper, I theoretically develop an underappreciated friction in authoritarian power-sharing relationships, which is widely empirically applicable: sharing power *enhances the threat* posed by the opposition within the incumbent authoritarian regime. This approach contrasts with the standard focus on either the *autocrat's* commitment problem or the problems inherent to *handing over* the executive position to the opposition.

The threat-enhancing effect captures a key insight. Sharing power improves the opposition's ability to *defend* its control over promised concessions; alternatively, though, an empowered opposition can initiate an *offensive* against the ruler. The defining element of a *power*-sharing deal—as opposed to temporary policy concessions—is a reallocation of *power* toward the opposition (Meng et al. 2023). This shift in power can facilitate commitment ability for the ruler by enabling the opposition to defend its control over promised concessions. But an opposition actor strong enough to defend its concessions is also strong enough to offensively strike against the ruler. Whatever their stated intentions, actors with a foothold in central governance institutions and who develop networks in the state military pose a potential threat to the ruler (Roessler 2011). Two common features of authoritarian politics disable an empowered opposition from committing to refrain from leveraging its enhanced threat: weak institutions and the available recourse to violence (Svolik 2012). This source of offensive prowess—the *threat-enhancing effect*—is a ubiquitous consequence of sharing power within authoritarian regimes.

To capture this idea formally, I analyze an infinite-horizon interaction in which a Ruler bargains over state revenues with an Opposition actor who periodically poses a threat of revolt ("high threat"; the other periods are "low threat"). In any period, the Ruler can offer a continuous amount of temporary concessions, which confer a transfer to the Opposition in the current period only. But, as is standard in this class of models, temporary concessions might not suffice to buy off the Opposition. The Ruler has another means of co-optation, a continuous choice over how much power to share. Reflecting the motivation just presented, sharing power strengthens the Opposition's defensive and offensive capabilities. To create a stark baseline, I begin by assuming the Opposition can perfectly and permanently defend any power-sharing concessions; the Ruler *never* has an opportunity to reverse the deal. On the offensive side, sharing more power raises the Opposition's probability of winning a revolt above its baseline coercive capabilities—the threat-enhancing effect.

Throughout the analysis, I assume that the Opposition's baseline offensive capabilities are high enough to prompt a revolt in every high-threat period if the Ruler never offers to share power. This assumption loads the dice in favor of power sharing occurring along the equilibrium path by mimicking the key condition in existing models that compels the Ruler to share power—the desire to avoid costly conflict.

The threat-enhancing effect substantially narrows the conditions under which peaceful power sharing occurs along the equilibrium path. Two distinct frictions arise in the baseline setting in which any power-sharing deal is permanent. First, the threat-enhancing effect can induce the Ruler to deliberately provoke a revolt rather than peacefully share power. Sharing power reallocates coercive power toward the Opposition. This creates a *commitment problem for the Opposition*. If the Opposition could credibly promise to refrain from leveraging the enhanced threat conferred by a power-sharing deal, then a deal exists that both sides would prefer to conflict. However, because of the Opposition's commitment problem, a severe-enough threat-enhancing effect makes the *Ruler unwilling* to share power. The Ruler prefers to fight from a stronger position than achieve a peaceful bargain from a weaker position.

Second, the threat-enhancing effect can yield a probabilistic risk of conflict *even if the Ruler is willing to share power* because the Opposition faces a time-inconsistency problem. Even if the Ruler does not share power today, sometime in the future, the Opposition will again be poised to revolt. If the Ruler shares power at that juncture, the threat-enhancing effect would discretely raise the Opposition's reservation value. The Opposition's temptation to wait for a future power-sharing deal can undermine its present threat to revolt. When true, the unique equilibrium entails mixed strategies that yield a positive risk of conflict.

I then open up the black box of *permanent* power-sharing concessions and analyze conditions under which power-sharing deals are self-enforcing.[3] Now, in some low-threat periods, the Ruler faces no immediate consequences to reversing a power-sharing deal. The contemporaneous benefit from stealing concessions previously promised to the Opposition creates a temptation to renege, but this transgression (may) trigger a revolt by the Opposition in the next high-threat period. There are, in principle, two plausible ways by which the Opposition can leverage the coercive advantages facilitated by a power-sharing deal to deter the Ruler and defend its control over promised concessions.

First, an intuitive hypothesis is that the best defense is a good offense: An Opposition who wins a revolt with higher probability can enforce power-sharing deals by making the Ruler more greatly fear the eventual revolt that punishes a transgression. This hypothesis, however, is incorrect. An Opposition who wins a revolt with higher probability also demands larger concessions along a peaceful equilibrium path, and this countervailing effect dominates. Consequently, the net effect is that the Ruler is *more prone* to renege on a power-sharing deal when confronting an Opposition actor with greater offensive capabilities. The threat-enhancing effect therefore exacerbates the Ruler's motives to revolt. This reveals a third distinct friction created by the threat-enhancing effect.

[3] At this point in the analysis, I shift from Markov to history-dependent strategies.

Second, an intuitive conceptualization of the Opposition's defensive capabilities is the frequency (in what would otherwise be a low-threat period) with which the Opposition can mobilize an immediate coercive response if the Ruler reverses a power-sharing deal. Greater defensive capabilities conferred by sharing power can improve prospects for power sharing to occur along an equilibrium path, albeit with a twist: power sharing is not permanent, but instead arises in cycles. A defensively strong Opposition tolerates periodic reversals because these reversals occur rarely.

Theoretical contributions. The main theoretical contribution of this paper is to highlight a novel friction inherent to power-sharing deals and to explain the varied ways in which this friction can undermine power sharing. Failed power sharing resulting from the ruler's unwillingness to buy off the opposition—even if sharing power would enable the ruler to retain his office forever—differs from mechanisms examined in most existing theories. Most accounts focus on the *autocrat's* commitment problem that lingers even after sharing power. Powell (2024) assumes that the ruler pays a cost to block the implementation of a power-sharing deal. However, when this cost is low—which Powell associates with "weak states"—the opposition will not accept any power-sharing deal because the risk of a reversal is too high. Powell's conceptualization of weak states draws from arguments about the difficulties of settling civil wars (Walter 1997; Fearon and Laitin 2008). Rebels are reluctant to put their arms down because they fear the government will renege on any proposed power-sharing deal.

Other theories focus on frictions that arise when the ruler's institutional-reform instrument is power *ceding* (i.e., opposition becomes the agenda setter), rather than power *sharing* within the incumbent regime. In Acemoglu and Robinson (2006), the wealthy elite block political transitions when economic inequality is high because they anticipate that the poor majority would redistribute too much under democratic rule.[4] Countermajoritarian institutions in democracy can potentially solve this problem, but only if the majority can credibly commit to retain elite-biased institutions (Al-

[4]This friction, however, is not present in Castañeda Dower et al. (2018), who allow the incumbent to make a continuous choice over the probability with which the opposition becomes the agenda setter.

berts et al. 2012; Albertus and Menaldo 2018; Fearon and Francois 2021). Incumbent elites are, potentially, more willing to hand over power to a limited franchise dominated by the relatively wealthy middle class. However, they also fear a "slippery slope" whereby middle-class leaders pursue policies that later yield larger franchise expansions (Acemoglu et al. 2012, 2021). None of these valuable mechanisms capture the core idea of the present paper: sharing power within the incumbent regime can unravel because it strengthens the opposition's offensive capabilities.

Another striking observation from the present model is that conflict can occur in equilibrium even when the ruler faces no frictions to how much he can offer *and* he prefers peaceful bargaining under power sharing to incurring conflict. This is not the first model of conflict and endogenous institutional reform to feature a range with a mixed-strategy equilibrium (Acemoglu et al. 2012; Gibilisco 2023), but the mechanism differs from the most closely related models. A recent exchange about regime-change models establishes that modeling a discrete choice over how much power to share yields a mixed-strategy equilibrium (Acemoglu and Robinson 2017) whereas a continuous choice does not (Castañeda Dower et al. 2020). Neither of these models, though, incorporate a threat-enhancing effect. As shown here, this wedge suffices to generate a time-inconsistency problem for the opposition even when the ruler's power-sharing choice is continuous.

The insights into reversals to power-sharing deals also depart from related models. Acemoglu and Robinson (2001; 2006, Ch. 7) consider the possibility that elites can stage coups to reverse democratic transitions.[5] However, they explicitly rule out parameter values in which conflict can occur along the equilibrium path, and they do not parameterize the opposition's probability of winning a revolt (in their analog of high-threat periods, the opposition necessarily wins with probability 1). Thus, they cannot recover either the equilibrium structure or comparative statics derived here. The core premise of Myerson (2008) is that holding power requires a leader to "be able to make credible commitments to his supporters and agents. But credibility requires some threat of adverse consequences if commitments are not fulfilled." Similarly, in Boix and Svolik (2013), "author-

[5]See also recent formal models of incumbent democrats consolidating power (Helmke et al. 2022; Luo and Przeworski 2023; Grillo et al. 2024; Chiopris et al. 2025).

itarian power-sharing succeeds only when it is backed by a credible threat of a rebellion by the dictators allies."[6] However, these models of self-enforcing power sharing do not incorporate either of two possibilities examined here: rulers might prefer conflictual autocratic rule over peaceful power sharing, and an opposition who is better able to win a rebellion can actually undercut the ruler's incentive to uphold a power-sharing deal.

Earlier seminal theories of institutions in authoritarian regimes do not incorporate an analog of the threat-enhancing effect (e.g., Geddes 1999; Gandhi 2008; Svolik 2012). Instead, this idea resonates more closely with the ethnic conflict literature, in particular contributions like Roessler's (2011) analysis of the coup/civil war trade off. A handful of existing formal models of domestic politics contain a mechanism analogous to the threat-enhancing effect, which can result from either sharing power, concentrating power, or repressing (Dal Bó and Powell 2009; Francois et al. 2015; Meng 2020; Gibilisco 2021; Paine 2021, 2022; Kenkel and Paine 2023; Luo 2024). Some of these setups recover a similar implication as derived in Section 4.1. Nonetheless, two differences are crucial. First, none of these models incorporate the key conceptual innovation here of distinguishing the defensive consequences of sharing power (permanent or otherwise potentially durable concessions) from the offensive consequences (threat-enhancing effect). Second, these models cannot recover the other results presented here.[7] Also related are IR conflict models with endogenous shifts in the distribution of power (Fearon 1996; Chadefaux 2011; Powell 2013; Debs and Monteiro 2014; Spaniel 2019). A theme of these models is that an actor who gains power over time can strategically slow its increase to prevent the declining actor from initiating a war. The mechanism here, though, works in the opposite direction—the threat-enhancing effect makes it *more* difficult to achieve peaceful bargaining by raising the opposition's opportunity cost to accepting.

[6]A variant of this idea also appears in other models that analyze institutional means for dictators to commit to promises, including legislatures (Gailmard 2017), parties (Gehlbach and Keefer 2011), and elections (Weingast 1997; Fearon 2011).

[7]See also note 1 in Appendix A.1.

Empirical examples. The frictions created by the threat-enhancing effect are of first-order importance in many real-world settings. In the example of Chad mentioned at the beginning of the paper, the three sides (ex-government and two rebel factions) discussed plans to integrate their three militaries, but never implemented this plan. Instead, mutual distrust prompted fighting between FAN (led by Defense Minister Habré) and the new government shortly after the regime was established, and FAN emerged victorious in 1982 (Nolutshungu 1996). The key, highly plausible assumption for linking this case to the model is that Habré—whose troops were located in the capital because of his high-ranking government post—was better positioned to strike against the government than he had needed to organize a new militia in rural areas.

The dynamics in Angola during its decolonization period were similar (Warner 1991). In early 1975, the main rebel groups that had fought the Portuguese government for over a decade—MPLA, UNITA, and FNLA—failed to establish a viable power-sharing arrangement. Following the Carnation Revolution in Portugal, which brought the Portuguese government to the bargaining table, the Alves Agreement of January 1975 constructed a framework for sharing power. An executive committee consisted of the leaders of the three rebel parties, plus a representative for the Portuguese government; and the twelve ministries were split evenly among the four groups. The power-sharing deal also called for military integration. However, each side anticipated the threat-enhancing effect and feared that the others would leverage their position at the center to consolidate power. Fighting resumed in the capital of Luanda shortly after the parties signed the Alves Agreement. MPLA unilaterally gained military control over Luanda and became the internationally recognized government upon independence in November 1975—but subsequently had to combat rebellions that lasted for more than a quarter century. During the late 1980s and 1990s, the government again tried to share power with UNITA, but the rebels repeatedly returned to combat.

In anticipation of the threat-enhancing effect, governments sometimes refuse to contemplate sharing power. This motive helps to explain numerous cases in which leadership involving a small ethnic minority group shuts out members of other groups from the government for extended periods. Such ethnocracies routinely involve extreme episodes of repression to maintain power. Some prominent examples were Western-colonized territories with dominant white minorities (e.g., South Africa, Southern Rhodesia, Algeria). Another is Syria between the early 1970s and late 2024. Members of the small Alawi ethnic group dominated politics, led by the al-Assad family. As van Dam (2011, 134–35) described prior to the Arab Spring in 2011, "it is very difficult to imagine a scenario in which the present narrowly based, totalitarian regime, dominated by members of the Alawi minority, who traditionally have been discriminated against by the Sunni majority" could count on "much understanding from a . . . regime which would for instance be dominated by members of the Sunni majority." The government responded to the initial Arab Spring protests with brutal repression. For over a decade, al-Assad survived only through the loyalty of his generals amid a long and bloody civil war. After the rebels ousted the government in December 2024, members of the minority Alawi sect continued to express fears about their fate under Sunni majority rule (Christou 2024).

2 Setup of Baseline Model

A Ruler and Opposition actor bargain over state revenues across an infinite-horizon interaction in a game of complete and perfect information. Periods are denoted by $t = 1, 2, 3 \ldots$ and each player discounts future payoffs by a common factor $\delta \in (0, 1)$. In each period, the total assets to be allocated equal 1. The Ruler begins each period t with control over a fraction $1 - \pi_{t-1}$ of state revenues, with π_{t-1} comprising the power-sharing concessions for the Opposition. At the outset of the game, $\pi_0 = 0$.

At the beginning of every period, Nature draws an iid threat posed by the Opposition, which is high with probability $r \in (0, 1)$ and low with complementary probability. In a low-threat period, no strategic moves occur and $\pi_t = \pi_{t-1}$. The Ruler consumes $1 - \pi_t$ and the Opposition consumes π_t, and they move to period $t + 1$ while retaining their respective positions, with continuation values $V_R(\pi_t)$ and $V_O(\pi_t)$.

In a high-threat period, the Ruler makes the first strategic move by proposing concessions to the Opposition, which consist of both a power-sharing component and a temporary component. The power-sharing choice is

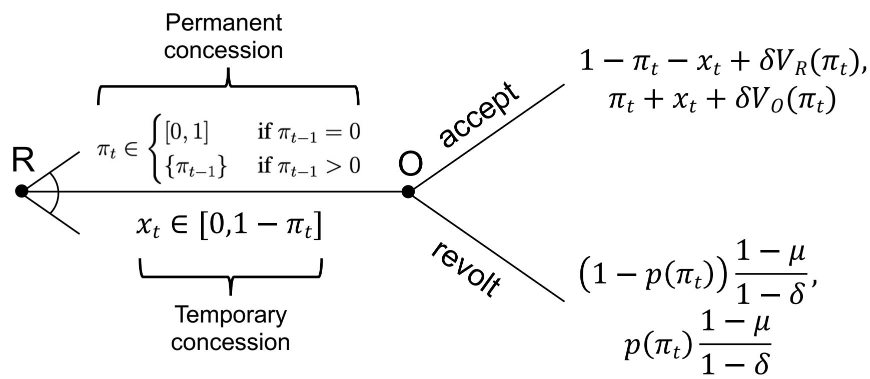
$$\pi_t \in \begin{cases} [0,1] & \text{if } \pi_{t-1} = 0 \\ \{\pi_{t-1}\} & \text{if } \pi_{t-1} > 0. \end{cases}$$

Thus, the Ruler has an unconstrained choice only if no power-sharing deal is in place (the top row of the piecewise function). The key assumption ensured by the stipulation in the bottom row is $\pi_t \geq \pi_{t-1}$, which implies power-sharing concessions are permanent. This provides a useful but stark baseline, which I later relax in the analysis of reversing power-sharing deals. Less consequential is the additional assumption that the Ruler can set a positive power-sharing level only once, and therefore cannot set $\pi_t > \pi_{t-1}$ if $\pi_{t-1} > 0$ (I relax this in Appendix A.3.5). The temporary policy concessions are $x_t \in [0, 1 - \pi_t]$ and constitute a credible promise of additional transfers in Period t only. Between the two instruments, the joint lower bound of 0 ensures that the Ruler cannot demand a net transfer to himself, and the upper bound of 1 is a limited-liability constraint: the Ruler cannot give away more than all contemporaneous state revenues.

After observing the Ruler's proposal (π_t, x_t) in a high-threat period, the Opposition responds by accepting or revolting. Accepting yields a peaceful outcome with a consumption split of $1-\pi_t-x_t$ for the Ruler and $\pi_t + x_t$ for the Opposition. Afterwards, they move to period $t+1$, as they would following a low-threat period. Revolting is a game-ending move. The winner consumes $1 - \mu$ in the period of the conflict and every subsequent period, with $\mu \in (0, 1)$ capturing the costliness of conflict; and the loser consumes 0 in the current and every subsequent period. A revolt succeeds with probability $p(\pi_t) \in (0, 1]$, and the Ruler survives with complementary probability. Figure 1 presents the stage game for a high-threat period.

Sharing more power strengthens the Opposition's defensive and offensive capabilities. To create a stark baseline, I assume in the baseline model that the Opposition can permanently defend any power-sharing concessions; once the Opposition gains π_t, the Ruler never has an opportu-

Figure 1: Stage Game for High-Threat Period



nity to reverse the deal. On the offensive side, sharing more power creates a *threat-enhancing effect* by raising the Opposition's probability of succeeding in a revolt in a high-threat period, with $p(\pi_t) = (1-\alpha(\pi_t))p^{\min} + \alpha(\pi_t)p^{\max}$. The parameter $p^{\min} \in (0,1)$ captures the Opposition's baseline offensive capabilities (absent power sharing) and $p^{\max} \in [p^{\min}, 1]$ expresses the Opposition's maximum probability of wining a revolt under power sharing. The parameter $\alpha(\pi_t) \in [0,1]$ determines the relative weight on the minimum and maximum probability-of-winning terms, placing all weight on $p^{\min}$ if the Ruler shares no power, $\alpha(0) = 0$, and placing all weight on $p^{\max}$ if the Ruler cedes all resources to the Opposition, $\alpha(1) = 1$. Sharing more power bolsters the Opposition's probability of winning at a decreasing rate, $\alpha'(\pi_t) > 0$ and $\alpha''(\pi_t) \leq 0$.[8] In the analysis, a key quantity of interest is

Magnitude of threat-enhancing effect for $\pi_t = \pi$. $\quad p(\pi) - p(0) = \alpha(\pi)(p^{\max} - p^{\min}).$

Discussion of assumptions. The setup is intentionally constructed to incorporate key elements of related existing models of commitment problems, conflict, and institutional reform. In Appendix A.1, I discuss some core assumptions of the present model: iid Nature draws for high/low threats, distinguishing temporary from power-sharing concessions, the mechanical connection between power sharing and shifts in power, and additional details for the function $p(\pi_t)$. Later, I

[8]One functional form that satisfies these assumptions is the indicator function $\alpha(\pi_t) = \pi_t$, which makes $p(\pi_t)$ linear in π_t.

present extensions that relax the assumptions of immediate shifts in power or the one-time increase in π_t (Appendices A.3.4 and A.3.5).

3 Analysis: Bargaining with Fixed Power-Sharing Level

I first characterize optimal actions while fixing the level of power sharing as an exogenous constant, $\pi_t = \pi$ for all t. A peaceful equilibrium requires that the power-sharing level π is high enough to enable the Ruler to buy off the Opposition in high-threat periods. The equilibrium concept is Markov Perfect Equilibrium (MPE). A Markov strategy allows a player to condition its actions only on the current-period state of the world and prior actions in the current period. An MPE is a profile of Markov strategies that is subgame perfect.

Along a peaceful path of play, the Opposition's lifetime expected consumption (from the perspective of any high-threat period) is $\pi + x + \delta V_O(\pi)$, for $V_O(\pi) = \pi + rx + \delta V_O(\pi)$. Solving the continuation value and substituting it into the consumption term yields per-period average consumption $\pi + (1 - \delta(1 - r))x$. The Opposition consumes at least π in every period and gains an additional transfer x in every high-threat period. The latter term is weighted by $1 - \delta(1 - r)$ because the current period is high threat, $1 - \delta$; as are a fraction r of future periods, δr. Similarly, the Ruler's lifetime expected consumption along a peaceful path, from the perspective of any high-threat period, is $1 - \pi - x + \delta V_R(\pi)$, for $V_R(\pi) = 1 - \pi - rx + \delta V_R(\pi)$. Solving the continuation value and substituting it into the consumption term yields per-period average consumption $1 - \pi - (1 - \delta(1 - r))x$.

The Opposition's reservation value to revolting implies the peaceful consumption stream must satisfy

$$\textbf{No-revolt constraint.} \quad \underbrace{\pi}_{\text{Permanent}} + \underbrace{(1 - \delta(1 - r))x}_{\text{Transfers in H periods}} \geq \underbrace{p(\pi)(1 - \mu)}_{\text{Revolt}}. \tag{1}$$

This constraint yields three possible cases that determine whether peaceful bargaining can be sustained in equilibrium and, if so, what is the Ruler's optimal choice of x. The following presents the intuition, Appendix A.2.1 formally characterizes key thresholds, and Appendix A.2.2 characterizes the equilibrium strategy profile.

Case 1: Conflict. An analysis of strategic power sharing is informative only if the Opposition has a *credible* threat to revolt absent any power sharing, which is true if the no-revolt constraint holds at $\pi = 0$. In this case, the Opposition prefers to revolt over consuming 1 in every high-threat period and 0 in every low-threat period. This requires that the Opposition's baseline offensive capabilities p^{min} are sufficiently high, which I assume throughout.

Assumption 1 (Opposition Credibility holds)**.**

$$\underbrace{p^{min}(1-\mu)}_{\text{Reservation value to revolting}} > \underbrace{1-\delta(1-r)}_{\text{Consume 1 in H periods}}.$$

If Opposition Credibility holds, then conflict occurs along the equilibrium path if π is too small. A unique threshold value $\underline{\pi} \in (0,1)$ constitutes the minimum level of power sharing needed to secure peace, implicitly defined as

$$\underline{\pi} + (1-\delta(1-r))(1-\underline{\pi}) - p(\underline{\pi})(1-\mu) = 0. \tag{2}$$

Furthermore, $\underline{\pi} < 1$ yields the following remark.

Remark 1. *The Ruler can choose $\pi < 1$ high enough to satisfy the no-revolt constraint.*

Case 2. Interior solution. High-enough π yields a peaceful equilibrium path, $\pi \geq \underline{\pi}$. If, furthermore, π is not too large (in a sense defined below), then the temporary concession x has an interior solution. In this case, the Ruler satisfies Equation 1 with equality to make the Opposition indifferent between accepting and revolting.

$$\pi + (1 - \delta(1 - r))x^*(\pi) = p(\pi)(1 - \mu) \implies \underbrace{x^*(\pi) = \frac{-\pi + p(\pi)(1 - \mu)}{1 - \delta(1 - r)}}_{\text{Interior-optimal transfer}}. \tag{3}$$

The Ruler prefers to make the temporary concession $x^*(\pi)$ than to incur a revolt because he consumes the entire surplus saved by preventing costly conflict. Substituting $x^*(\pi)$ into the Ruler's consumption stream yields

$$R(\pi) = 1 \overbrace{-\pi}^{\text{Direct cost}} - (1 - \delta(1 - r)) \underbrace{\frac{\overbrace{-\pi}^{\text{Indirect benefit}} + p(\pi)(1 - \mu)}{1 - \delta(1 - r)}}_{x^*(\pi)} = 1 - p(\pi)(1 - \mu). \tag{4}$$

The Ruler consumes total surplus, 1, minus the Opposition's reservation value to revolting, $p(\pi)(1 - \mu)$; and, conversely, the Opposition consumes its reservation value. Consequently, the only element of the power-sharing level π that affects the Ruler's consumption along a peaceful path is the Opposition's probability of winning; the level of permanent concessions cancels out. To see why, the Ruler loses π in every period, the direct cost of higher permanent concessions. However, higher π indirectly benefits the Ruler by increasing the Opposition's consumption along a peaceful path. By raising the opportunity cost of revolting, the Ruler can buy off the Opposition with a smaller temporary concession in high-threat periods. Thus, the Opposition compensates the Ruler for higher permanent concessions by demanding fewer temporary concessions. The direct cost and indirect benefit perfectly offset each other because the Ruler and Opposition identically weight the stream of temporary concessions, which occur in the current high-threat period (weight $1 - \delta$) and a fraction r of future periods (weight δr).

Case 3: No temporary concessions. If the permanent concession exceeds the Opposition's reservation value, $\pi > p(\pi)(1-\mu)$, then the Opposition will not revolt even without additional temporary concessions (Equation 1 is satisfied at $x = 0$). Consequently, the path of play is guaranteed to be peaceful.

4 ANALYSIS: STRATEGIC POWER SHARING

Four features of the baseline model push toward stable power sharing. First, the Opposition poses a credible threat of revolt if the Ruler never shares power (Assumption 1). Second, the Ruler can always set π high enough to buy off the Opposition (Remark 1). Third, the continuous choice over π implies that the Ruler never faces a discrete choice between no power sharing and inordinately large concessions, like ceding its agenda-setting powers. Fourth, the Ruler cannot reverse a power-sharing deal nor access asymmetric conflict technologies like repression.

Thus, intuitions from existing models suggest a straightforward, unique equilibrium path of play: the Ruler offers the minimum power-sharing level that secures peace, $\pi_t = \underline{\pi}$, in the first high-threat period. The Ruler should want to prevent a revolt because, by virtue of making all the bargaining offers and holding the Opposition down to indifference, he consumes the entire surplus saved by preventing conflict. Furthermore, following the logic of Castañeda Dower et al. (2020), we would expect that a continuous power-sharing choice would yield a pure-strategy equilibrium.

The threat-enhancing effect overturns these premises. A pure-strategy power-sharing equilibrium requires two additional conditions—Ruler Willingness and Strong Opposition Credibility. Appendices A.3.1 and A.3.2 provides supporting formal results for characterizing the equilibrium.

4.1 RULER WILLINGNESS

The Ruler is willing to share enough power to achieve peaceful bargaining if and only if his consumption stream along a peaceful path exceeds his utility to incurring a revolt. The threat-enhancing effect can undercut what would otherwise be a foregone conclusion to share power. The relevant comparison in a high-threat period is between

1. Sharing the minimum amount of power to induce peace, $(\pi_t, x_t) = (\underline{\pi}, 1 - \underline{\pi})$, and buying off an Opposition who wins with probability $p(\underline{\pi})$.

2. Perpetuating an autocratic regime by setting $\pi_t = 0$ facing a revolt that succeeds with probability p^{min}.

The incentive-compatibility constraint for the Ruler to share power is

$$\underbrace{1 - p(\underline{\pi})(1-\mu)}_{\text{Share power}} \geq \underbrace{(1 - p^{\text{min}})(1-\mu)}_{\text{Incur revolt}},$$

which simplifies to

$$\textbf{Ruler Willingness.} \qquad \underbrace{\mu}_{\text{Cost of revolt}} \geq \underbrace{\alpha(\underline{\pi})(p^{\text{max}} - p^{\text{min}})}_{\text{Threat-enhancing effect}}(1-\mu). \tag{5}$$

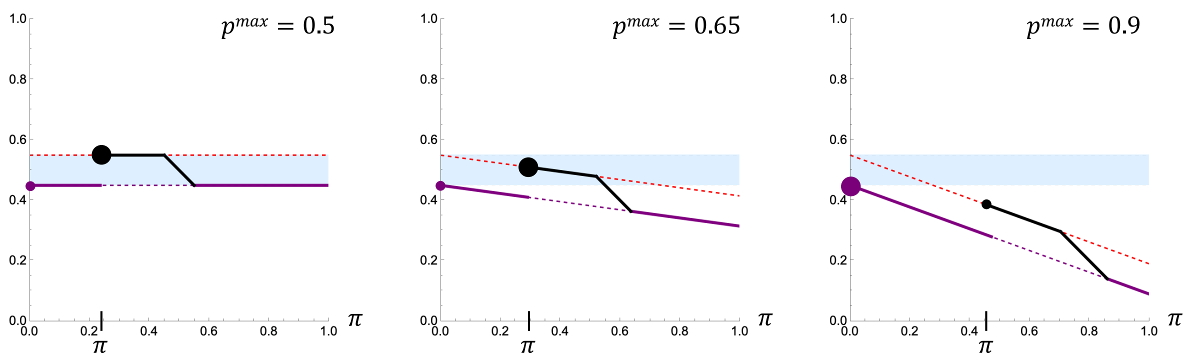
The main force that pushes toward Ruler Willingness holding is the cost of a revolt. As suggested by canonical results on conflict bargaining, more destructive conflict harms the Ruler. By virtue of making all the bargaining offers and holding the Opposition down to indifference, the Ruler consumes the entire surplus saved by preventing a revolt.

However, despite this benefit of sharing power, the threat-enhancing effect can cause Ruler Willingness to fail. Upon sharing power, the Ruler holds the Opposition down to indifference only *after power has shifted in the Opposition's favor*. Consequently, the Ruler might prefer to fight a weaker Opposition than to buy off a stronger Opposition. But without a threat-enhancing effect, $p^{\text{max}} = p^{\text{min}}$ and therefore Ruler Willingness necessarily holds. And, as before, the level of permanent concessions cancels out (Equation 4), and therefore does not affect Ruler Willingness.[9]

[9]This analysis also highlights the importance of assuming that π and $p(\pi)$ are positively correlated. If the Ruler could separately manipulate these instruments, the choice of p would be trivial because he would always minimize it.

Visual intuition. The panels in Figure 2 depict the Ruler's lifetime expected consumption from the perspective of a high-threat period, plotted for any possible choice of π. The higher red-dashed line is the Ruler's consumption along a peaceful path when the Opposition consumes its reservation value to revolting, $1-p(\pi)(1-\mu)$; and the lower purple-dashed line is the Ruler's reservation value to incurring a revolt, $(1-p(\pi))(1-\mu)$. The shaded blue region indicates the range of consumption values in between the two lines while fixing $p(\pi) = p^{\text{min}}$, as in the left panel. For every value of π in each panel, the gap between the two lines equals the cost of conflict, μ.[10] The solid lines denote the Ruler's level of consumption at each level of π, based on whether the resultant path of play would be peaceful or conflictual (with $\underline{\pi}$ comprising the cutpoint). In each panel, the two dots indicate the set of possible optimal choices, $(1-p^{\text{min}})(1-\mu)$ in purple and $1-p(\underline{\pi})(1-\mu)$ in black. The larger dot indicates the equilibrium choice for the specified set of parameter values.

Figure 2: Threat-Enhancing Effect and Ruler Willingness



Parameter values: $\delta = 0.9$, $r = 0.2$, $\mu = 0.1$, $p^{\text{min}} = 0.5$. In left panel, $p^{\text{max}} = 0.5$. In the center panel, $p^{\text{max}} = 0.65$. In the right panel, $p^{\text{max}} = 0.9$. The four qualitatively distinct ranges of π values in each panel correspond with Cases 1 and 2 in Proposition A.1 and Cases 3a and 3b in Proposition A.2.

In the left panel, there is no threat-enhancing effect because $p^{\text{max}} = p^{\text{min}} = 0.5$. Therefore, the sole consequence of choosing $\pi = 0$ over $\pi = \underline{\pi}$ is to destroy the surplus associated with peace; Ruler Willingness holds. In the center panel, sharing power raises the Opposition's probability of winning but not by a large magnitude, as $p^{\text{max}} = 0.65$. By sharing power, the threat-enhancing

[10]This follows from straightforward subtraction, $\underbrace{1-p(\pi)(1-\mu)}_{\text{Peace}} - \underbrace{(1-p(\pi))(1-\mu)}_{\text{Revolt}} = \mu$.

effect causes the Ruler to lose some of the surplus associated with preventing conflict relative to a baseline in which the Opposition's probability of winning is fixed at $p^{\min}$. However, the magnitude of this drop is not too large. This relationship flips in the right panel, though, because the threat-enhancing effect is large in magnitude, $p^{\max} = 0.9$. Now, Ruler Willingness fails because sharing power raises the Opposition's probability of winning by so much that the Ruler prefers simply to fight a weaker Opposition who wins with probability $p^{\min}$.

Opposition's commitment problem. An alternative interpretation of this result is that Ruler Willingness can fail because the threat-enhancing effect creates a commitment problem for the Opposition. A standard result in conflict bargaining models is that conflict occurs because the player making offers (here, the Ruler) cannot commit to give enough away. However, in this case, conflict occurs because the player who responds to the offers, the Opposition, cannot commit to refrain from leveraging its higher probability of winning a revolt. Whenever Ruler Willingness fails, a Pareto-improving deal exists. Suppose that, following a power-sharing deal, the Opposition could commit to bargain as if its probability of winning was some $p' \in (p^{\min}, p^{\min} + \frac{\mu}{1-\mu})$. On the one hand, the Opposition would consume $p'(1-\mu)$, which exceeds its baseline reservation value to revolting, $p^{\min}(1-\mu)$. On the other hand, the Ruler's bargaining position would weaken by a small-enough amount that he prefers peacefully sharing power to preserve the surplus that conflict would have destroyed. Thus, both sides would consume a fraction of the surplus saved by preventing conflict. However, the Opposition's inability commit to this deal after the shift in power has occurred creates the possibility of Ruler Willingness failing.

Consequently, although sharing power enables the *Ruler* to commit to deliver concessions in low-threat periods, the *Opposition's* commitment problem—which stems from the threat-enhancing effect—may dissuade the Ruler from doing so. This creates a commonly overlooked source of intractability inherent to power-sharing deals.[11]

[11] This result is not a knife-edge implication of assuming either that the reallocation of power toward the Opposition occurs immediately or that the Ruler can raise π_t only once; see Appendices A.3.4 and A.3.5.

4.2 STRONG OPPOSITION CREDIBILITY

Surprisingly, even Ruler Willingness does not ensure peaceful power sharing. The threat-enhancing effect creates a time-inconsistency problem for the Opposition because of the dynamic structure of the game and the repeated opportunities for the Ruler to share power. Even if the Ruler does not share power today, sometime in the future, the Opposition will again be poised to revolt. If the Ruler shares power at that juncture, the threat-enhancing effect would discretely raise the Opposition's reservation value. The Opposition's temptation to wait for a future power-sharing deal can undermine its present threat to revolt. When true, the unique equilibrium entails mixed strategies that yield a positive risk of conflict. Only if the Opposition's threat of revolt is *strongly credible* does the unique equilibrium feature peaceful power sharing in pure strategies.

To see this formally, assume Ruler Willingness holds. Consider a strategy profile in which the Ruler shares power in every high-threat period and the Opposition always rejects an offer with temporary concessions only. The relevant deviation to assess is whether the Opposition can profit by accepting the off-the-equilibrium path offer $(\pi_t, x_t) = (0, 1)$. Because this is a single-deviation, the Opposition knows the Ruler will offer $(\pi_z, x_z) = (\underline{\pi}, 1 - \underline{\pi})$ in the next high-threat period z. A pure-strategy equilibrium requires the Opposition to revolt today, as opposed to accepting temporary concessions today and waiting for a power-sharing deal tomorrow

$$\underbrace{\frac{p^{\min}(1-\mu)}{1-\delta}}_{\text{Revolt now}} \geq \underbrace{1 + \delta V_O}_{\text{Wait}}, \tag{6}$$

$$\text{for} \quad V_O = \underbrace{r\frac{p(\underline{\pi})(1-\mu)}{1-\delta}}_{\text{Move to power sharing}} + \underbrace{(1-r)\delta V_O}_{\text{Autocracy persists}}. \tag{7}$$

If the Opposition waits, it gains a reward in the next period if it poses a high threat (probability r). This will prompt the Ruler to share power, at which point the Opposition's consumption is determined by its reservation value to revolting at the higher probability of winning $p(\underline{\pi})$. But if instead the Opposition poses a low threat, it consumes 0 and continues to wait for a power-sharing deal.

Combining the previous two equations yields the necessary inequality for pure-strategy power sharing:

$$\textbf{Strong Opposition Credibility.} \quad \underbrace{1-\delta(1-r)-p^{\min}(1-\mu)}_{\text{Opposition Credibility (Asst 1)}}+\underbrace{\gamma}_{\text{Wedge}}<0,$$

$$\text{for} \quad \gamma \equiv \delta r \underbrace{\alpha(\underline{\pi})(p^{\max}-p^{\min})}_{\text{Threat-enhancing effect}} \frac{1-\mu}{1-\delta}. \tag{8}$$

This inequality encompasses the terms from Opposition Credibility (Assumption 1), plus an additional term γ for the consumption boost conferred by a future power-sharing deal. Thus, γ creates a wedge between the thresholds at which the Opposition revolts (a) if *never* offered a power-sharing deal (Opposition Credibility) and (b) if *not always* offered a power-sharing deal (Strong Opposition Credibility). The threat-enhancing effect is necessary for this wedge to be positive.[12] Highlighting the importance of the game's dynamic structure, $r > 0$ is also a necessary condition for the wedge to be positive because otherwise the Opposition could never again compel the Ruler to share power.

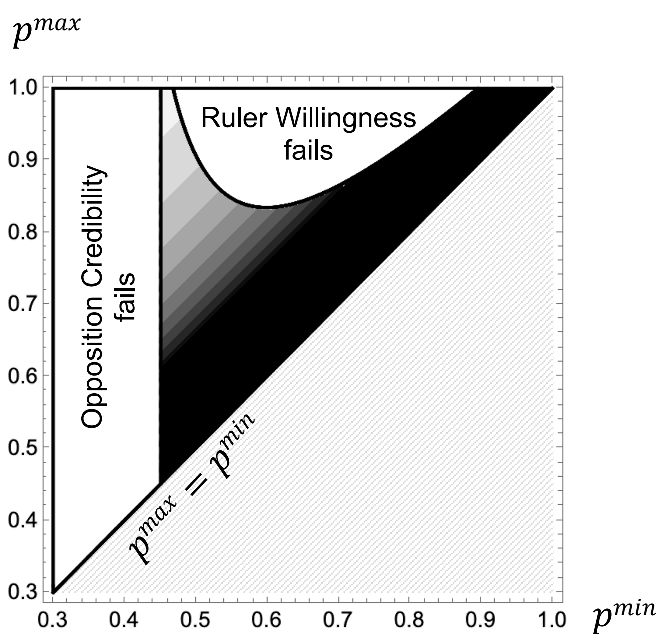
If Strong Opposition Credibility fails, then the Opposition can profitably deviate from either always accepting or always rejecting proposals that lack a power-sharing provision. This yields a unique equilibrium in mixed strategies. In this scenario, the Opposition faces a time-inconsistency problem. The Opposition would benefit from committing to revolt with probability 1 in any high-threat period if not offered a power-sharing deal. That threat, if credible, would compel the Ruler to share power with probability 1 (assuming Ruler Willingness holds). However, precisely because sharing power discretely raises the Opposition's utility, it prefers to (probabilistically) wait rather than revolt for sure. Only if Strong Opposition Credibility holds is there a unique pure-strategy equilibrium with peaceful power sharing.

[12] In Appendix A.3.6, I discuss differences between the present analysis of mixed strategies and that in Acemoglu and Robinson (2017) and Castañeda Dower et al. (2020).

4.3 Comparative Statics

Three outcomes are possible in equilibrium: peaceful power sharing (Ruler Willingness and Strong Opposition Credibility both hold), no power sharing and conflict (Ruler Willingness fails), and probabilistic power sharing or conflict (Ruler Willingness holds and Strong Opposition Credibility fails).[13] Figure 3 illustrates how the threat-enhancing parameter p^{max} affects these equilibrium outcomes for different values of p^{min} (Appendix A.3.3 presents formal results). Darker colors indicate a higher probability of transitioning to a power-sharing deal in a high-threat period (assuming $\pi_{t-1} = 0$), with white indicating probability 0 and black indicating probability 1. The region to the bottom-right of $p^{\text{max}} = p^{\text{min}}$ is shaded out because these parameter values violate the assumption $p^{\text{max}} \geq p^{\text{min}}$.

Figure 3: Equilibrium Probability of Power Sharing



Parameter values: $\delta = 0.9$, $r = 0.35$, $\mu = 0.08$, $\alpha(\pi_t) = \pi_t$.

Along the diagonal line $p^{\text{max}} = p^{\text{min}}$, there is no threat-enhancing effect. For these parameter values, the Ruler shares power as long as p^{min} is not so low that Opposition Credibility fails (Assumption 1). Moreover, if p^{min} is very high, then peaceful power sharing is guaranteed for a mechanical

[13] Appendix Proposition A.3 provides a formal equilibrium statement.

reason: high $p^{\min}$ restricts the magnitude of the threat-enhancing effect, which is determined by $p^{\max} - p^{\min}$. However, for all values of $p^{\min}$ in between these extremes, raising $p^{\max}$ can undercut Ruler Willingness (Equation 5) and/or Strong Opposition Credibility (Equation 8).

5 Reversing Power-Sharing Deals

I now allow the Ruler to reverse power-sharing deals in some low-threat periods without facing an immediate consequence, although I also allow the Opposition to play a history-dependent punishment strategy. An intuitive hypothesis is that an offensively strong Opposition actor—one who succeeds at revolting with high probability—can make power-sharing deals self-enforcing because the Ruler more greatly fears the eventual punishment triggered by reneging. This hypothesis, however, is incorrect; the Ruler is *more prone* to renege on a power-sharing deal when confronting an offensively strong Opposition. Instead, greater defensive capabilities conferred by sharing power can improve prospects for power sharing to occur along an equilibrium path, albeit with a twist: power sharing is not permanent, but instead arises in cycles. Appendix A.4 provides supporting formal results.

5.1 Setup

The setup is qualitatively similar to the baseline game, but with several modifications that enable capturing key insights into reversing and enforcing power-sharing deals. At the outset of each period, Nature chooses among three possible states: high-threat, low-threat without a defensive advantage, and low-threat with a defensive advantage. The Ruler moves next and chooses $\pi_t \in \{0, \pi_+\}$, for some $\pi_+ \in (0, 1]$. The most important difference from the baseline game is that the Ruler is not constrained to choose $\pi_t \geq \pi_{t-1}$; even if $\pi_{t-1} = \pi_+$, the Ruler can choose $\pi_t = 0$. The less important difference is that the power-sharing choice is binary. This greatly simplifies the equilibrium characterization for reasons discussed in Appendix A.4.5. However, I ensure this restriction does not create any new frictions in the bargaining process by assuming that the value of π_+ is exactly equal to an analog of the threshold power-sharing level $\underline{\pi}$ from the baseline model.

After the Ruler chooses π_t, low-threat periods without a defensive advantage and high-threat periods unfold identically to their namesakes from the baseline game. In the former, no additional strategic moves occur in the period; and in the latter, the Ruler proposes a temporary concession, and the Opposition responds to the power-sharing/temporary concessions by accepting or revolting. The new type of period is low-threat with a defensive advantage. In such a period, no strategic moves occur after the power-sharing choice if $\pi_t \geq \pi_{t-1}$. However, if instead $\pi_t < \pi_{t-1}$, then the Opposition has a contemporaneous option to initiate a revolt that would succeed with probability p^{min}.

High-threat periods arise with the same frequency as before, r. Among the remaining low-threat periods—now, *low* in the sense that at best the Opposition is able to launch a defensive reaction only if "provoked"—the Opposition has a defensive advantage in a fraction q. Higher values of q intuitively correspond with a more defensively capable Opposition because it can more frequently inflict an immediate punishment in response to the Ruler reversing a power-sharing deal.

To allow for endogenous enforcement of power-sharing deals, I relax the restriction to Markov strategies and instead allow the Opposition to play a history-dependent punishment strategy. Markov strategies, by contrast, would make much of the present analysis uninteresting; the Opposition would be unable to punish the Ruler for a transgression in an earlier period, which means the Ruler would necessarily reverse a power-sharing in any low-threat periods without a defensive advantage. The present structure enables examining the conditions under which the Opposition's threat of punishment deters the Ruler from reversing a power-sharing deal, as well as how the equilibrium unfolds if the Opposition lacks a credible threat of punishment.[14]

[14]Appendix A.4.5 discusses key conceptual distinctions between sustaining power-sharing deals, as opposed to temporary concessions, with history-dependent punishments.

5.2 STRONG RULER WILLINGNESS

Throughout the analysis, I continue to assume that Opposition Credibility holds (Assumption 1), as well as both Ruler Willingness and Strong Opposition Credibility. Therefore, if power sharing fails, a distinct friction relative to the prior analysis drives this outcome. I start by assuming $q = 0$, meaning the Opposition can never immediately defend its power-sharing concessions in a low-threat period (and thus the distinction between having or not a defensive advantage is irrelevant). This enables isolating the effect of offensive capabilities on upholding power-sharing deals. At the end of the Section, I analyze the full model.

Two paths of play are possible in equilibrium: (1) a peaceful path in which the Ruler permanently upholds a power-sharing deal, and (2) a conflictual path in which the Ruler would reverse a power-sharing deal in every low-threat period—and therefore power sharing never gains traction in the first place. The minimum power-sharing concession needed to buy off the Opposition is the same as before, $\underline{\pi}$. Thus, as to not introduce a new friction into the model, I assume $\pi_+ = \underline{\pi}$. By construction, this choice ensures that if the Ruler never reverses the deal, the Opposition will not revolt. Furthermore, the Opposition's threat to revolt in every high-threat period if the Ruler reverses in every low-threat period is necessarily credible. With $q = 0$, such "promises" are no better than purely temporary concessions, which the Opposition rejects (Assumption 1).

The new incentive-compatibility constraint to assess is whether the Ruler will reverse a power-sharing deal in a low-threat period. Permanently maintaining the concession would yield consumption of 0 in every high-threat period and $1 - \underline{\pi}$ in every low-threat period for the Ruler. By contrast, reneging in a low-threat period would yield consumption of 1 in the current low-threat period and in every subsequent low-threat period until the next high-threat period arises, at which point the Opposition punishes the Ruler by revolting. This tradeoff implies that reneging yields a benefit today and a cost tomorrow.[15]

To formally assess whether the Ruler will renege, we first need to assess the net magnitude of the

[15]Note that $\pi_t = \underline{\pi}$ minimizes the amount the Ruler concedes in low-threat periods (among all power-sharing offers that induce acceptance from the Opposition), and therefore minimizes the Ruler's motives to renege.

punishment that the Ruler would incur in the first high-threat period following a deviation

$$(1-\delta)V_{\Delta}^{H} = \underbrace{(1-p^{\min})(1-\mu)}_{\text{Conflict}} - \underbrace{\delta(1-r)(1-\underline{\pi})}_{\text{Peace}} = \underbrace{\alpha(\underline{\pi})(p^{\max}-p^{\min})(1-\mu)-\mu<0}_{\text{Ruler Willingness}}. \quad (9)$$

From the perspective of a high-threat period, following a prior deviation, a revolt occurs today and the expected value of this event is $(1-p^{\min})(1-\mu)$. By contrast, had the Ruler stuck with the actions needed to sustain peace, he would consume 0 today (and in every future high-threat period) and $1-\underline{\pi}$ in every future low-threat period. This yields an expected payoff of $\delta(1-r)(1-\underline{\pi})$. The first part of Equation 9 expresses the difference in these terms, captured with the subscript Δ. Substituting in for $\underline{\pi}$ and rearranging yields an expression equivalent to the Ruler Willingness condition, which we assume to hold throughout. Thus, deviating creates a net cost for the Ruler starting from whenever the next high-threat period arises.

This term enables assessing the net profitability for the Ruler of reneging in a low-threat period. The new condition, Strong Ruler Willingness, is strictly harder to satisfy than the original Ruler Willingness condition for two reasons. First, the costs of the revolt are attenuated by a magnitude of δr because the Ruler does not pay them until a future high-threat period. Second, the Ruler gains a benefit of magnitude $(1-\delta)\underline{\pi}$ from consumption accrued prior to the revolt.

Strong Ruler Willingness. $$\underbrace{\delta r\overbrace{\left(\mu-\alpha(\underline{\pi})(p^{\max}-p^{\min})(1-\mu)\right)}^{\text{Ruler Willingness}}}_{\text{Cost of reversing}} \geq \underbrace{(1-\delta)\underline{\pi}}_{\text{Benefit of reversing}}. \quad (10)$$

Thus, Strong Ruler Willingness determines whether the equilibrium involves permanent peaceful power sharing, or no power sharing and conflict.[16]

[16] Appendix A.4.1 presents intermediate steps to solve for Equation 10.

5.3 Comparative Statics on Offensive Capabilities

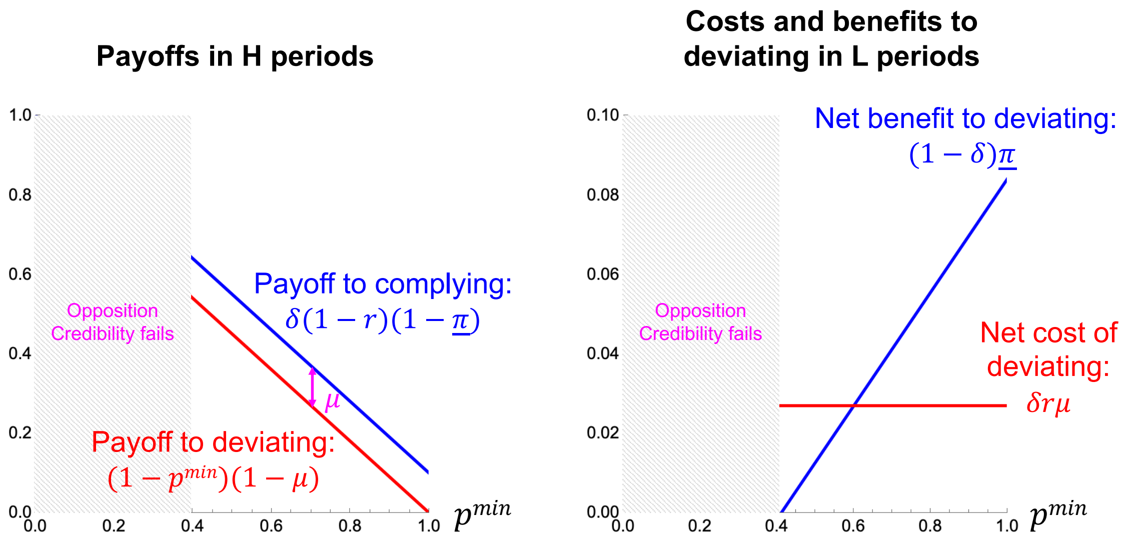
We might expect power-sharing deals to be self-enforcing when the Opposition poses strong offensive capabilities, in the sense of a high probability of winning revolt. This should enable the Opposition to deter the Ruler by inflicting a harsh punishment in response to a transgression. In fact, though, the relationship works in the opposite direction—the Ruler is *more* prone to renege when the Opposition wins with higher probability. The threat-enhancing effect reinforces this incentive to renege, but is not a necessary condition for such incentives.[17] Therefore, I begin by shutting down the threat-enhancing effect (setting $p^{\max} = p^{\min}$) and analyzing the effects of raising $p^{\min}$.

Greater offensive capabilities in the sense of higher $p^{\min}$ increases the Ruler's benefit from reversing a power-sharing deal while having no net effect on the expected cost of doing so, for which I show the visual intuition in Figure 4. The left panel examines high-threat periods by presenting the Ruler's lifetime average expected consumption amounts upon either complying with power sharing (blue) or reneging (red). In both panels, Opposition Credibility fails when $p^{\min}$ is too low, and those regions are grayed out.

The key insight from the left panel is that $p^{\min}$ *does not affect* the Ruler's net consumption from the perspective of a high-threat period. The downward sloping red line encompasses the intuitive notion that a coercively stronger Opposition imposes a greater (expected) punishment in response to a reversal. However, the Ruler also needs to compensate the Opposition for a higher probability of winning a revolt along a *peaceful path*. Because the Ruler sets the temporary concession to hold the Opposition down to its reservation value to fighting, increases in $p^{\min}$ diminish the Ruler's consumption by the same magnitude as if a revolt actually occurred. Therefore, regardless of the value of $p^{\min}$, the gap between the Ruler's consumption along a peaceful and conflictual path in a high-threat period is positive and equals the cost of conflict, μ. This follows directly from Equation 9 when setting $p^{\max} = p^{\min}$.

[17] By contrast, as shown earlier, a positive threat-enhancing effect is necessary for either Ruler Willingness or Strong Opposition Credibility to fail.

Figure 4: Incentives to Reverse Power-Sharing Deals



Parameter values: $\delta = 0.9$, $r = 0.3$, $\mu = 0.1$, $p^{\max} = p^{\min}$. Note that $\underline{\pi}$ strictly increases in $p^{\min}$; see Equation 2 with $p(\underline{\pi}) = p^{\min}$.

The only remaining effect of $p^{\min}$ influences the Ruler's calculus in a low-threat period, which the right panel shows. When $p^{\min}$ is just high enough to satisfy Opposition Credibility, the Opposition does not require much consumption in low-threat periods to facilitate peaceful bargaining in high-threat periods. A low value of $\underline{\pi}$ diminishes the Ruler's temptation to deviate in a low-threat period, and the eventual deviation cost μ incurred in a future high-threat period deters the Ruler from reneging. Consequently, Strong Ruler Willingness holds (see Equation 10 with $p^{\max} = p^{\min}$). However, as $p^{\min}$ grows, the Ruler must offer increasingly high levels of compensation in low-threat periods along a peaceful path. This raises the opportunity cost of sticking with the power-sharing deal in low-threat periods, relative to the (constant) cost of deviating.

A larger-magnitude threat-enhancing effect—in the sense of higher $p^{\max}$—makes Strong Ruler Willingness harder to hold through two channels. The first is the same as just described for $p^{\min}$. The second relates to the earlier analysis, in which I demonstrated that a high values of $p^{\max}$ can cause Ruler Willingness to fail (e.g., Figure 3). Even among parameter values in which Ruler Willingness holds, though, higher $p^{\max}$ diminishes the magnitude of the positive cost of reversing a power-sharing deal (see Equation 10) because the Ruler no longer would have to buy off the Opposition at the high cost commensurate to $p^{\max}$. Through these two channels, the threat-enhancing effect simultaneously increases the benefit of reneging while lowering the cost.[18]

5.4 Comparative Statics on Defensive Capabilities

If Strong Ruler Willingness fails, then only strong defensive capabilities for the Opposition can facilitate power sharing. Nonetheless, power sharing is not permanent; instead, it occurs in cycles. To see why, we now analyze outcomes for any value of q, the frequency with which the Opposition can defensively block the Ruler from reversing a power-sharing deal in a low-threat period.[19]

When $q = 0$, only two outcomes are possible: either peaceful permanent power sharing (if Strong Ruler Willingness holds) or conflict (if not). The reason is that if the Ruler opts to reverse power-sharing deals whenever possible, he can do so in every low-threat period. Thus, if Strong Ruler Willingness fails, sharing power conveys no commitment ability.

By contrast, positive values of q enable the Opposition to defend its power-sharing concessions in some low-threat periods, even if Strong Ruler Willingness fails. Consequently, when q is high enough, power-sharing deals are palatable to the Opposition *even if the Ruler will subsequently renege*—because those opportunities are seldom. The unique threshold value is denoted as $\hat{q} \in (0, 1)$. For any $q > \hat{q}$, regardless of whether Strong Ruler Willingness holds, the unique equilibrium involves peaceful bargaining with cycling between power-sharing spells (P) and autocratic spells (A); Figure 5 presents the transition probabilities. Strong Ruler Willingness is irrelevant if $q > \hat{q}$ because this condition ensures that the Opposition lacks a credible threat to revolt in high-threat periods following prior reversals. Anticipating no punishment, the Ruler reverses in the fraction $(1 - r)(1 - q)$ of periods when the Opposition lacks a defensive advantage.[20]

[18] Appendix A.4.4 provides a formal characterization.

[19] Appendix A.4.2 formally characterizes a path with cyclical power sharing. Because both Ruler Willingness and Strong Opposition Credibility are assumed to hold, the Ruler will never reverse whenever the Opposition poses a contemporaneous threat of revolt.

[20] In this analysis, to ensure the binary power-sharing choice does not create a new friction, I set $\pi_+ = \underline{\pi}_q$. This threshold, characterized in Appendix A.4.2, is analogous to the $\underline{\pi}$ threshold analyzed throughout, but incorporates the need for the Ruler to share more power with the Opposition as q decreases.

Figure 5: Regime Transitions with Cyclical Power Sharing

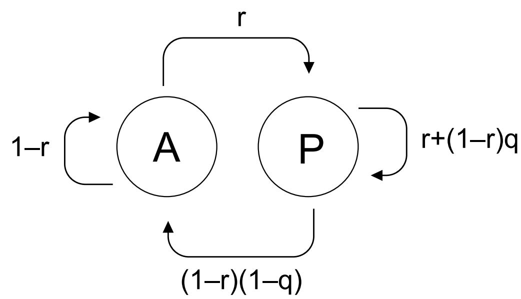
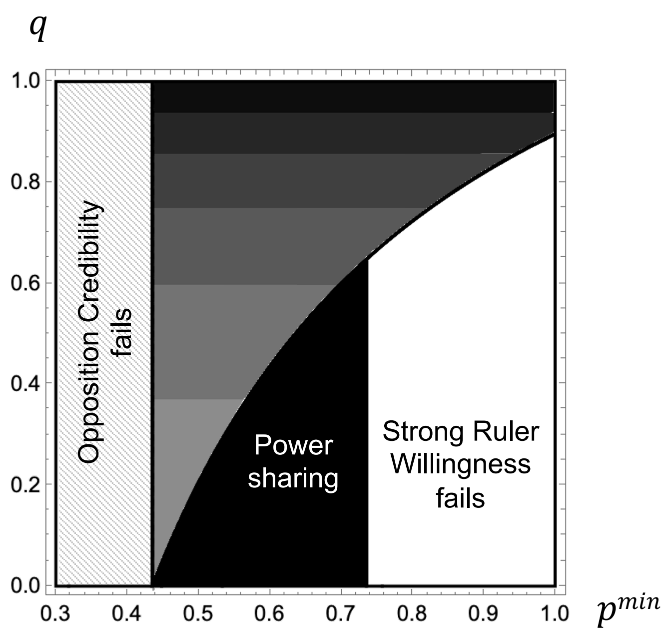


Figure 6 presents a region plot that shows how varying q (y-axis) affects equilibrium outcomes for different values of p^{min} (x-axis). As with Figure 3, black indicates probability 1 of power sharing, white indicates probability 0, and shades of gray represent intermediate probabilities. Figure 4 already previewed the result at $q = 0$: two threshold values of p^{min} determine whether Opposition Credibility holds and, if so, when p^{min} is too large to sustain Strong Ruler Willingness. The new figure highlights the two new types of equilibrium behavior possible in the model with reversals: no power sharing because of endogenous reneging (Strong Ruler Willingness fails), and equilibrium cycling.

Stronger defensive capabilities for the Opposition, in the form of higher q, *promote* power sharing in the region of high p^{min} values at which Strong Ruler Willingness fails, although power sharing nonetheless occurs in cycles as opposed to permanently. However, for intermediate levels of p^{min} at which Strong Ruler Willingness holds, greater defensive capabilities for the Opposition in fact *lower* the equilibrium frequency of power sharing. High q undercuts the credibility of the Opposition's threat to revolt. Consequently, the Ruler can get away with reversing power-sharing deals—which he would have been unable to do if the Opposition was less effective at defending its promised concessions.[21]

[21] Appendix A.4.3 formally characterizes the equilibrium and Appendix A.4.4 formalizes all the comparative statics results.

Figure 6: Equilibrium Probability of Power Sharing



Parameter values: $\delta = 0.9$, $r = 0.3$, $\mu = 0.15$, $\alpha(\pi_t) = \pi_t$. Setting $p^{\max} = p^{\min}$ ensures that Ruler Willingness and Strong Opposition Credibility each hold for all parameter values. In the stationary distribution of the Markov chain shown in Figure 5, the frequency of periods with power sharing is $\frac{r}{1-q(1-r)}$. The shades-of-gray region of the figure presents this probability for varying values of q. The frontier of the cycling region is $\hat{q}$.

6 CONCLUSION

This paper presents a formal model that incorporates a core component of authoritarian power-sharing deals: reallocating power toward the Opposition. This creates a defensive advantage, which facilitates a credible commitment to durable concessions; and an offensive advantage, the threat-enhancing effect which reflects the Opposition's greater ability to win a revolt. Existing formal models and other theories of authoritarian survival routinely incorporate the first effect, but not the second. However, introducing a threat-enhancing effect reveals three overlooked frictions to power-sharing deals. First, the Ruler may refuse to share power—despite triggering a revolt—because the Opposition cannot commit to refrain from leveraging its coercive advantage. Second, the Opposition faces a time-inconsistency problem that can create a preference to wait for a power-sharing deal tomorrow, but this posture also risks conflict today. Third, when the Ruler has opportunities to reverse power-sharing deals, a greater revolt threat makes it harder, not easier, to sustain power-sharing deals. Strong defensive capabilities ensure peaceful bargaining with power sharing along the equilibrium path. However, that same source of strength also undercuts the Opposition's threat to punish a Ruler who cycles between power sharing and autocracy.

The present model has elements of both types of approaches to formal models in political science described in Paine and Tyson (2020): an experimental approach (model as explication of causal mechanisms) and a phenomenon approach (model relates to descriptive empirical patterns). For the former, I incorporate elements of canonical approaches to modeling political transitions and demonstrate the new theoretical implications derived from including novel sources of offensive capabilities (threat-enhancing effect) and defensive capabilities (blocking reversals) for the Opposition. Some of these, such as the parameter ranges in which power sharing occurs in mixed strategies or in cycles, are difficult to test empirically but nonetheless reveal new logical implications of the model structure—which provides new insights into mechanisms.[22]

Other implications of the model are more straightforward to observe empirically, such as the real-life manifestations of the threat-enhancing effect presented in the Introduction. An important step in future empirical research is to continue to assess conditions under which power sharing is most viable for preventing or resolving societal conflict. Many empirical studies analyze post-civil war settings, which have yielded mixed conclusions. Power-sharing deals following civil wars that end in negotiated settlements can sometimes prevent recurrence (Hartzell and Hoddie 2003; Mattes and Savun 2009), yet it is difficult to achieve stable power sharing among domestic combatants without third-party intervention (Walter 1997; Fearon and Laitin 2008). Even when rebels win civil wars, they often attempt to but fail to share power among themselves and instead return to conflict (Clarke et al. 2025).

The present model provides insights into core frictions that relate to these considerations, which could be assessed empirically. Rulers should be more willing to share power when the threat-enhancing effect is low in magnitude, i.e., low $p^{\max}$, as we might expect for a consolidated regime

[22] Appendix A.5 discusses this point in more depth.

with tight control over its coercive apparatus. However, a strong state coercive apparatus would also lower the Opposition's baseline capabilities $p^{\min}$. This could undermine the credibility of the Opposition's revolt threat, and thereby the Ruler's motive to share power in the first place. Conversely, the fact that $p^{\min}$ and $p^{\max}$ would tend to be high in the same contexts, such as after civil war, therefore creates an unfortunate reality. Power sharing is often most needed in the circumstances in which it is hardest to achieve, as the threat-enhancing effect undermines the Ruler's willingness to share power.

As another implication for future work, the threat-enhancing effect should create frictions not only when rulers contemplate sharing power within the incumbent regime, but also when managing regime transitions in which they step down from power. For example, election results in Burundi in 1993 portended the end of Tutsi dominance, the ethnic-stacking status quo since the country's independence in the 1960s. Following electoral victory by a Hutu-led party, Tutsi officers reacted in accordance with the logic of the threat-enhancing effect by overthrowing the regime. "[C]onservative members of the Tutsi elite tended to associate Hutu officership with threats like the abortive 1965 coup and 1972 insurrection. Those Tutsi elites rejected the characterization of the army as an instrument of Tutsi dominance. Rather, they saw Tutsi control over the army as a necessary protection against 'genocidal' or 'revolutionary' tendencies among the Hutu masses" (Samii 2014, 215). Analyzing incentives for electoral turnover in the context of the threat-enhancing effect could yield valuable insights. And beyond the threat-enhancing effect specifically, we lack a firm theoretical understanding of why rulers in some circumstances share power within the incumbent regime but step down in other circumstances. Existing models tend to consider one option or the other; combining them into a single model would be fruitful in future work.

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Online Appendix for "The Threat-Enhancing Effect of Authoritarian Power Sharing"

Table of Contents

A.1 Setup: Discussion of Model Assumptions (Section 2)

1. **iid Nature draws for high/low threat.** I assume that the probability of high-threat periods, r, is an exogenous constant uncorrelated with other parameters. This assumption is standard in related models (e.g., Acemoglu and Robinson 2006; Castañeda Dower et al. 2018; Powell 2024), although some recent models allow the frequency of high-threat periods to be positively correlated with the Opposition's probability of winning a revolt (Paine 2022; Little and Paine 2024; Luo 2024). In the present model, the only assumption needed on r is that it is sufficiently low to enable the Opposition Credibility assumption to hold; see Assumption 1, which I interpret primarily as a threshold of $p^{\min}$ rather than r.

   I depart from recent advances that allow r to correlate with other parameters because such machinery is unnecessary in the present model. It is straightforward to demonstrate that the insights are qualitatively unchanged upon adding the assumption that r and p are correlated, given the present assumption that $p(\pi)$ is correlated with π. This implies that the core tradeoff in the present model resembles that in some existing models with a threat-enhancing effect; the pacifying effect of power sharing can come from either permanent concessions (present model) or more frequent high-threat periods (Paine 2022). Conceptually, though, only the present approach encompasses the core idea that power-sharing deals facilitate durable *sharing* between the Ruler and Opposition. This, in turn, enables a cleaner conceptual distinction and linkage between the defensive and offensive consequences of power sharing. By contrast, Paine (2022) assumes that the Ruler can never commit to durable concessions. The present modeling approach is also much more analytically tractable; when the frequency of high-threat periods is determined by strategic choices, it is difficult to incorporate other elements into the model. Consequently, besides an analog of the logic by which Ruler Willingness can fail, these existing models cannot derive analogs of the numerous additional results in the present model.

2. **Distinguishing temporary from power-sharing concessions.** It is natural to include both power-sharing concessions and temporary policy concessions in the model. Conceptually, it is helpful to distinguish between purely temporary concessions and those with inherent sources of durability, both to capture distinct real-world methods of co-optation and to include the two distinct instruments contained in the most closely related existing models. Furthermore, including temporary concessions helps to load the dice in favor of deriving an equilibrium with stable power sharing. The usage of temporary concessions enables the Ruler to minimize the level of power-sharing concessions, conditional on setting them to a high-enough level of enable buying off the Opposition. Each of the key incentive-compatibility constraints derived in the model analysis (Ruler Willingness, Strong Opposition Credibility, Strong Ruler Willingness) would be harder to satisfy without the possibility of offering temporary concessions. Thus, conditions under which any of these IC constraints fail absent the temporary-concession instrument would in some sense be artificial because I would not have evaluated the "best case" scenario for them to hold.

3. **Mechanical connection between power sharing and shifts in power.** For simplicity, I assume a mechanical connection between power sharing and shifts in power, albeit while parameterizing the magnitude of the threat-enhancing effect. Additional complexities would

not qualitatively change the core insights. One possibility is to model a moral hazard problem whereby the Opposition can take hidden actions to invest its power-sharing endowment into coercive capabilities, similar to Debs and Monteiro (2014), in contrast to the present assumption that higher π automatically translates into higher p. But along any equilibrium path in which that investment occurs with positive probability, the insights would be similar as the present model. Another possibility would be for the Ruler to invest in military power to counteract the threat-enhancing effect. But assuming limitations in the efficacy of such investments, the insights from this alteration would also be qualitatively similar.

4. **Additional details on $p(\pi_t)$.** The function $\alpha(\pi_t)$ is class $\mathcal{C}^2$ (continuous and first two derivatives exist and are continuous). Assuming (weakly) diminishing marginal returns to the power endowment is natural: granting any degree of access to power at the center greatly improves the Opposition's prospects for overthrowing the Ruler, but further increasing the Opposition's endowment enhances these prospects less.

A.2 Bargaining with a Fixed Power-Sharing Level (Section 3)

A.2.1 Preliminary Results for Equilibrium Characterization

The first lemma characterizes the unique threshold $\underline{\pi}$ such that if $\pi \geq \underline{\pi}$, then it is possible to choose high-enough x to satisfy the no-revolt constraint (Equation 1). There are two cases depending on whether marginal increases in π relax the no-revolt constraint for all values of π (Case 1), or whether the threat-enhancing effect dominates at low values of π and therefore a high-enough value of π is needed (Case 2). Note that the upper bound $\overline{\pi}$ is formally characterized in the following lemma.

Lemma A.1 (Peaceful Power-sharing Threshold $\underline{\pi}$)**.**

Case 1. *If $p'(0) < \frac{\delta(1-r)}{1-\mu}$, then a unique threshold $\underline{\pi} \in (0, \overline{\pi})$ exists such that*

$$\Theta(\pi) \begin{cases} < 0 & \text{if } \pi < \underline{\pi} \\ = 0 & \text{if } \pi = \underline{\pi} \\ > 0 & \text{if } \pi > \underline{\pi}, \end{cases}$$

for $\underline{\pi}$ implicitly defined as

$$\Theta(\underline{\pi}) = \underline{\pi} + (1 - \delta(1-r))(1 - \underline{\pi}) - p(\underline{\pi})(1 - \mu) = 0$$

and for $\overline{\pi}$ defined and characterized in Lemma A.2.

Case 2. *If $p'(0) > \frac{\delta(1-r)}{1-\mu}$, then a unique threshold $\underline{\pi} \in (\pi_0, \overline{\pi})$ exists, for $\underline{\pi}$ characterized in Case 1 and a unique threshold $\pi_0 \in (0, \overline{\pi})$ implicitly defined as $p'(\pi_0) = \frac{\delta(1-r)}{1-\mu}$.*

Proof. I prove the strictly concave case, $p''(\pi) < 0$, while noting which part of the proof applies to the linear case $p''(\pi) = 0$. The two derivatives used throughout the proof are

$$\frac{d\Theta(\pi)}{d\pi} = \delta(1-r) - p'(\pi)(1-\mu), \tag{A.1}$$

which is ambiguous in sign, and

$$\frac{d^2\Theta(\pi)}{d\pi^2} = -p''(\pi)(1-\mu) > 0. \tag{A.2}$$

Case 1. Applying the intermediate value theorem demonstrates existence for $\underline{\pi}$. *Lower bound:* $\Theta(0) < 0$ by Assumption 1. *Upper bound:* $\Theta(\overline{\pi}) = (1-\delta(1-r))(1-\overline{\pi}) > 0$ because $\overline{\pi} = p(\overline{\pi})(1-\mu)$. *Continuity:* The continuity of $\Theta(\pi)$ follows from the assumed continuity of $p(\pi)$.

Strict monotonicity establishes the unique threshold claim. For this case, Equation A.1 is strictly positive at $\pi = 0$, $p'(0) < \frac{\delta(1-r)}{1-\mu}$. Therefore, Equation A.2 implies $p'(\pi) < \frac{\delta(1-r)}{1-\mu}$ for all $\pi > 0$.

The same strict monotonicity logic applies to the linear case. Equation A.1 reduces to $\delta(1-r) - (p^{\max} - p^{\min})(1-\mu)$. Rearranging the inequality in Assumption 1 yields $p^{\min} > \frac{1-\delta(1-r)}{1-\mu}$. Therefore, $\delta(1-r) - (p^{\max} - p^{\min})(1-\mu) > \delta(1-r) - \big(p^{\max} - \frac{1-\delta(1-r)}{1-\mu}\big)(1-\mu)$. This simplifies to $1 - p^{\max}(1-\mu) > 0$.

Case 2. Applying the intermediate value theorem establishes existence for π_0

- *Lower bound:* $\frac{d\Theta(\pi)}{d\pi}\Big|_{\pi=0} < 0$ is the assumed scope condition for this case, $p'(0) > \frac{\delta(1-r)}{1-\mu}$.
- *Upper bound:* The following string of inequalities establishes $p'(\overline{\pi}) < \frac{\delta(1-r)}{1-\mu}$
  - o $p'(\overline{\pi}) < \int_0^{\overline{\pi}} p'(\pi)d\pi$ because $p'' < 0$.
  - o $\int_0^{\overline{\pi}} p'(\pi)d\pi = p(\overline{\pi}) - p^{\min}$ by the fundamental theorem of calculus; recall $p(0) = p^{\min}$.
  - o $p(\overline{\pi}) - p^{\min} = \frac{\overline{\pi}}{1-\mu} - p^{\min}$ by the definition of $\overline{\pi}$.
  - o $\frac{\overline{\pi}}{1-\mu} - p^{\min} < \frac{\overline{\pi}}{1-\mu} - \frac{1-\delta(1-r)}{1-\mu}$ by Assumption 1.
  - o $\frac{\delta(1-r)}{1-\mu} - \frac{1-\overline{\pi}}{1-\mu} < \frac{\delta(1-r)}{1-\mu}$ because $\overline{\pi} < 1$.
- *Continuity:* The continuity of $\frac{d\Theta(\pi)}{d\pi}$ follows from the assumed continuity of $p'(\pi)$.

The uniqueness of π_0 follows from Equation A.2. Given this, we can apply the intermediate value theorem to establish existence for $\underline{\pi}$. *Lower bound:* $\Theta(\pi_0) < 0$ follows from Assumption 1 and $p'(\pi) > \frac{\delta(1-r)}{1-\mu}$ for all $\pi < \pi_0$. *Upper bound:* Same as Case 1. *Continuity:* Same as Case 1.

To establish the unique threshold, $p'(\pi_0) = \frac{\delta(1-r)}{1-\mu}$ combined with Equation A.2 implies $p'(\pi) < \frac{\delta(1-r)}{1-\mu}$ for all $\pi > \pi_0$. ■

The next lemma characterizes a threshold level of power sharing $\overline{\pi}$ at which $x^*(\overline{\pi}) = 0$ (Equation 3). No additional temporary concessions occur in high-threat periods for $\pi > \overline{\pi}$.

Lemma A.2 (No-Transfer Threshold $\overline{\pi}$)**.**

> ***Case 1.*** *If $p'(0) < \frac{1}{1-\mu}$, then a unique threshold $\overline{\pi} \in (0,1)$ exists such that*
>
> $$x^*(\pi) \begin{cases} > 0 & \text{if } \pi < \overline{\pi} \\ = 0 & \text{if } \pi = \overline{\pi} \\ < 0 & \text{if } \pi > \overline{\pi}, \end{cases}$$
>
> *for $\overline{\pi}$ implicitly defined as $\overline{\Theta}(\overline{\pi}) = 0$, with $\overline{\Theta} \equiv \pi - p(\pi)(1-\mu)$.*
>
> ***Case 2.*** *If $p'(0) > \frac{1}{1-\mu}$, then a unique threshold $\overline{\pi} \in (\overline{\pi}_0, 1)$ exists, for $\overline{\pi}$ characterized in Case 1 and a unique threshold $\overline{\pi}_0 \in (0,1)$ implicitly defined as $p'(\overline{\pi}_0) = \frac{1}{1-\mu}$.*

Proof. I prove the strictly concave case, $p''(\pi) < 0$, while noting which part of the proof applies to the linear case $p''(\pi) = 0$. The two derivatives used throughout the proof are

$$\frac{d\overline{\Theta}(\pi)}{d\pi} = 1 - p'(\pi)(1-\mu), \tag{A.3}$$

which is ambiguous in sign, and

$$\frac{d^2\overline{\Theta}(\pi)}{d\pi^2} = -p''(\pi)(1-\mu) > 0. \tag{A.4}$$

Case 1. Applying the intermediate value theorem establishes existence for $\overline{\pi}$. *Lower bound:* $\overline{\Theta}(0) = -p^{\text{min}}(1-\mu) < 0$. *Upper bound:* $\overline{\Theta}(1) = 1 - p^{\text{max}}(1-\mu) > 0$. *Continuity:* The continuity of $\overline{\Theta}(\pi)$ follows from the assumed continuity of $p(\pi)$. Strict monotonicity establishes the unique threshold claim. For this case, Equation A.3 is strictly positive at $\pi = 0$, $p'(0) < \frac{1}{1-\mu}$. Therefore, Equation A.4 implies $p'(\pi) < \frac{1}{1-\mu}$ for all $\pi > 0$. The same strict monotonicity logic applies to the linear case, for which Equation A.3 reduces to $1 - (p^{\text{max}} - p^{\text{min}})(1-\mu) > 0$.

Case 2. Applying the intermediate value theorem establishes existence for $\overline{\pi}_0$

- *Lower bound:* $\left.\frac{d\overline{\Theta}(\pi)}{d\pi}\right|_{\pi=0} < 0$ is equivalent to the assumed scope condition of this case, $p'(0) > \frac{1}{1-\mu}$.
- *Upper bound:* To show $p'(1) < \frac{1}{1-\mu}$, suppose not and $p'(1) \geq \frac{1}{1-\mu}$. Because $p''(\pi) < 0$, this implies $p'(\pi) > \frac{1}{1-\mu} > 1$ for all $\pi \in [0,1]$; and thus $\int_0^1 p'(\pi)d\pi > 1$. By the fundamental theorem of calculus, $p(1) = \underbrace{p(0)}_{>0} + \underbrace{\int_0^1 p'(\pi)d\pi}_{>1} > 1$. This contradicts the bound $p(1) \leq 1$.
- *Continuity:* The continuity of $\frac{d\overline{\Theta}(\pi)}{d\pi}$ follows from the assumed continuity of $p'(\pi)$.

The uniqueness of $\overline{\pi}_0$ follows from Equation A.4. Given this, we can apply the intermediate value theorem to establish existence for $\overline{\pi}$. *Lower bound:* $\overline{\Theta}(\overline{\pi}_0) < 0$ follows from $\overline{\Theta}(0) < 0$ and $p'(\pi) > \frac{1}{1-\mu}$ for all $\pi < \overline{\pi}_0$. *Upper bound:* Same as Case 1. *Continuity:* Same as Case 1.

To establish the unique threshold, $p'(\overline{\pi}_0) = \frac{1}{1-\mu}$ combined with Equation A.4 implies $p'(\pi) < \frac{1}{1-\mu}$ for all $\pi > \overline{\pi}_0$. ∎

A.2.2 Equilibrium Strategy Profile

In the special case of fixed π, a profile of Markov pure strategies in a high-threat period specifies for the Ruler a mapping $x \to [0, 1-\pi]$, and for the Opposition a mapping $\beta : [0, 1-\pi] \to \{0, 1\}$, where $\beta = 1$ indicates acceptance and $\beta = 0$ indicates revolt.

The following proposition summarizes the equilibrium strategy profile and outcomes for different values of π. The equilibrium is unique if $\pi \geq \underline{\pi}$. It is not unique if $\pi < \underline{\pi}$ because the Ruler is indifferent among any $x_t = [0, 1-\pi]$. However, all equilibria are payoff equivalent because the Opposition rejects all offers along any equilibrium path.

Proposition A.1 (Equilibrium for fixed π)**.** *Suppose $\pi_t = \pi$ for all t. The following constitute the equilibrium strategy profile:*

- ***Case 1.*** *If $\pi < \underline{\pi}$, then in every high-threat period, the Ruler offers any $x_t = [0, 1-\pi]$ and the Opposition revolts in response to any offer, for $\underline{\pi}$ defined in Lemma A.1. Along the equilibrium path, a revolt occurs in the first high-threat period; and in this period, the Ruler's average per-period expected consumption is $(1 - p(\pi))(1-\mu)$ and the Opposition's is $p(\pi)(1-\mu)$.*
- ***Case 2.*** *If $\pi \in [\underline{\pi}, \overline{\pi})$, then in every high-threat period, the Ruler offers $x_t = x^*(\pi) > 0$, for $\overline{\pi}$ defined in Lemma A.2 and $x^*(\pi)$ defined in Equation 3. The Opposition accepts any $x_t \geq x^*(\pi)$ and revolts otherwise. Along the equilibrium path, revolts never occur; and from the perspective of any high-threat period, the Ruler's average per-period expected consumption is $1 - p(\pi)(1-\mu)$ and the Opposition's is $p(\pi)(1-\mu)$.*
- ***Case 3.*** *If $\pi \geq \overline{\pi}$, then in every high-threat period, the Ruler offers $x_t = 0$ and the Opposition accepts any offer. Along the equilibrium path, revolts never occur; and from the perspective of any high-threat period, the Ruler's average per-period expected consumption is $1 - \pi$ and the Opposition's is π.*

A.2.3 Extension: Ruler Option to Trigger Revolt

Case 3 of the preceding proposition yields the strange implication that the Ruler can potentially consume less than its expected consumption to incurring a revolt. This is true whenever π exceeds a threshold such that $1 - \pi < (1 - p(\pi))(1 - \mu)$. This is never relevant along the equilibrium path when the Ruler endogenously chooses π_t because he would never set π_t high enough to induce this bargaining path. Nonetheless, it is useful to show how Case 3 would change if the Ruler were granted an additional strategic option in any period to trigger a revolt (e.g., commit mass atrocities that would provoke the Opposition to revolt), which means its expected value to incurring a revolt comprises a lower bound on its consumption.

Proposition A.2 (Case 3 of Proposition A.1 with Ruler-triggered revolt option)**.** *Suppose $\pi_t = \pi$ for all t and that the Ruler can choose to trigger a revolt in any period. The following constitutes the equilibrium strategy profile for $\pi \geq \overline{\pi}$ (see Proposition A.2 for $\pi < \overline{\pi}$).*

- ***Case 3a.*** *If $\pi \in [\overline{\pi}, \tilde{\pi}]$, then in every high-threat period, the Ruler offers $x_t = 0$ and the Opposition accepts any offer. Along the equilibrium path, revolts never occur; and from the perspective of any high-threat period, the Ruler's average per-period expected consumption is $1 - \pi$ and the Opposition's is π.*
- ***Case 3b.*** *Suppose $\pi > \tilde{\pi}$, as defined below in Lemma A.3. In every high-threat period, the Ruler triggers a revolt (the Opposition would accept any offer). Along the equilibrium path, a revolt occurs in the first period. From the perspective of this period, the Ruler's average per-period expected consumption is $(1 - p(\pi))(1 - \mu)$ and the Opposition's is $p(\pi)(1 - \mu)$.*

Lemma A.3 (Threshold values for bargaining)**.** *A unique value $\tilde{\pi} \in (\overline{\pi}, 1]$ exists such that $\tilde{\pi} - \mu - p(\tilde{\pi})(1 - \mu) = 0$.*

Proof. Applying the intermediate value theorem establishes existence. *Lower bound:* $\overline{\pi} - \mu - p(\overline{\pi})(1 - \mu) < 0$ because $\overline{\pi} = p(\overline{\pi})(1 - \mu)$. *Upper bound:* $1 - \mu - p^{\max}(1 - \mu) \geq 0$ because $\mu \in (0, 1)$ and $p^{\max} \leq 1$. *Continuity:* $p(\pi)$ is continuous. Strict monotonicity establishes uniqueness. $\frac{d}{d\pi}\big(\pi - \mu - p(\pi)(1 - \mu)\big) = 1 - p'(\pi)(1 - \mu)$. The proof for Lemma A.2 proves this is strictly positive for all $\pi > \overline{\pi}$. ■

A.3 Strategic Power Sharing (Section 4)

A.3.1 Preliminary Results for Equilibrium Characterization

The following lemmas provide the elements needed to characterize the equilibrium strategy profile, presented in Appendix A.3.2 (where I also formally define strategies). The first lemma characterizes how the Opposition responds to every possible offer with a positive power-sharing level. The proof of the lemma follows directly from Proposition A.1; assuming $\pi_t = \pi_{t-1}$ if $\pi_{t-1} > 0$ implies that once the Ruler shares a positive amount of power, π is permanently fixed at that level.

Lemma A.4 (Opposition's response to positive power-sharing offers)**.**

Part a. *If $\pi_t \in (0, \underline{\pi})$, then for any $x_t \geq 0$, the Opposition accepts (π_t, x_t) with probability 0.*

Part b. *If $\pi_t \in [\underline{\pi}, \overline{\pi})$, then the Opposition accepts (π_t, x_t) with probability 1 if $x_t \geq x^*(\pi_t)$ and accepts with probability 0 otherwise.*

Part c. *If $\pi_t \geq \overline{\pi}$, then for any $x_t \geq 0$, the Opposition accepts (π_t, x_t) with probability 1.*

Given these responses by the Opposition, the next lemma shows that the only possible offer the Ruler will make that includes a positive power-sharing level is $(\pi_t, x_t) = (\underline{\pi}, 1 - \underline{\pi})$.

Lemma A.5 (Eliminating suboptimal power-sharing choices)**.**

> ***Part a.*** *The Ruler places probability 0 on offers with* $\pi_t \in (0, \underline{\pi}) \cup (\underline{\pi}, 1]$.
>
> ***Part b.*** *The Ruler places probability 0 on offers with* $\pi_t = \underline{\pi}$ *and* $x_t < 1 - \underline{\pi}$.

Proof of part a:

> **Step 1.** $\boldsymbol{\pi_t \in (0, \underline{\pi})}$**.** By Lemma A.4, the Opposition will accept any such proposal with probability 0, and therefore the Ruler faces a revolt. The Ruler can profitably deviate to offering $\pi_t = 0$ because $\arg\max_{\pi \geq 0} \; (1 - p(\pi))(1 - \mu) = 0$.
>
> **Step 2.** $\boldsymbol{\pi_t \in (\underline{\pi}, \overline{\pi})}$**.** By Lemma A.4, the Opposition will accept any such proposal with probability 1 if $x_t \geq x^*(\pi_t)$ (and probability 0 otherwise). The Ruler can profitably deviate to offering $(\pi_t, x_t) = (\underline{\pi}, 1 - \underline{\pi})$ because $p'(\pi) > 0$ implies $\arg\max_{\pi \geq \underline{\pi}} \; 1 - p(\pi)(1 - \mu) = \underline{\pi}$.
>
> **Step 3.** $\boldsymbol{\pi_t \geq \overline{\pi}}$**.** By Lemma A.4, the Opposition will accept any such proposal with probability 1. Given Step 2 of the present proof, it suffices to prove that the Ruler's expected consumption function is continuous at $\pi = \overline{\pi}$:
>
> $$\lim_{\pi \to \overline{\pi}^-} \; 1 - p(\pi)(1 - \mu) = 1 - \pi = \lim_{\pi \to \overline{\pi}^+} \; 1 - \pi.$$

Proof of part b. If $\pi_t = \underline{\pi}$ and $x_t < 1 - \underline{\pi}$, then by construction of $\underline{\pi}$, the no-revolt constraint is violated (Equation 1). Therefore, then Opposition accepts with probability 0. Thus, making this offer would yield expected consumption of $(1 - p(\underline{\pi}))(1 - \mu)$ for the Ruler. If the Ruler deviates to offering $\pi_t = 0$, then the lower bound on its expected consumption is $(1 - p^{\text{min}})(1 - \mu)$. The strict profitability of this deviation follows from $p(0) = p^{\text{min}}$ and $p'(\pi_t) > 0$. ■

Lemma A.6 (Opposition's response to purely temporary concessions)**.**

> ***Part a.*** *The Opposition accepts with probability 0 an offer* $(\pi_t, x_t) = (0, x)$*, for any* $x < 1$.
>
> ***Part b.*** *The Opposition cannot accept with probability 1 an offer* $(\pi_t, x_t) = (0, 1)$.

Proof of part a. Suppose not and that an equilibrium exists in which the Opposition accepts such an offer with positive probability. Then the Opposition must accept $(\pi_t, x_t) = (0, x + \epsilon)$ with probability 1, for $\epsilon \in (0, x - 1)$. The Ruler would then strictly prefer to make this offer over any offer with $\pi_t \geq \underline{\pi}$ and $x_t = x^*(\pi_t)$. The resultant consumption stream for the Opposition would violate the Opposition Credibility inequality.

Proof of part b. Suppose not and that the Opposition accepted this offer with probability 1. The Ruler would then strictly prefer to make this offer over any offer with $\pi_t \geq \underline{\pi}$ and $x_t = x^*(\pi_t)$. The resultant consumption stream would violate Opposition Credibility. ■

These results rule out any equilibrium having a positive probability on offers other than $(\pi_t, x_t) = \{(0,1), (\underline{\pi}, 1-\underline{\pi})\}$. The next lemma presents the final elements needed to characterize all pure-strategy equilibria.

Lemma A.7 (Eliminating suboptimal power-sharing choices)**.**

Part a. *If Ruler Willingness fails, then with probability 0 the Ruler offers* $(\pi_t, x_t) = (\underline{\pi}, 1-\underline{\pi})$.

Part b. *If Strong Opposition Credibility holds, then the Opposition accepts with probability 0 an offer* $(\pi_t, x_t) = (0,1)$.

Part c. *If Ruler Willingness and Strong Opposition Credibility both hold, then with probability 1 the Ruler offers* $(\pi_t, x_t) = (\underline{\pi}, 1-\underline{\pi})$.

Proof of part a. By Lemma A.4, the Ruler's expected consumption from offering $(\pi_t, x_t) = (\underline{\pi}, 1-\underline{\pi})$ is $1-p(\underline{\pi})(1-\mu)$. If instead the Ruler makes an offer that includes $\pi_t = 0$, the lower bound to its payoff (achieved if the Opposition accepts with probability 0) is $(1-p^{\min})(1-\mu)$. By construction of the Ruler Willingness constraint, if the inequality fails, then deviating to $\pi_t = 0$ is strictly profitable.

Proof of part b. Follows by construction of the Strong Opposition Credibility constraint.

Proof of part c. Part b establishes that the Opposition will surely reject $(\pi_t, x_t) = (0,1)$ because Strong Opposition Credibility holds. Because of Ruler Willingness, it is optimal for the Ruler to offer $(\pi_t, x_t) = (\underline{\pi}, 1-\underline{\pi})$. ■

Thus, the only remaining conditions in which the equilibrium strategy profile is undetermined is when Ruler Willingness and Strong Opposition Credibility both hold. I first prove that no pure-strategy equilibrium exists.

Lemma A.8 (No equilibrium in pure strategies)**.** *If Ruler Willingness and Strong Opposition Credibility both hold, then an equilibrium in pure strategies does not exist.*

Proof. It suffices to establish that neither $(\pi_t, x_t) = (0,1)$ nor $(\pi_t, x_t) = (\underline{\pi}, 1-\underline{\pi})$ can be offered with probability 1.

Pure temporary concessions. If the Ruler offers $(\pi_t, x_t) = (0,1)$ with probability 1, the Opposition would accept with probability 0. Ruler Willingness implies the Ruler would strictly profit from deviating to offering $(\pi_t, x_t) = (\underline{\pi}, 1-\underline{\pi})$.

Power sharing. Suppose $(\pi_t, x_t) = (\underline{\pi}, 1-\underline{\pi})$ is offered with probability 1. By construction of the Strong Opposition Credibility constraint, the Opposition accepts with probability 1 a single-deviation by the Ruler to offer $(\pi_t, x_t) = (0,1)$. To see that this deviation is strictly profitable for the Ruler, we need to show

$$Z < \delta V_R, \text{ for } V_R = (1-r)(1+\delta V_R) + rZ \text{ and } Z \equiv \frac{1-p(\underline{\pi})(1-\mu)}{1-\delta}.$$

Algebraic rearrangement reduces the inequality to $1-\delta(1-r) < p(\underline{\pi})(1-\mu)$, which follows from Assumption 1 and $p'(\pi_t) > 0$. ■

The intuition for the Ruler's calculus from deviating from pure-strategy power sharing is as follows. If he shares power now, he immediately moves to the concomitant subgame, whose valuation is expressed by Z. If instead he deviates, he consumes 0 in the present period but remains in the autocratic subgame (i.e., no power sharing). Thus, the next period will be either (a) a high-threat period in which the players move to the power-sharing subgame, or (b) a low-threat period, in which the Ruler will consume 1 and then move to the next period in the autocratic subgame. This deviation is strictly profitable because if we fix the path of play as peaceful, then the Ruler prefers to share the minimum amount of power possible.

I now define mixing probabilities for the Ruler to share power and for the Opposition to accept an offer with temporary concessions only.

Definition A.1 (Defining mixing probabilities)**.**

$$(\pi, x) = \begin{cases} (\underline{\pi}, 1-\underline{\pi}) & \textit{with probability} = \sigma_R \\ (0,1) & \textit{with probability} = 1-\sigma_R \end{cases} \qquad \beta(0,1) = \begin{cases} 1 & \textit{with probability} = \sigma_O \\ 0 & \textit{with probability} = 1-\sigma_O \end{cases}$$

For the Ruler, $\sigma_R = 1$ corresponds with a pure strategy of offering to share power in every high-threat period, $\sigma_R = 0$ with a pure strategy of only ever offering temporary transfers, and any $\sigma_R \in (0,1)$ with a nondegenerate mixed strategy. For the Opposition, $\sigma_O = 1$ corresponds with a pure strategy of always accepting a transfer equal to 1, $\sigma_O = 0$ with a pure strategy of always revolting if not offered a power-sharing deal, and any $\sigma_O \in (0,1)$ with a nondegenerate mixed strategy. Note that $\beta(\pi, x)$ is the function that determines the Opposition's reaction to any possible offer (see Appendix A.3.2 for a formal definition of strategies).

Lemma A.9 (Mixed-strategy equilibrium)**.** *If Ruler Willingness and Strong Opposition Credibility both hold, then unique values $\sigma_R^* \in (0,1)$ and $\sigma_O^* \in (0,1)$ satisfy the Ruler's and Opposition's respective indifference conditions.*

Proof: Ruler's probability of sharing power. The Ruler calibrates its probability of sharing power in a high-threat period to make the Opposition indifferent between accepting and revolting. This pins down a unique mixing probability, denoted $\sigma_R^* \in (0,1)$:

$$\underbrace{\frac{p^{\min}(1-\mu)}{1-\delta}}_{\text{Revolt}} = \underbrace{1+\delta V_O}_{\text{Wait}}, \tag{A.5}$$

$$\text{for} \quad V_O = r\left(\underbrace{\sigma_R^* \frac{p(\underline{\pi})(1-\mu)}{1-\delta}}_{\text{Move to power sharing}} + \underbrace{(1-\sigma_R^*)\frac{p^{\min}(1-\mu)}{1-\delta}}_{\text{Revolt or wait}} \right) + \underbrace{(1-r)\delta V_O}_{\text{Autocracy persists}}. \tag{A.6}$$

To prove the existence and uniqueness of an equilibrium mixing probability $\sigma_R^* \in (0,1)$, we can implicitly characterize $\Omega_R(\sigma_R^*) = 0$ by solving Equation A.6 for V_O, substituting into Equation A.5, and rearranging

$$\Omega_R(\sigma_R) = \underbrace{1-\delta(1-r)-p^{\text{min}}(1-\mu)}_{\Theta(0)\text{ (see Assumption 1)}} + \underbrace{\delta r\alpha(\underline{\pi})(p^{\text{max}}-p^{\text{min}})\frac{1-\mu}{1-\delta}}_{\gamma\text{ from Eq. 8}}\sigma_R. \tag{A.7}$$

Applying the intermediate value theorem establishes existence. The lower bound $\Omega_R(0) < 0$ is equivalent to the Opposition Credibility condition (Assumption 1) holding, the upper bound $\Omega_R(1) > 0$ is equivalent to Strong Opposition Credibility failing (Equation 8), and $\Omega_R(\cdot)$ is continuous. Uniqueness follows from

$$\frac{d\Omega_R}{d\sigma_R} = \underbrace{\delta r\alpha(\underline{\pi})(p^{\text{max}}-p^{\text{min}})\frac{1-\mu}{1-\delta}}_{\gamma>0\text{ from Equation 8}} > 0,$$

Opposition's probability of accepting temporary concessions. The Ruler strictly prefers to share power than to incur a revolt for sure, given the present assumption that Ruler Willingness holds. But the Ruler gambles if the Opposition might accept a contemporaneous offer that lacks a power-sharing provision. The Opposition calibrates its probability of accepting a pure-transfers proposal to make the Ruler indifferent between sharing power and not. This pins down a unique mixing probability, denoted $\sigma_O^* \in (0,1)$:

$$\underbrace{\frac{1-p(\underline{\pi})(1-\mu)}{1-\delta}}_{\text{Share power}} = \underbrace{\overbrace{\sigma_O^*\delta V_R}^{\text{Autocracy persists}} + \overbrace{(1-\sigma_O^*)\frac{(1-p^{\text{min}})(1-\mu)}{1-\delta}}^{\text{Opposition revolts}}}_{\text{Wait}}, \tag{A.8}$$

$$\text{for} \quad V_R = \underbrace{(1-r)(1+\delta V_R)}_{\text{Autocracy persists}} + r\underbrace{\frac{1-p(\underline{\pi})(1-\mu)}{1-\delta}}_{\text{Share power or wait}}. \tag{A.9}$$

To prove the existence and uniqueness of an equilibrium mixing probability $\sigma_O^* \in (0,1)$, we can yield an implicit characterization $\Omega_O(\sigma_O^*) = 0$ by solving solving Equation A.9 for V_R, substituting into Equation A.8, and rearranging

$$\Omega_O(\sigma_O) = -\Big(\mu-\alpha(\underline{\pi})(p^{\text{max}}-p^{\text{min}})(1-\mu)\Big)(1-\sigma_O) - \frac{1-\delta}{1-\delta(1-r)}\Big(1-\delta(1-r)-p(\underline{\pi})(1-\mu)\Big)\sigma_O. \tag{A.10}$$

Applying the intermediate value theorem establishes existence. The lower bound $\Omega_O(0) < 0$ is equivalent to the Ruler Willingness condition (Equation 5) holding; the upper bound $\Omega_O(1) > 0$ is equivalent to an analog of the Opposition Credibility condition holding but with $p(\pi_t) = p(\underline{\pi})$, which makes Opposition Credibility strictly easier to hold; and $\Omega_O(\cdot)$ is continuous. Uniqueness follows from

$$\frac{d\Omega_O}{d\sigma_O} = \underbrace{\mu-\alpha(\underline{\pi})(p^{\text{max}}-p^{\text{min}})(1-\mu)}_{>0\text{ b/c Ruler Willingness}} - \frac{1-\delta}{1-\delta(1-r)}\underbrace{\Big(1-\delta(1-r)-p(\underline{\pi})(1-\mu)\Big)}_{<0\text{ b/c Opposition Credibility}} > 0.$$

■

A.3.2 Equilibrium Strategy Profile

The preceding section provides all the elements needed to characterize the equilibrium strategy profile. I first formally define strategies. An endogenous state variable $\eta_t \in \{A, P\}$ denotes the regime at the outset of each period, either Autocracy or Power-sharing. The game begins with $\eta_0 = A$. The transition function is: If $\eta_t = A$ and $\pi_t = 0$, then $\eta_{t+1} = A$; If $\eta_t = A$ and $\pi_t > 0$, then $\eta_{t+1} = P$; If $\eta_t = P$, then $\eta_{t+1} = P$. This state variable circumscribes the possible choices for the Ruler. If $\eta_t = P$, then $\pi_t = \pi_{t-1}$ and Proposition A.1 characterizes strategies for this subgame. For $\eta_t = A$, a profile of Markov pure strategies entails the following mappings in high-threat periods: $\pi \to [0, 1]$ and $x \to [0, 1-\pi]$ for the Ruler, and $\beta : [0, 1] \times [0, 1-\pi] \to \{0, 1\}$ for the Opposition. Earlier I introduced notation for mixed strategies over choices that can occur with positive probability along an equilibrium path (see Definition A.1).

Proposition A.3 (Equilibrium strategy profile)**.**

- *In any MPE,*

$$\beta(\pi_t, x_t) = \begin{cases} 1 & \text{if } \pi_t \geq \underline{\pi} \text{ and } x_t \geq x^*(\pi_t) \\ 0 & \text{if } x_t < x^*(\pi_t) \\ 0 & \text{if } \pi_t < \underline{\pi} \\ 0 & \text{if } \pi_t = 0 \text{ and } x_t < 1, \end{cases}$$

  for $\underline{\pi}$ defined in Lemma A.1, $\overline{\pi}$ defined in Lemma A.2, and $x^*(\pi)$ defined in Equation 3.

- ***Conflict.*** *If Ruler Willingness fails, then any MPE includes $\pi = 0$, $x \in [0, 1]$, and $\beta(0, 1) = 0$. All equilibria are payoff-equivalent; and along any equilibrium path, a revolt occurs in the first high-threat period.*

- ***Peaceful power sharing.*** *If Ruler Willingness and Strong Opposition Credibility both hold, then the unique MPE includes $(\pi, x) = (0, 1)$ and $\beta(0, 1) = 0$. Along the equilibrium path, the Ruler shares power in the first high-threat period and revolts never occur.*

- ***Probabilistic power sharing or conflict.*** *If Ruler Willingness holds and Strong Opposition Willingness fails, then the unique MPE includes*

$$(\pi, x) = \begin{cases} (\underline{\pi}, 1 - \underline{\pi}) & \text{with probability} = \sigma_R^* \\ (0, 1) & \text{with probability} = 1 - \sigma_R^* \end{cases}$$

$$\beta(0, 1) = \begin{cases} 1 & \text{with probability} = \sigma_O^* \\ 0 & \text{with probability} = 1 - \sigma_O^*, \end{cases}$$

  for σ_R^* and σ_O^* characterized in Lemma A.9. Along the equilibrium path, either power sharing or conflict is possible.

A.3.3 Comparative Statics

Proposition A.4 (Comparative Statics)**.**

- ***Part a.*** *Raising p^{max} makes Ruler Willingness (Equation 5) strictly harder to hold.*
- ***Part b.*** *Raising p^{max} makes Strong Opposition Credibility (Equation 8) strictly harder to hold.*
- ***Part c.*** *Raising p^{max} strictly decreases σ_R^*, the probability of power sharing in the mixed-equilibrium range (characterized in Lemma A.9).*

Proof of Part a:

$$\frac{d}{dp^{\max}}\Big(\mu - \alpha(\underline{\pi})(p^{\max} - p^{\min})(1-\mu)\Big)$$
$$= -\left(\alpha(\underline{\pi}) + \alpha'(\underline{\pi})\frac{d\underline{\pi}}{dp^{\max}}(p^{\max} - p^{\min})\right)(1-\mu) < 0.$$

The negative sign follows from applying the implicit function theorem to yield

$$\frac{d\underline{\pi}}{dp^{\max}} = \frac{\alpha(\pi)(1-\mu)}{\delta(1-r) - \alpha'(\underline{\pi})(p^{\max} - p^{\min})(1-\mu)} > 0, \tag{A.11}$$

where the positive denominator follows from the proof for Lemma A.1.

Proof of Part b:

$$\frac{d}{dp^{\max}}\left(1 - \delta(1-r) - p^{\min}(1-\mu) + \delta r\alpha(\underline{\pi})(p^{\max} - p^{\min})\frac{1-\mu}{1-\delta}\right)$$
$$= \delta r\left(\alpha(\underline{\pi}) + \alpha'(\underline{\pi})\frac{d\underline{\pi}}{dp^{\max}}(p^{\max} - p^{\min})\right)\frac{1-\mu}{1-\delta} > 0.$$

The positive sign follows from Equation A.11.

Proof of Part c:

$$\frac{d\sigma_R^*}{dp^{\max}} = -\frac{\frac{\partial \Omega_R}{\partial p^{\max}}}{\frac{\partial \Omega_R}{\partial \sigma_R}} = -\frac{\sigma_R^*}{p^{\max} - p^{\min}} < 0.$$

■

A.3.4 Extension: Delayed Shifts in Power

The model assumes that the reallocation in power toward the Opposition occurs in the period of a power-sharing deal, that is, the probability of winning immediately rises from $p^{\min}$ to $p(\pi_t)$. This is a reasonable assumption if we think of a period as a long-enough period in time such that the power-sharing deal has sufficient time to be implemented. More important, though, the results are not a knife-edge implication of assuming an immediate shift. The following extension allows for gradual shifts over time and shows that an analog of Ruler Willingness fails if the shift is not too gradual; the liquidity constraint binds and the Opposition cannot compensate the Ruler in the present for his future losses.

Suppose that when the Ruler sets $\pi_t = \pi > 0$, the Opposition immediately gains permanent control of concessions π (as in the original model) but the shift in power is not necessarily immediate. Instead, in every period (including the period the power-sharing deal is implemented), there is a $s \in (0, 1]$ chance that the Opposition's probability of winning will permanently jump from p^{min} to $p(\pi)$; the core model is a special case in which $s = 1$. The Ruler's consumption reaches its upper bound when he can set $x_t = 0$ in all periods before the shift occurs (which, for the parameter values in which we are interested, the Opposition will accept because it does not want to revolt before power shifts in its favor). After rearranging the original recursive equations to include the s probability, we can recalculate the Ruler's average per-period average expected consumption upon sharing power as

$$W(s)(1 - p(\underline{\pi})(1 - \mu)) + (1 - W(s))(1 - \underline{\pi}), \tag{A.12}$$

for $W(s) \equiv \frac{s(1-\delta(1-r))}{1-\delta(1-rs)}$. Thus, the Ruler's consumption is a weighted average between (1) buying off the Opposition at its elevated probability of winning and (2) giving away the permanent concession only in all periods. Setting $s = 1$ yields $W(s) = 1$, and therefore all the weight is on the first consumption term. This is equivalent to the baseline model. Lower values of s place more weight on the second consumption term, which is larger. To see this, recall the implicit definition $\underline{\pi} + (1 - \delta(1 - r))(1 - \underline{\pi}) = p(\underline{\pi})(1 - \mu)$. This implies $\underline{\pi} < p(\underline{\pi})(1 - \mu)$, which in turn implies $1 - \underline{\pi} > 1 - p(\underline{\pi})(1 - \mu)$.

Comparing the term in Equation A.12 to $(1 - p^{\text{min}})(1 - \mu)$, as in Equation 5, shows that Ruler Willingness fails if the magnitude of the shift in power is large (as before) *and* the speed of the shift is fast enough (the new element of this extension). The intuition is that if the shift occurs too fast, then the Opposition cannot sufficiently compensate the Ruler in the interim period because of the liquidity constraint: the Opposition cannot take actions that enable the Ruler to consume more than $1 - \underline{\pi}$ in each period.

A.3.5 Extension: Multiple Steps in Power Sharing

The setup of the baseline model assumes that the Ruler can set a positive power-sharing level only once, and therefore cannot set $\pi_t > \pi_{t-1}$ if $\pi_{t-1} > 0$. Assuming single-shot reform option resembles the setup in existing models such as Acemoglu and Robinson (2000) and Castañeda Dower et al. (2018). Moreover, this assumption makes the model tractable (see in particular the proof of Lemma A.4) and facilitates substantively relevant extensions like reversing power-sharing deals. Nonetheless, though, it is useful to show that allowing for multiple steps in power sharing does not eliminate the possibility of Ruler Willingness failing. Multiple steps expand the range of parameter values in which peaceful bargaining could be sustained, but the frictions created by infrequent high-threat periods and the threat-enhancing effect continue to make possible an equilibrium path with conflict the Ruler Willingness condition can still fail.

It is most straightforward to illustrate this point if power sharing occurs in two steps, although the logic is similar with n steps. Suppose the power-sharing path entails $\pi_1 > 0$ in the first high-threat period and $\pi_2 > \pi_1$ in the next high-threat period. We already know that any equilibrium requires

$\pi_2 = \underline{\pi}$. The Ruler's incentives to follow through are maximized by setting the lowest possible π_1 that the Opposition will accept, which is achieving by maximizing temporary transfers ($x_t = 1 - \pi_1$) and making the Opposition indifferent between accepting that step and revolting

$$1 + \delta V_O(\pi_1) = \frac{p(\pi_1)(1-\mu)}{1-\delta}, \text{ for } V_O(\pi_1) = r\frac{p(\underline{\pi})(1-\mu)}{1-\delta} + (1-r)\big(\pi_1 + \delta V_O(\pi_1)\big).$$

Solving this out yields a unique value π_1:

$$\frac{1-\delta}{1-\delta(1-r)}\pi_1 + (1-\delta)(1-\pi_1) + \frac{\delta r}{1-\delta(1-r)}p(\underline{\pi})(1-\mu) = p(\pi_1)(1-\mu) \qquad \text{(A.13)}$$

Given this value of π_1, Ruler Willingness requires

$$\delta V_R(\pi_1) \geq \frac{(1-p^{\text{min}})(1-\mu)}{1-\delta}, \text{ for } V_R(\pi_1) = \left(r\frac{1-p(\underline{\pi})(1-\mu)}{1-\delta} + (1-r)\big(1-\pi_1 + \delta V_R(\pi_1)\big)\right).$$

Solving this out yields

$$\delta\frac{r(1-p(\underline{\pi})(1-\mu)) + (1-\delta)(1-r)(1-\pi_1)}{1-\delta(1-r)} \geq (1-p^{\text{min}})(1-\mu). \qquad \text{(A.14)}$$

Incorporating Equation A.13 shows that Equation A.14 can be rewritten in the same form as the Ruler Willingness constraint

$$1 - p(\pi_1)(1-\mu) \geq (1-p^{\text{min}})(1-\mu) \implies \mu \geq \alpha(\pi_1)(p^{\text{max}} - p^{\text{min}})(1-\mu).$$

Thus, Ruler Willingness can fail in two steps for the same reason it can fail in one.

A.3.6 Distinctiveness of Mixed-Strategy Equilibrium

Existing models do not account for why a mixed-strategy range exists in the present model. A mixed-strategy range exists in Acemoglu and Robinson (2017) because the choice over permanent concessions is binary: the autocratic elite grants either no political power to the majority, or full franchise expansion and thereby permanent agenda-setting powers. Castañeda Dower et al. (2020) extend the Acemoglu and Robinson model to allow for continuous levels of institutional reform. This alteration eliminates the mixed-strategy range because the ruling elites can perfectly tailor the majority's probability of winning an election to make them indifferent between accepting or revolting. We might expect the Castañeda Dower et al. (2020) result to apply to the present model, as the space of power-sharing options is continuous here as well. The key difference is the wedge created by the threat-enhancing effect. In equilibrium, the Ruler sets the power-sharing level to make the Opposition indifferent between accepting or revolting. However, this indifference holds for the Opposition's probability of winning only *after power has shifted in its favor*. But compared to the Opposition's baseline under autocratic rule, sharing power strictly increases its reservation value. Thus, despite the continuous space of power-sharing options, the threat-enhancing effect creates a discrete wedge (see the γ term in Equation 8) that yields a mixed-strategy range.

A.4 REVERSING POWER-SHARING DEALS (SECTION 5)

A.4.1 Strong Ruler Willingness

The text characterizes the Strong Ruler Willingness condition (Equation 10). The following presents some intermediate steps used to solve for the condition. The net profitability for the Ruler of reneging in a low-threat period is $V_\Delta^L = \underline{\pi} + \delta\big(rV_\Delta^H + (1-r)V_\Delta^L\big)$. Deviating is surely better in the current period—the Ruler would consume 1 rather than $1-\underline{\pi}$, for a net gain of $\underline{\pi}$. Then, starting in the next period, the Ruler's payoff depends on whether the Opposition poses a low or a high threat. Rearranging the recursive equation yields a term that must be negative for the Ruler to comply, which I express in the paper as the Strong Ruler Willingness condition.

$$(1-\delta(1-r))(1-\delta)V_\Delta^L = \underbrace{(1-\delta)\underline{\pi}}_{\text{Benefit}} - \underbrace{\delta r \overbrace{\left(\mu - \alpha(\underline{\pi})(p^{\max}-p^{\min})(1-\mu)\right)}^{(1-\delta)V_\Delta^H \text{ (Eq. 9)}}}_{\text{Cost}}.$$

A.4.2 Cyclical Power Sharing

Along paths of play in which a power-sharing deal is in place in all periods or in which conflict occurs, the analysis of the baseline game characterizes each player's consumption stream and the key conditions that determine outcomes. The following conducts this analysis for a path of play with cyclical power sharing.

Opposition's consumption along a peaceful cycling path of play. A possible equilibrium path of play features cycling between a power-sharing state (P) and an autocratic state in which a power-sharing deal is not in place (A). Along a cycling path, for a given level π at times a power-sharing deal is in place and a given amount of temporary concessions x in high-threat periods, the Opposition consumes $\pi + x$ in every high-threat period, π in every low-threat period in which a power-sharing deal is in place, and 0 in every low-threat period under autocratic rule. From the perspective of a high-threat period, the value of that consumption stream is $\pi + x + \delta V_O^P$, for

$$V_O^P = \underbrace{r\big(\pi + x + \delta V_O^P\big) + (1-r)q(\pi + \delta V_O^P)}_{\text{P persists}} + \underbrace{(1-r)(1-q)\overbrace{\frac{\delta r}{1-\delta(1-r)}\big(\pi + x + \delta V_O^P\big)}^{\delta V_O^A}}_{\text{Transition to A}}$$

$$\text{and} \quad V_O^A = \underbrace{(1-r)\delta V_O^A}_{\text{A persists}} + \underbrace{r\big(\pi + x + \delta V_O^P\big)}_{\text{Transition to P}} \implies V_O^A = \frac{r}{1-\delta(1-r)}\big(\pi + x + \delta V_O^P\big).$$

Solving the recursive equations yields a per-period average consumption stream from the perspective of a high-threat period which, as before, must weakly exceed the expected value to revolting,

$$\frac{1-\delta(1-r)}{1-\delta(1-r)q}\big(\pi + (1-\delta(1-r)q)x\big) \geq p(\pi)(1-\mu). \tag{A.15}$$

Setting this as an equality enables solving for the transfer $x_q^*(\pi)$ that makes the Opposition indifferent between accepting and revolting, given the power-sharing level π

$$\frac{1-\delta(1-r)}{1-\delta(1-r)q}\big(\pi + (1-\delta(1-r)q)x_q^*(\pi)\big) = p(\pi)(1-\mu) \tag{A.16}$$

$$\implies x_q^*(\pi) = \frac{p(\pi)(1-\mu)}{1-\delta(1-r)} - \frac{\pi}{1-\delta q(1-r)}. \tag{A.17}$$

Setting $x = 1 - \pi$ (the maximum the Ruler can transfer) in Equation A.16 yields the no-revolt constraint.

$$\textbf{No-revolt constraint.} \quad \underbrace{\frac{1-\delta(1-r)}{1-\delta(1-r)q}\pi}_{\text{Durable concession}} + \underbrace{(1-\delta(1-r))(1-\pi)}_{\text{Transfers in H periods}} - \underbrace{p(\pi)(1-\mu)}_{\text{Revolt}} \geq 0. \tag{A.18}$$

The only difference from the no-revolt constraint in the baseline model (Equation 1) is a multiplier on π, which equals $\frac{1-\delta(1-r)}{1-\delta(1-r)q} \in (0,1]$. Sharing π now concedes durable, as opposed to permanent, concessions because the Opposition consumes 0 during autocratic reversal spells.

We can now define a new condition, Opposition Willingness, which determines whether the Opposition accepts a power-sharing deal if cycles between autocratization and power sharing occur along the path of play. Thus, the question is whether the Opposition will accept the highest-possible power-sharing level $\pi = 1$ (i.e., whether Equation A.18 is satisfied at $\pi = 1$), knowing that the concession is durable rather than permanent. Exactly how durable the concession is depends on q, which determines whether Opposition Willingness is satisfied. At $q = 0$, Opposition Willingness is sure to fail because it is the inverse of the original Opposition Credibility condition (Assumption 1), which we assume throughout. At $q = 1$, Opposition Willingness is sure to hold because the opportunity to renege never in fact arises; the Opposition would consume 1 in every period, and thus its compliance is identical to the rationale in Remark 1.

$$\textbf{Opposition Willingness.} \quad \frac{1-\delta(1-r)}{1-\delta(1-r)q} \geq p^{\min}(1-\mu). \tag{A.19}$$

A unique threshold value of q determines whether Opposition Willingness holds.

Lemma A.10 (Threshold Frequency of Reversals)**.** *At unique value $\hat{q} \in (0,1)$ exists such that Opposition Willingness holds if $q \geq \hat{q}$ and fails otherwise.*

Proof. Define $\Theta_q(q) \equiv \frac{1-\delta(1-r)}{1-\delta(1-r)q} - p^{\min}(1-\mu)$. Applying the intermediate value theorem establishes existence. $\Theta_q(0) = 1-\delta(1-r) - p^{\min}(1-\mu) < 0$ follows from Assumption 1. $\Theta_q(1) = 1 - p^{\min}(1-\mu) > 0$ is identical to Remark 1. $\Theta_q(q)$ is continuous in q. Strict monotonicity in q establishes uniqueness:

$$\frac{d\Theta_q}{dq} = \frac{(1-\delta(1-r))\delta(1-r)}{(1-\delta(1-r)q)^2} > 0.$$

■

Finally, for $q > \hat{q}$, a unique value $\underline{\pi}_q$ is the minimum level of power sharing that induces acceptance from the Opposition. At $q = 1$, this threshold equals $\underline{\pi}$ from the baseline model; and at $q = \hat{q}$, it equals 1. Intuitively, $\underline{\pi}_q$ decreases in q because the Ruler must increase the size of the power-sharing concession if power-sharing deals are less durable. The proof is identical in structure to that for Lemma A.1 and is therefore omitted.

Lemma A.11 (Peaceful power-sharing threshold with q reversals)**.** *For any $q \in [\hat{q}, 1]$, a unique value $\underline{\pi}_q \in [\underline{\pi}, 1]$ exists such that $\pi = \underline{\pi}_q$ satisfies Equation A.18 with equality.*

Ruler's consumption along a peaceful cycling path of play. It is straightforward to demonstrate that Ruler Willingness and Strong Opposition Credibility have the same form as in the baseline game. The only required modification to Equations 5 and 8 is replacing $\underline{\pi}$ with $\underline{\pi}_q$.

A.4.3 Equilibrium Strategy Profile

Defining strategies in the model with reversals requires specifying actions for the Ruler in both high and low-threat periods. Thus, it will helpful to denote the elements of the Nature draw as $\theta_t \in \{\theta^H, \theta^L, \theta^D\}$, where the superscripts denote high-threat periods (H), low-threat periods in which the Opposition lacks a defensive advantage (L), and low-threat periods in which the Opposition has a defensive advantage (D). Because we are now evaluating history-dependent strategies, let $\mathcal{H}^{t-1}$ denote the set of all possible histories of play up to $t-1$, with a particular history denoted as $h^{t-1} \in \mathcal{H}^{t-1}$. In the following definition of pure strategies, the players do not condition on the state variable $\eta_t \in \{A, P\}$ (originally defined for the baseline game), which instead I simply include as an element of a history. A profile of pure strategies entails the following mappings.

- Ruler in all periods. $\pi : \{\theta^H, \theta^L, \theta^D\} \times \mathcal{H}^{t-1} \to \{0, \pi_+\}$
- Ruler if $\theta_t = \theta^H$. $x : \mathcal{H}^{t-1} \to [0, 1 - \pi_t]$
- Opposition if $\theta_t = \theta^H$. $\beta : \mathcal{H}^{t-1} \times \{0, \pi_+\} \times [0, 1 - \pi_t] \to \{0, 1\}$
- Opposition if $\theta_t = \theta^D$ and $\pi_t < \pi_{t-1}$. $\beta : \mathcal{H}^{t-1} \to \{0, 1\}$

The following proposition characterizes the equilibrium.

Proposition A.5 (Equilibrium strategy profile in model with reversals)**.**

Suppose Ruler Willingness and Strong Opposition Credibility both hold, and $\pi_+ = \underline{\pi}_q$.

- *In any SPNE, the Opposition revolts in a defensive-advantage period if the Ruler reverses a power sharing deal, $\beta(\theta^D, h^{t-1}) = 0$ for any h^{t-1}.*
- ***Conflict.*** *If Strong Ruler Willingness and Opposition Willingness both fail, then any SPNE entails $\pi(\theta_t, h^{t-1}) = 0$ and $x(h^{t-1}) \in [0, 1]$, for $\theta_t \in \{\theta^H, \theta^L, \theta^D\}$ and any h^{t-1}; and $\beta(\theta^H, \pi, x, h^{t-1}) = 0$, for any π, x, and h^{t-1}. All equilibria*

are payoff-equivalent; and along any equilibrium path, a revolt occurs in the first high-threat period.

- ***Peaceful power sharing (permanent).*** *Suppose Strong Ruler Willingness holds and Opposition Willingness fails. Define a set of histories $\hat{h}^{t-1}$ as those that include $\pi_y = \pi_+$ in every period $y \leq t-1$ such that $\eta_y = P$, and $x_z \geq x_q^*(\pi_t)$ in every period $z \leq t-1$ such that $\theta_z = \theta^H$ and $\eta_z = P$. The following constitutes the unique SPNE:*

$$\pi(\theta_t, h^{t-1}) = \begin{cases} \pi_+ & \textit{if } h^{t-1} \in \hat{h}^{t-1} \\ 0 & \textit{if } h^{t-1} \notin \hat{h}^{t-1}, \end{cases} \qquad \textit{for} \quad \theta_t \in \{\theta^H, \theta^L, \theta^D\}$$

$$x(h^{t-1}) = \begin{cases} x^*(\pi_+) & \textit{if } h^{t-1} \in \hat{h}^{t-1} \\ 0 & \textit{if } h^{t-1} \notin \hat{h}^{t-1} \end{cases}$$

$$\beta(\theta^H, h^{t-1}) = \begin{cases} 1 & \textit{if } h^{t-1} \in \hat{h}^{t-1} \textit{ and } \pi_t = \pi_+ \textit{ and } x_t \geq x^*(\pi_+) \\ 0 & \textit{if } h^{t-1} \notin \hat{h}^{t-1} \textit{ or } \pi_t = 0 \textit{ or } x_t < x^*(\pi_+). \end{cases}$$

Along the equilibrium path, the Ruler shares power in the first high-threat period, never reverses the deal, and revolts never occur.

- ***Peaceful power sharing (cycling).*** *If Opposition Willingness holds, then the following constitutes the unique SPNE:*

$$\pi(\theta_t, h^{t-1}) = \begin{cases} \pi_+ & \textit{if } \theta_t \in \{\theta_H, \theta_D\} \\ 0 & \textit{if } \theta_t = \theta^L, \end{cases} \qquad \textit{for any} \;\; h^{t-1}$$

$$x(h^{t-1}) = x_q^*(\pi_+) \;\; \textit{for any} \;\; h^{t-1}$$

$$\beta(\theta^H, h^{t-1}) = \begin{cases} 1 & \textit{if } \pi_t = \pi_+ \textit{ and } x_t \geq x_q^*(\pi_+) \\ 0 & \textit{if } \pi_t = 0 \textit{ or } x_t < x_q^*(\pi_+), \end{cases} \qquad \textit{for any} \;\; h^{t-1}.$$

Along the equilibrium path, the Ruler shares power in every high-threat period, reverses the deal in every low-threat period in which the Opposition lacks a defensive advantage, and revolts never occur.

A.4.4 Comparative Statics

Proposition A.6 (Comparative statics in model with reversals)**.**

- ***Part a.*** *Assume $p^{max} = p^{min}$. Raising p^{min} makes Strong Ruler Willingness (Equation 10) strictly harder to hold.*
- ***Part b.*** *Raising p^{max} makes Strong Ruler Willingness strictly harder to hold.*
- ***Part c.*** *Raising q makes Opposition Willingness strictly easier to hold.*

Proof of Part a: $$\frac{d}{dp^{\min}}\Big(\delta r\mu-(1-\delta)\underline{\pi}\Big)=-(1-\delta)\frac{d\underline{\pi}}{dp^{\min}}\Big|_{p(\pi_t)=p^{\min}}=-\frac{(1-\delta)(1-\mu)}{\delta(1-r)}<0.$$

Proof of Part b. The negative sign follows from Equation A.11:

$$\frac{d}{dp^{\max}}\Big(\delta r\big(\mu-\alpha(\underline{\pi})(p^{\max}-p^{\min})(1-\mu)\big)-(1-\delta)\underline{\pi}\Big)=\delta r\alpha(\underline{\pi})(1-\mu)-\big(\delta r\alpha'(\underline{\pi})(1-\mu)+1-\delta\big)\frac{d\underline{\pi}}{dp^{\max}}<0.$$

Proof of Part c. See the proof for Lemma A.10. ■

A.4.5 Setup: Discussion of Model Assumptions

- **Sustaining temporary concessions with history-dependent punishments.** In principle, history-dependent strategies could enable the Ruler to buy off the Opposition with temporary concessions only for some parameter values in which Opposition Credibility holds (i.e., temporary transfers are insufficient to buy off the Opposition in a Markov Perfect Equilibrium). The history-dependent strategies would entail the Opposition punishing the Ruler in a high-threat period if the Ruler failed to provide a sufficient temporary concession in an earlier low-threat period (this would also require the slight modification to the present model of allowing the Ruler to make temporary concessions in low-threat periods).

  This idea lacks compelling conceptual foundations, though, for two reasons. First, the revolt threat inherent in history-dependent punishments—which can help to endogenously uphold power-sharing deals—requires an information and coordination structure created by power-sharing institutions such as cabinet positions, courts, and legislatures (Myerson 2008; Boix and Svolik 2013). Thus, the ability to coordinate on an inter-temporal punishment implicitly assumes some type of institutional structure. Second, allowing history-dependent punishments to enforce temporary concessions would eliminate the conceptual distinction between durable/permanent and temporary concessions. If indeed the "temporary" concessions are permanent, then they should yield similar consequences as the power-sharing concessions modeled here. For example, we would imagine that the Opposition could invest these de facto permanent concessions to facilitate coercive organization—much like the threat-enhancing effect inherent to power sharing.

- **Binary power-sharing choice.** The assumed binary power-sharing choice $\pi_t \in \{0, \pi_+\}$ does not create any additional bargaining frictions under the maintained assumption $\pi_+ = \underline{\pi}_q$. By contrast, it is straightforward to show that for other values of π_+, the actors might fail to reach a peaceful power-sharing arrangement (even absent any other frictions in the model) either because the Ruler has to give away too much under a power-sharing deal (high π_+) or the Opposition does not receive enough under a power-sharing deal (low π_+). However, because I eliminate these possibilities, modeling a binary power-sharing choice yields qualitatively similar insights as a continuous choice.

  The complications of including a continuous power-sharing choice in the model with reversals are twofold. One is the same as in the baseline model: multiple opportunities to raise π_t.

This could in principle be eliminated in a similar way as the baseline model, by assuming that once the Ruler has chosen a positive power-sharing level $\pi_y = \pi > 0$ in some period y, he is restricted to choosing $\pi_t \in \{0, \pi\}$ in all periods $t > y$. A second complication would remain, though: the need to characterize all off-the-equilibrium path subgames in which the Ruler initially chooses a positive power-sharing level $\pi \neq \underline{\pi}_q$. The binary choice eliminates this uninteresting additional analysis without qualitatively changing the insights from the model.

A.5 Conclusion (Section 6)

The Conclusion distinguishes between the empirical/phenomenon and mechanism/experimental approaches to formal models in political science (Paine and Tyson 2020), and discusses some empirical implications of the present formal analysis. Other implications of the model, though, are more difficult to test empirically and are more squarely based in the mechanism/experimental tradition. The mixed-strategy equilibrium is a logically consistent implication of the wedge created by the threat-enhancing effect. However, this equilibrium path also implies that two countries with the same social conditions could have distinct patterns of power sharing, which makes it difficult to assess the underlying causal factors. The separate implication regarding power sharing with cycles resonates well with some empirical cases (e.g., fluctuation between periods of autocratization and institutionalization in China under the CCP; see Nathan 2003; Shirk 2018), and future work could more systematically assess scope conditions under which we would expect power-sharing cycles to occur. Gibilisco (2023) and Christensen and Gibilisco (2024) provide recent examples of empirical assessments of model predictions based on mixed strategies and/or cycling.