

Institutions as Signals: How Dictators Consolidate Power in Times of Crisis

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Formal institutions in dictatorship are known to improve authoritarian governance and promote power-sharing. Yet institutions also act as tools of information propagation and can be used by autocrats for signaling purposes. In this article, I argue that in times of weakness dictators follow an expand-and-signal strategy, expanding the ruling coalition to decrease the relative power of coup plotters and then create visible formal institutions to signal strong support. Doing so decreases (1) the probability that a coup is launched and (2) that one succeeds if staged. I propose a formal model to unpack the mechanisms of my argument and use the case of the Dominican Republic during Rafael Trujillo's rule to illustrate my theory.

In 1930, after a perfectly orchestrated coup, Rafael Trujillo began his thirty-year long tenure as self-proclaimed *benefactor* of the Dominican people. Lacking explicit US support and facing credible challenges from within his coalition, he moved quickly to consolidate power. He created a political party with an expansive regional and national apparatus, the *Partido Dominicano*, and strengthened the role of the country's Senate. Rural supporters were given important posts in the party, and loyal elites became Senators. In essence, what Trujillo did with celerity and skill during the first six months of his rule was to (1) expand his support coalition and (2) use formal institutions

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to accommodate the expansion. Why did Trujillo choose to develop these formal institutions rather than focus on establishing a strong army, secret police, and use the repressive tactics that became common in the latter part of his rule?

Formal institutions such as political parties and legislatures are known to improve authoritarian governance and place at least some constraints on authoritarian leaders.¹ They also enhance survival by promoting power-sharing.² By incorporating and co-opting different elites into the regime's policy-making process, autocrats can enjoy more stable tenures and better policy outcomes. Indeed, I do not intend to rebuke these assessments. Rather, my argument is that they are incomplete and that we have not yet theorized about the full range of reasons why formal institutions in dictatorship are so common and useful to autocrats. The important intuition from Trujillo's example, and which constitutes the central claim of this article, is that the institutions he created served as highly effective *signaling* devices.

In times of crisis, dictators expand their coalition to reduce the relative power of potential plotters within it and use institutions to communicate strength to the rank-and-file. Since the spread of information and coordination among the coup plotters are crucial for coup success,³ dictators can reduce both the threat that a coup occurs and the probability that one succeeds if staged by employing the 'extend and signal' strategy that I outline in this paper.

The reasoning behind expanding the ruling coalition is especially counterintuitive. In order to reduce the relative power of the potential coup-plotters within the coalition, leaders incorporate new members with whom plotters will have difficulty coordinating, thus reducing the probability that a coup occurs. An example illustrates my logic best: If, say, a support coalition consists of ten people, and five of them are plotting against the dictator without his knowledge, the dictator is one defection away from being deposed. However, if he expands his coalition to fifteen members by

adding five new members, he weakens the position of the plotters, who are no longer a majority. The leader pays a financial cost if he expands and finds himself sharing a certain degree of influence with other members who have attained a position of power within the regime after the expansion.

Leaders face two critical problems when they oversize the coalition. First, they cannot credibly expect new members to remain loyal indefinitely. The dictator needs these new members to send a credible signal of commitment to him, become invested in the regime, and tie their fortunes to the fortunes of the leader. Second, he needs to communicate this gain in power to the broader coalition. Oversizing the coalition is much less useful if the rank-and-file are unaware of the dictator's newfound support. This is particularly important, as we know that information plays a key role in determining which actors join a coup and which do not.⁴ The dictator must prevent key players, such as ranking officers and soldiers, from joining the coup if one is staged. Informational asymmetries may lead officers to join a coup that may, unbeknownst to them, not have been initially viable. As Little shows, a coup attempt is likely forthcoming at the beginning of a leader's tenure.⁵ It is important for the leader to try to affect an officer's belief about his strength and make them less likely to join a coup if one takes place.

Key power-sharing institutions, political parties and legislatures, are useful for the dictator to solve these two problems. First, accepting a public position within an institution, such as vice-president of the senate or member of parliament, sends a signal of commitment and loyalty to the leader and carries a cost for the new member. The more closely she is associated with the regime, the more likely she will be removed or vanished should a coup occur and succeed. In this way, formal institutions reduce the probability that a coup takes place. Second, by expanding the coalition through public formal institutions, the leader communicates strength to the broader

coalition, who perceive a signal that the leader is stronger than they thought he was. This makes officers less likely to defect and thus reduces the probability that a coup succeeds if staged.

The expand and signal strategy can be superior to other traditional strategies to garner support, such as distributing rents or purges.⁶ The former suffer from a credibility problem, since the leader can withdraw funds at any time and the supporters can end their support whenever they can obtain more elsewhere. Purges, on the other hand, carry a high cost in terms of popularity and support, since more insecurity may reduce other members' payoffs of staying in the status quo and thus induce a coup rather than stifle it. A particularly insidious cost emerges when purging is used in spurts, as described, for instance, in Svoboda: since the leader cannot be certain about the identity of the plotters, he may actually purge *loyalists* who have come under suspicion.⁷ This may strengthen the chances that a potential coup succeeds. This argument is rooted in the fact that dictators cannot be certain of who supports them.⁸ Expanding the coalition, even though it requires certain sacrifices, is a less costly and potentially more effective strategy to consolidate power in times of crisis. These findings complement Arriola's work on coalition expansion by incumbents in Africa. He finds that expanding the size of the cabinet reduces the probability that a leader is deposed through a coup.⁹

This article contributes to the literature on authoritarian governance and power-sharing. First, by identifying the role of institutions as signaling devices, we can better understand how they originate and why they vary at different points in time. For instance, it provides an alternative explanation for co-optation: a leader may co-opt a rival faction in order to almost instantly reduce the relative power of another rival faction. If these factions are at odds, their capacity to coordinate is low and, as a consequence, the dictator consolidates power. Institutions then signal this to the broader coalition. Second, modeling how dictators consolidate power in times of evident

weakness, for instance, at the outset of tenure, is an important conceptual shift. While extant work does consider the creation of formal institutions in times of crises, conclusions are often related to long-run governance – such as policy outcomes or stability.¹⁰ Instead, I consider short-term solutions to short-term problems, and some of the conclusions I draw differ from those of previous authors. Lastly, a recent trend in the literature on coups is to model the coordination capacity of the opposition.¹¹ In this article I complement these works and show how leaders may try to anticipate such coordination by disrupting elite communication and the information that reaches the lower ranks.

This article proceeds in three stages. After a brief introduction to the relevant debates, I introduce a standard signaling model that shows precisely that for a certain range of relatively strong types of leaders, expanding the coalition and creating institutions is attractive. I then present evidence from the Dominican Republic that illustrates the logic put forward in this paper.

Extant Work

The question of how authoritarian leaders consolidate power has received renewed attention in the past decade. Scholars have tended to focus on two different approaches to the issue. One looks particularly closely at the power dynamics within the regime itself. Conflict can emerge when an autocratic leader and a set of elites within the regime fight over control of executive action. Svoboda has argued that the leader has an incentive to accumulate power in his hands and reduce the influence of the ruling coalition, whereas the latter seeks precisely the opposite.¹² The resulting tension can lead to a coup or a more entrenched and consolidated leader. Others in this line of research have focused on the relationship between the dictator and the military.¹³ The central dilemma here is that dictators may prefer a strong military apparatus to fight an external threat, but

a strong military in turn may find it easier and less costly to conduct a coup. Powell, for instance, argues that placing structural barriers to the coordination capacity of military personnel, such as fractionalizing different branches of the military, reduces the likelihood of a military coup.¹⁴ The coordination problems among the military have also been the focus of work by Geddes and Little.¹⁵

The second approach to the analysis of dictatorship consolidation has revolved around the role of formal institutions in improving authoritarian governance, which falls within a broader debate on authoritarian governance pioneered by Linz and O'Donnell, among others, and reenergized more recently by seminal works by Levitsky and Way and Gandhi.¹⁶ One formal institution that has received much attention are legislatures. A key argument in this line of research has been that power-sharing institutions such as legislatures help dictators co-opt opposition groups into the regime's policy-making process, which reduces conflict, solidifies the position of the leader, and helps him obtain his preferred policy outcomes.¹⁷ Boix and Svobik argue that authoritarian institutions increase regime survival by facilitating power-sharing.¹⁸ Gandhi and Przeworski argue that dictators who need greater cooperation make more policy concessions.¹⁹ Other work has helped deepen our understanding about the relationship between dictators and their legislative bodies. Wright argued that regimes dependent on domestic investment rather than natural resource revenue create more binding legislatures, which serve as credible constraints on the leader's ability to expropriate wealth.²⁰ Wright and Escribà-Folch also show evidence that legislatures make dictatorships more stable.²¹

Another relevant institution are political parties. The debate around the role of political parties in dictatorship has reached less of a consensus than the debate around legislatures. Brownlee, for instance, argues that "[r]uling parties ... bridle elite ambitions and bind together otherwise fractious coalitions."²² Echoing Geddes, he finds that single-party regimes tend to be the

most long-lasting.²³ Slater also ties the survival of authoritarian regimes to the robustness of political parties, which are valuable mechanisms for elites to act collectively.²⁴ Opposed to this generally positive view of political parties in dictatorship, Wright and Escribà-Folch argue that political parties, in fact, may have a deleterious effect on regime survival in the long run.²⁵ The authors claim that a strong political party can generate incentives to democratize for authoritarian elites, who can find protection in a subsequent democracy. Other work has explored the role of hegemonic parties, which serve to prevent personal dictatorship and ensure long-lasting rewards for ruling elites through a vast clientelist network.²⁶

Haber's organizational theory of dictatorship is a useful tool to tie together my argument and the insights from these literatures.²⁷ The authoritarian leader comes to power on the shoulders of an organization, such as the military, a party, a royal family. Once in power, one option is to dote on its members and credibly commit to them. Albertus and Menaldo make a persuasive argument that leaders do so by expropriating the existing elite and signaling exclusive reliance on the support group.²⁸ Another option is to curb the power of the launching organization, who will oppose this. One strategy Haber identifies through which newly installed dictators reduce the organization's power is to create "a set of rival or complementary organizations, the purpose of which is to raise the cost of collective action for the leadership of the launching organization."²⁹ I argue that formal institutions channel these complementary groups that the leader creates to sustain his rule, which signals to the broader coalition that the leader is strong and likely to survive a coup should they stage one.

A contribution of this paper is to provide a theory of leadership consolidation in authoritarian regimes that brings together key insights from these literatures. On the one hand, I place strong emphasis on conflict between the ruler and his coalition, as Haber does, rather than a

more classic power struggle between a leader and an opposition group. Most coups come from within the regime,³⁰ hence the focus on this aspect of authoritarian politics. On the other hand, most of the literature on formal institutions in authoritarian regimes has focused so far on their *substantive* value in terms of power-sharing and the constraints they place on dictators. Here I point to the *instrumental* value of institutions in authoritarian regimes. These institutions can serve as powerful signaling devices, since they are visible and well-known in society. They can be used to communicate a signal of strength by the leader to both his most immediate elite circle as well as to the broader set of actors in the dictator's coalition. Thus, I do not mean to directly challenge substantive arguments. I consider that they are, in fact, complementary to the argument offered in this paper and that, together, they can give us a more comprehensive understanding of the relationship between dictators and the power-sharing institutions under their control.

Indeed, it is important to point out that my argument in this paper is not in support of institutions as some form of façade for authoritarian leaders to display a false sense of power-sharing. In fact, for the signal to be credible, institutions need to be given a *raison d'être*, a political purpose. In some cases, legislative powers are weak and wholly dependent on the dictator's wishes. In others, legislative freedom gives members of parliament and senators the prerogative to push a certain agenda and obtain actual concessions from the leader. Either way, institutions require a purpose to serve as credible signals. Institutions are designed to entrench new elites in their post, so that plotters have a more difficult time convincing them to switch allegiance. That may mean, sometimes, as in Trujillo's Dominican Republic, that supporters sycophantically promote legislation to score points with the dictator, such as the time when Mario Fermín Cabral proposed that the capital city of Santo Domingo be renamed to *Ciudad Trujillo*, even if the 'benefactor'

himself never requested the change.³¹ Other times, legislative freedom may lead to reform that forces the leader to compromise.

My argument also fits well with recent literature on how coups develop from the point of view of the opposition,³² which echoes earlier arguments by Geddes.³³ Little explores the coordination capacity of officers and the factors that will lead them to join a coup as global game, and argues that a coup attempt is always forthcoming at the outset of a dictator's tenure.³⁴ Singh shows that coup success depends on officers joining it once it's already in full swing, and information exchange is key to determine allegiances.³⁵ The better the plotters communicate their likelihood of success, the more likely they are to seduce potential converts and succeed. This article analyzes how leaders try to thwart the two channels by which the opposition may succeed in a coup.

First, by expanding the coalition, the leader prevents key top-level actors from launching a coup in the first place, since their relative strength is lower and the capacity to coordinate with new members is limited. Second, by using formal institutions as a public signal of increased strength, the dictator manipulates the information mid- and low- level officers use to make the decision whether to join a coup once it starts. We know from Singh that coup success is largely determined by how many actors joins the coup in the final stages, and the leader has a substantial incentive to prevent such a snowball effect once he coup is in full swing.³⁶ If officers believe that the leader is weak, they are more likely to join. Similarly, the more high-level officers join, the more likely are low level officers willing to join. An expanded coalition dilutes this belief and makes it more likely that the rank-and-file believe the leader is strong and the coup will fail.

Theory

My central claim is that dictators in times of crises consolidate power by using an expand and signal strategy. It consists of (1) expanding the ruling coalition and adding new members to reduce elite coordination capacity; and (2) signaling their strength to the broader coalition via formal institutions, which reduces the potential snowball effect against the leader after a coup is launched.³⁷ Thus, I conceive of formal institutions as arenas for signaling, an idea that has not yet been considered in the literature on authoritarian regimes. In this article, I focus exclusively on the role of a limited set of formal institutions, parties and legislatures.³⁸ There are two reasons for a narrow approach. First is that parties and legislatures have tended to dominate the debate on institutions in dictatorship;³⁹ and, second, because these are indeed highly visible institutions that lend themselves easily to the expand-and-signal approach.⁴⁰ Before introducing the formal model, I address relevant theoretical issues related to the expansion of the coalition as well as signaling through institutions.

Expanding the coalition in the midst of a crisis may be counterintuitive, since it may appear to weaken the position of the leader. Yet, introducing a set of newcomers to the coalition has the advantage of reducing the coordination power of the plotters within the coalition. New entrants need to be screened and are more likely to support the leader, at least early on. Trying to persuade them to join a coup may give the entire plot away, making coordination difficult for the plotters. Careful selection by the leader is required, but this can be achieved by choosing elites with few ties among each other and current members of the coalition or that are part of different opposition groups.⁴¹ Making the coordination capacity of the plotters more difficult gains the dictator sufficient time to weather a crisis and potentially close the window of opportunity for a potential coup against him.

Formal institutions fulfill two key roles within the expand-and-signal strategy. First, they force new members of the coalition to be publicly associated with the regime. This is not an angle that has been much studied in the vast literature on co-optation examined above, or on other related literatures such as studies on co-optation and repression.⁴² By extracting a costly public commitment, the leader ensures that members of the coalition are tied to his rule, which binds them in future dealings with him or with any potential successor. The more associated a member becomes to a given ruler, the more difficult it will be to remain in power or avoid becoming a target for a potential new dictator.

Second, institutions signal the leader's true type to a set of members in the coalition with whom he may not be able to credibly communicate. Support from mid- and low-ranking officers and soldiers is key to the success of any coup, and they may be more likely to join one if they believe the leader is weak and the coup will succeed.⁴³ If the leader receives public support from new elites, the rank-and-file is more likely to think that the leader is stronger than the plotters believe. This reduces the likelihood that a coup succeeds if launched. Therefore, we should observe authoritarian leaders making fairly extensive use of seemingly power-sharing institutions such as parties and parliaments, with periods of expansion coinciding with those moments in which a leader is in a relatively weak position. Leaders tend to be particularly weak at the beginning of tenure and after growth shocks.

The Model

The formal model I introduce in this paper seeks to reflect how expanding the ruling coalition through power-sharing institutions both reduces the probability that a coup succeeds and, under some circumstances, persuades plotters to not carry out a coup in the first place.

The game takes the form of a standard signaling game with two types and a dichotomous signaling choice. The model consists of two actors, an authoritarian leader (L) and a set of plotters (P) from within the dictator's ruling coalition that seek to depose him. The leader is uncertain about who the actual plotters are, but he knows whether or not he enjoys majority support within the coalition. The game begins with Nature drawing a type of leader, who is strong with probability θ and weak with probability $1 - \theta$. While the game resembles Svobik's, it differs precisely on this point, i.e. nature moves first by introducing a shock that weakens the leader.⁴⁴ The leader's strength is determined by the level of support the leader has within the entirety of the coalition.

I assume for simplicity that the leader is strong if at least half of the members of the winning coalition back him, and survives a coup with probability p_s . The fact that he does not win outright despite his strength is an interesting nuance of the game. It is meant to account for the possibility that informational asymmetries during the coup lead to defections from the rank-and-file, who join the coup as it is unfolding. One of Singh's insights is that uncertainty during coups can lead to outcomes that were unpredictable before they were launched. Indeed, actions taken during the coup can be as important to its outcome as actions taken in anticipation.⁴⁵ I reflect this by giving strong dictators the highest probability of winning, π_s , but not assuming they always win outright. This also entails, however, that weak types—at least some of them—also have a chance of *winning* if a coup is staged, π_w after expansion and ϕ_w after non-expansion. The solution concept is Perfect Bayesian Equilibrium.

Costs, Information Structure and Timing

Creating and governing through oversized coalitions and formal institutions is costlier and less desirable for the dictator than the alternative of not doing so. A clique of sycophants is easier to manage and control. A larger coalition in which many members hold positions of nominal power is more dangerous, as its members could use their influence to undermine the leader, and thus requires higher levels of surveillance and general involvement.⁴⁶ Therefore, there are two sources of costs, both of which are exogenous to the dynamic of the game. One is financial –creating a party with over a million members and with local, regional, and national branches is not a cheap enterprise, much less so if done so quickly as was the case with Trujillo’s *Partido Dominicano*. The other imposes upon the dictator’s power and responsibilities. By expanding the coalition and using formal institutions, the leader allows some individuals to have greater influence in the political arena, which political entrepreneurs could capitalize to challenge the leader in the future.

Assumption 1: Oversizing the coalition through formal institutions is costly. It carries a financial cost as well as greater need to monitor and control influential challengers. The relative cost of signaling for the strong type is lower than for the weak type.

The leader is informed about his type at the outset of the game. Both the leader and the plotters know the probability distribution around θ , the prior belief about the strength of the leader, but the plotters do not know precisely which leader they are facing. The game proceeds as follows: after Nature has determined the type of leader, the leader decides whether to expand the coalition through institutions or not. The plotters then have a choice between launching a coup or acquiescing in the new or current status quo. If they do not coup, the game ends. If they do, a

lottery ensues in which the leader or the plotters may win control over government. The extended form of the game is represented in Figure 1.

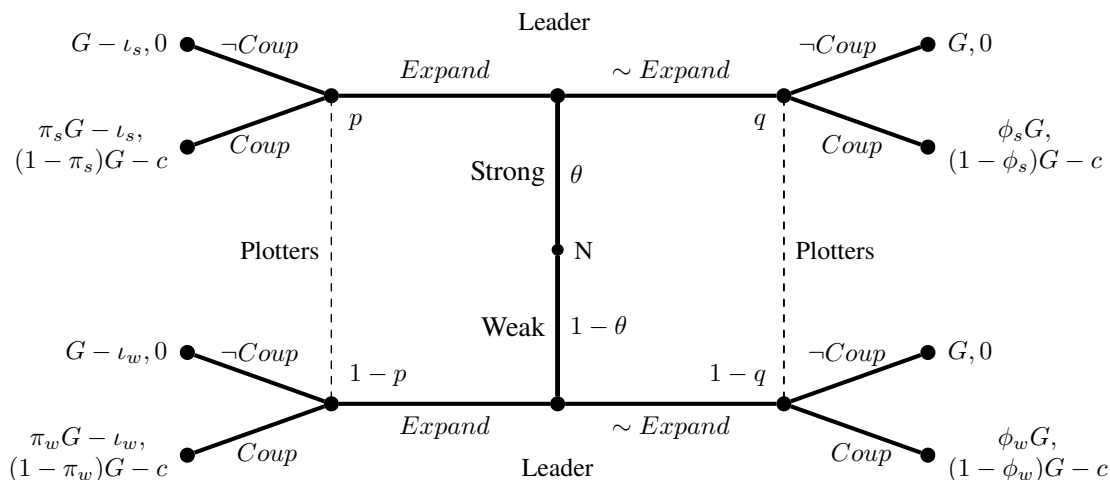


Figure 1: Signaling Model in Extended Form

Payoffs

The payoffs for the leader are as follows. After no expansion, all leader types receive G , the value for governing, if no coup is staged. If a coup is launched, strong types receive $\phi_s G$, which is the value for the prize multiplied by the probability of winning a coup for a strong type (subscripted s) who does not expand.⁴⁷ Weak types, on the other hand, obtain $\phi_w G$ after a coup.⁴⁸

After expansion, if no coup is staged, both types receive $G - \iota_t$, the value of governing minus the signaling cost for weak and strong types. If a coup occurs, strong types get $\pi_s G - \iota_s$ if they fight. Here, π_s is the probability that the coup succeeds after a signal is sent and ι_s the cost of signaling for strong types. Similarly, Weak types receive $\pi_w G - \iota_w$.

Two important conditions emerge. First, in this set up, sending a public signal that the coalition has been expanded and more elites show their support for the leader affects the probability that a coup succeeds. This is meant to reflect the channel of indirect communication mentioned above: officers further down the chain of command may not receive direct credible signals that a leader is weak or strong, as those closer to the leader are better informed. The uncertainty might make them join a coup even if the leader is relatively strong. Sending the signal has the effect of persuading lower-ranking officers to not join the coup. Therefore, $\pi_s > \phi_s$ as well as $\pi_s > \pi_w$. Similarly, $\pi_w > \phi_w$ and $\phi_s > \phi_w$.

Assumption 2: $\frac{\pi_t}{\phi_t} > 1$. If a leader expands the coalition through institutions, his probability of winning is greater than if he does not.

As for the plotters' payoffs, they obtain a payoff of 0 in all situations in which they do not launch a coup. After observing a signal that the ruling coalition was extended, their payoffs for launching are $(1 - \pi_s)G - c$ if the leader is strong and $(1 - \pi_w)G - c$ if he is weak. G is the value for controlling government and it is the same for both actors. c is the cost to the plotters of fighting if the leader does not quit. If they do not observe any signal and they launch a coup, their fighting payoffs are $(1 - \phi_s)G - c$ if the leader is strong and $(1 - \phi_w)G - c$ if he is weak.

Equilibria

Before delving into the effects of asymmetric information on the expansion of the ruling coalition through institutions, I begin by analyzing the complete-information game. Under full information,

plotters would coup against weak types and choose the status quo against strong types. Strong types would thus always play non-expansion, and weak types would also do not expand if the signaling cost is more expensive than what they stand to gain, i.e. $\iota_w > G(\pi_w - \phi_w)$. They expand otherwise.

Things change when we give the leader private information about his true type. Multiple equilibria emerge, and I will focus here on those that help explain the dynamic identified in this paper. To start, let us examine what happens in the status quo, when dictators weather the course by not expanding through institutions. Plotters always launch a coup when $(1 - \phi_s)G - c > 0$, or $(1 - \phi_s) > \frac{c}{G}$, which is the threshold over which they will challenge a strongest type. Conversely, they never coup if $(1 - \phi_w) < \frac{c}{G}$. They are indifferent between either course of action when $q^* = \frac{c - G(\phi_w - 1)}{G(\phi_w - \phi_s)}$.

One obvious pooling behavior that emerges is that neither leader expands if no coup is forthcoming, as both types obtain their best payoff, G . This is akin to a 'non-crisis' equilibrium where leaders are strong enough to make plotters always play a pure strategy of no coup. Now, if $q > q^*$, the plotters' strategy after no expansion is to always coup. The dictator's best response will depend on his payoffs if he deviates and expands as well as the plotter's beliefs off the equilibrium path. A strong leader deviates when $\pi_s G - \iota_s > \phi_s G$, or $\iota_s < G(\pi_s - \phi_s)$, that is, when the costs of expanding are lower than what he stands to gain from sending the signal. Similarly, a weak leader deviates when $\iota_w < G(\pi_w - \phi_w)$. The equilibrium holds if $p > p^*$, i.e. a coup is forthcoming off the given the plotters' beliefs at that information set. If plotters were to not coup after expansion, the incentives to deviate for weak types would be greater. A pooling equilibrium on expansion also exists in which the aforementioned conditions are reversed.

Substantively, these equilibria are difficult to sustain, as we know that weak types have difficulty being able to afford the expansion.

Proposition 1: If plotters never coup, a pooling equilibrium emerges where both weak and strong leaders do not expand the coalition. The strategy profile $s_{p1} = (\sim \text{Exp.}|S; \sim \text{Exp.}|W), (\sim \text{Coup}|\sim \text{Exp.}; \sim \text{Coup}|Exp.)$ constitutes a PBE. Conversely, a pooling equilibrium exists in pure strategies when plotters always coup. If $\iota_w < G(\pi_w - \phi_w)$, all types send the signal, and $s_{p2} = (Exp.|S; Exp.|W), (Coup|\sim \text{Exp.}; Coup|Exp.)$ is a PBE.

The game's separating equilibrium displays a similar dynamic. The only separation that can be sustained is one where all strong types expand, since we know it is difficult for weak types to afford the signaling cost. In this scenario, plotters will always choose to coup after non-expansion, as they know they are facing the weakest type. After expansion, knowing they face the strong type, they will not coup.

Proposition 2: If $p = 1$, plotters always coup against weak types, who will not deviate if $\iota_w > G(\pi_w - \phi_w)$. They do not coup against the strongest type, for whom expanding is a dominant strategy when $\iota_s < G(1 - \phi_s)$. Under this conditions, the strategy profile $s_s = (Exp.|S; \sim \text{Exp.}|W), (\sim \text{Coup}|Exp.; Coup|\sim \text{Exp.})$ constitutes a PBE.

Substantively, pooling and separating behaviors are difficult to sustain primarily because weak types, by definition, cannot always afford expansion. However, one could expect that some weak types are still sufficiently capable and have enough resources to send the signal, which is not possible for the weakest types. With this intuition in mind, an interesting semi-separating equilibrium emerges in which weak types mix between expanding and not expanding but strong types always send the signal.⁴⁹

Consider the plotters strategy after observing a non-expansion. Since the weakest types are forced to separate themselves, they launch a coup. On the other hand, after witnessing an expansion, always staging a coup is not an option: plotters face the strongest types against whom they have a lower probability of winning. They either choose to not coup as a pure strategy, or mix. Never staging a coup is only possible if $p^* \geq 1$, which produces a razor-edge pooling equilibrium on expansion, which we discussed earlier. Given that plotters are facing at least some weak types against whom they may want to launch a coup, mixing is an option and the weak leader will induce them to use a mixing strategy by expanding with a certain probability. He mixes in such a way that makes plotters indifferent between staging a coup or not after expansion, or

$$t[\pi_w G - \iota_w] + (1 - t)[G - \iota_w] = \phi_w G,$$

$$t^* = \frac{G(1 - \phi_w) - \iota_w}{G(1 - \pi_w)},$$

where t is the probability that plotters stage a coup after witnessing an expansion and t^* is the value of t that makes the weak leader indifferent between expanding or not expanding. Now the leader wants to make sure he mixes between expansion and non-expansion in such a way that it makes the plotters indifferent between a coup and accepting the status quo. Since after observing a signal the plotters know they are dealing with stronger types –either strong types or weak types who can afford expansion–, the plotters update their beliefs according to Bayes' rule:

$$p = \frac{\theta}{\theta + (1 - \theta) * \beta}.$$

Here, β denotes the probability that a weak type will expand. Knowing this, plotters will be indifferent between launching a coup or not after expansion when

$$p[(1 - \pi_s)G - c] + (1 - p)[(1 - \pi_w)G - c] = 0,$$

$$\beta^* = \frac{\theta[G(1 - \pi_s) - c]}{G[\pi_w(1 - \theta) + \theta - 1] + c(1 - \theta)}.$$

At first glance, it appears that $t \in (0,1)$ in equation (1) provided ι_w is large enough, which is intuitive. If the costs to the weak type are larger than his benefit of expanding if a coup is not forthcoming after expansion –the best case scenario– t^* goes negative, meaning that weak types no longer mix. Since $G(1 - \phi_s) < G(1 - \pi_s)$, a large enough ι_w is required for the division to be less than one. If we solve for 0 and one, we'll see that $t \in (0,1)$ when $G(1 - \phi_w) > \iota_w > G(\pi_w - \phi_w)$. In other words, for the leader to mix, his expected utility needs to be greater than what he would obtain if plotters always launched a coup after expansion. He needs to benefit from the plotters' mixing strategy to have an incentive to expand.

As for β , it is also bound between 0 and 1 provided the costs of staging a coup are not too low. This, however, should not be the case, given that plotters face stronger types after an expansion, and costs will not be low. More specifically, $\beta \in (0,1)$ when $G(1 - \pi_s) > c > G[1 - \pi_w - \theta(\pi_s - \pi_w)]$. Before delving more deeply into the comparative statics, it is worth noting that β behaves intuitively: it increases when the costs of launching a coup for the plotters decrease; it decreases as the probability that the weak type wins, π_w , increases. Both of these factors make plotters less likely to coup.

Proposition 3: A semi-separating equilibrium exists in which the weakest types reveal themselves by not expanding, but both strong types and weak types who can afford to expand do so. For $\beta \in (0,1)$, strategy profile $s_{ss} =$

(*Exp.* | *S*; *Exp.* | *W* if β^* , \sim *Exp.* if not β^*), (\sim *Coup* | *Exp.* if t^* , *Coup* | *Exp.* if not t^* ; *Coup* | \sim *Exp.*) constitutes a PBE.

Taking the derivative of beta with respect to π_w confirms that increases in the probability that a weak leader survives a coup increase β^* , the mixing strategy by the dictator designed to make plotters indifferent between a coup or the status quo –see equation (4), in which a higher value for π_w will decrease the value of the denominator. Also note that the term is positive as G , c , π_t and θ are always nonnegative.

$$\frac{d\beta}{d\pi_w} = \frac{\theta G[G(1 - \pi_s) + c]}{(1 - \theta)[G(1 - \pi_w) + c]^2}.$$

Taking the derivative with respect to π_s shows that changes in π_s affect β always positively provided $c < G(1 - \pi_w)$, which is intuitive: a higher probability of winning for strong types reduces the incentives of staging a coup, allowing weak leaders to mix with a higher probability of expansion. However, this requires plotters to have enough capital to launch a coup against weak types –a credibility threshold for the coup threat.⁵⁰ What does affect β systematically are the costs of launching a coup for the plotters. As expected, increases in costs have a positive impact on β , although the effect is nonlinear and diminishes as costs increase.⁵¹

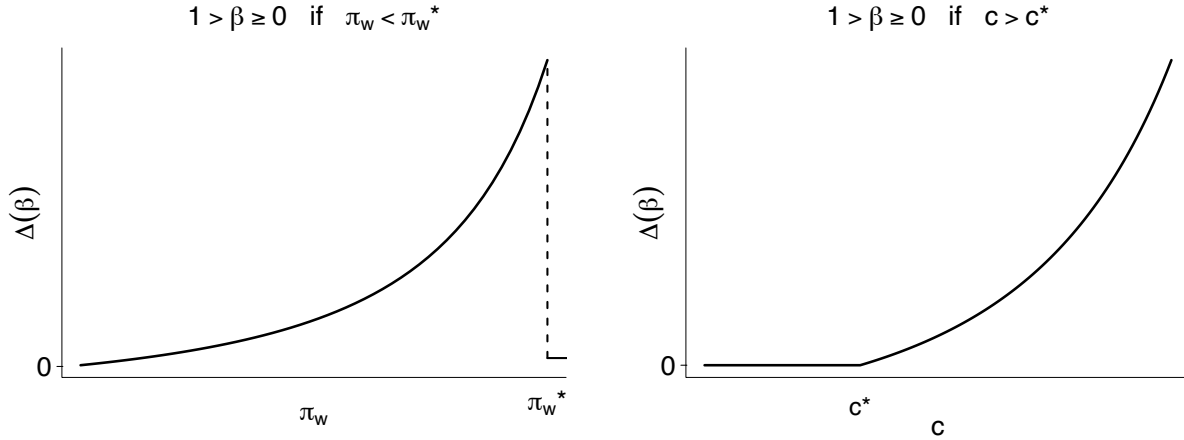


Figure 2: Changes in β as a function of the probability that a weak type survives a coup (L) and the cost of launching a coup for the plotters (R).

The insights from this equilibrium can be seen more precisely in Figure 2. Here, π_w^* and c^* are the points at which the costs for the plotters are higher than $G(1 - \pi_w)$, leading to no coup after expansion. Increases in π_w^* have a positive exponential effect on beta as the probability that a weak type wins after expansion approaches coin toss levels -0.5 . After that, costs are always greater than the payoff of fighting, so π_w no longer has an effect on β . Similarly, costs have a positive effect on β after c^* , when the plotters have an incentive to mix: $c > G[1 - \pi_w - \theta(\pi_s - \pi_w)]$.

Now, remember that $t^* = \frac{G(1-\phi_w)-i_w}{G(1-\pi_w)}$. This is the plotters' strategy that makes the weak leader indifferent between expanding and not expanding. Provided $i_w < G(1 - \phi_w)$, increases in π_w have a *negative* impact on t .⁵² Coups occur less often as weak types get stronger after expansion. Thus, by making a reasonable assumption that strong types always expand because they can afford it, we obtain an intuitive semi-separating equilibrium. In it, the weakest types reveal themselves by not expanding, and both strong types and some weak types expand. The model thus

shows that under uncertainty, there exists a weak type that can afford to expand and institutionalize and benefit directly from doing so. An interesting nuance of the model is that by sending the signal, a dictator manages to increase his probability of surviving a coup. Another nuance is that uncertainty is placed with the plotters, rather than the leader, who has an incentive to (1) avoid a coup lottery even if he is strong and (2) benefit from the plotters' uncertainty and send the signal anyway if he is weak and can afford it.

The formal model introduced in this article shows how formal institutions in authoritarian regimes emerge and expand as signaling tools used purely for information propagation. This stands in contrast to arguments that they exist to provide credible commitment mechanisms for the distribution of rents. It is important, however, to consider testable hypotheses that are unique to the institutions-as-signals mechanism. One is that, as political parties expand within dictatorship, so should counter-balancing security institutions that further protect the leader against coups. While reducing the overall probability of a coup, expanding non-military institutions may also increase the likelihood of civil coups or coups launched by executive police forces instead of military generals. These implications, if tested, could provide important findings for the literatures on coup-proofing⁵³ and how coups unfold once launched.⁵⁴

Institutions Under Trujillo In The Dominican Republic

In this article, I contend that dictators expand the coalition in times of weakness to weaken the relative position of the plotters and use formal institutions to signal strength to the broader coalition. The case of Rafael Trujillo, which I review now, illustrates this argument well. I will focus on two specific events: Trujillo's removal of Vásquez from power in early 1930 and the steps he took to consolidate power afterward.

When Rafael Trujillo rose to power in the Dominican Republic in 1930, the country was politically and institutionally underdeveloped. Internecine power struggles between *coludo* and *bolo* caudillos had led to a period of deep political instability starting in 1899. Eleven presidents ruled the country between that year and 1914, when US occupation began. Trujillo trained with the American forces and rose through the ranks during Horacio Vásquez's six-year tenure after the US left in 1924, becoming the commander in chief of the armed forces in 1927.⁵⁵ As the great depression weakened Vásquez, whose decision to seek an extension on his term limit proved unpopular, factions developed that sought to overthrow him. A nationalist movement led by Rafael Estrella Ureña launched a revolt on February 23, 1930, and Trujillo seized the moment to strike a pact with Estrella and take power for himself.

Trujillo's coup in 1930 is a vivid example of why leaders (1) are constantly under threat from other members in the ruling coalition and (2) they do not know who these plotters are. I argue that, precisely for these reasons, leaders are better off using an expand and signal strategy over other potential solutions, i.e. selective purges and co-optation through increased rents. By making Trujillo commander in chief of the armed forces in 1927, Vásquez intended for him to become his second in command and his most loyal servant. Yet, in early in 1930, Trujillo began to plot against Vásquez by forming an alliance with Estrella's movement. He allowed Estrella's forces to march freely on Santo Domingo, while telling the President that he was doing everything within his power to stop them. As Crassweller describes, Vásquez refused to believe, until the very last second, that Trujillo was behind the plot to overthrow him; he only realized it when Trujillo himself appeared in his office and asked him to leave.⁵⁶

While he had the support of Estrella's coalition and the army, Trujillo's position was not consolidated. New rulers have coups launched against them more frequently⁵⁷ and the effects of

the Great Depression could sow discontent quickly and erode his position. Moreover, Trujillo had one main competitor, Estrella himself, whose movement he used to depose Vásquez. Estrella was the only figure who had the prestige and political capital to pose a difficult challenge to Trujillo's rule. While Trujillo controlled the armed forces, Estrella had the charisma, the coalition, a small political party –the Patriotic Coalition of Citizens– and a position of power. As part of the deal, Estrella was made interim President and Trujillo would run as a candidate in the August 1930 elections, partly because the US State Department refused to recognize a potential Trujillo administration.⁵⁸ Estrella emerged, therefore, as the main threat to Trujillo's path to the Presidency.

After becoming President in August 1930, through elections that he helped rig,⁵⁹ Trujillo set out to consolidate his power. Indeed, what Trujillo did next helps illustrate precisely the expand-and-signal strategy I describe in this paper. Trujillo first dissolved the Patriotic Coalition of Citizens, Estrella's party and the one which had brought him to power. He then founded the *Partido Dominicano* and established himself as its leader. The party would soon reach a membership of 1,302,751 Dominicans, as most citizens were required to sign up. The political elite that emerged was a mix of new *Trujillistas* from Santo Domingo and an old rural elite that fit uneasily in the new scheme. Trujillo held a deep disdain for the old 'aristocracy' and sought to undermine their power by creating a powerful urban elite made up of people whom, like himself, had risen from the lower classes.⁶⁰ He organized the party in one central, 23 provincial, and 69 communal *juntas*. Further local and district-level groups were organized. Leadership of these subgroups became equivalent to social standing, and occasional purges ensured every provincial and national leader remained alert and loyal. The expansion of Trujillo's coalition from a small centralized group of supporters in the Patriotic Coalition of Citizens, in which Estrella Ureña

competed for leadership with Trujillo, to a wide-ranging complex organization with many more members like the Dominican Party took place in less than a year.

The relative power of Estrella and his coalition dwindled as the party elite grew in numbers and in support for Trujillo. Indeed, Estrella's downfall was precipitous. After agreeing to transfer the Presidency to Trujillo in August 1930 after 5 months as acting President, he became the Vice-President. He resigned from the position in 1932 after fleeing to Cuba in late 1931. He returned from exile in 1940 and Trujillo made him Supreme Court Justice, but tensions between them arose again after Estrella reignited his old Nationalist Party and died in 1944 in suspicious circumstances.⁶¹

More generally, while Trujillo is remembered as one of the most ruthless and long-lasting dictators in Latin America during the twentieth century, his rule was not solely based on repression executed by a small coterie of sycophants. Quite to the contrary, he built a relatively complex network of regional and national institutions and used it to manage his power. In fact, in the Democracy and Dictatorship dataset,⁶² Trujillo's Dominican Republic is coded as one of the most institutionalized dictatorships. Elections were held to elect representatives, multiple parties were allowed both *de jure* and *de facto* for long stretches of time, and a functioning legislature existed that could enact its own laws –with the consent, of course, of the benefactor. This network of institutions, I argue, was useful to Trujillo not to prevent domestic conflict and improve policy-making generally. For the former, he had the Military Intelligence Service, a sharp and spineless police force tasked with repressing all forms of dissent. For the latter, he could find ways to strong-arm any lawmaker into submission.⁶³ Rather, institutions were used as signaling devices to members within and without his immediate support circle that any deviation from the most absolute loyalty would be greatly punished.

The Dominican Party was Trujillo's main tool for coalition expansion. Another was the Parliament, which slowly increased from 31 representatives and 12 senators in 1930 to 58 and 23 respectively in 1957, just four years before Trujillo's assassination. Why the expansion? While the legislature retained powers to enact law, and even if multiple parties were allowed at different points in time, all of its members were staunch Trujillo loyalists. In the only election in which the Partido Dominicano did not obtain one hundred percent of the vote, in 1947, no party obtained enough votes to enter either chamber of Parliament. Rather, these formal institutions were in place precisely as signaling devices. In entering them, the elites that were part of these institutions made their support for Trujillo explicit by becoming invariably linked with the regime. While many survived the country's transition to a weak democracy in the second half of the 1960s, most notably Joaquín Balaguer, the outcome would likely have been the opposite had a rival faction taken power via a coup. Moreover, the institutions convened on a regular basis and were part of the political debate of the time. Senators were important people and scandals involving them fascinated the popular imagination. Between the elites in the party organization and the elites in Parliament, few were left to contest the regime consistently from the outside, which explains why Trujillo was never under real pressure to co-opt domestic opposition. Plotters from inside the regime had the unenviable task of convincing the rank-and-file that Trujillo was weak enough that a coup against him would succeed. By creating such strong and visible institutions, Trujillo made himself look strong in the eyes of a majority of the armed forces and the broader populace. The three coup attempts he faced in the first decade in power were easily and quickly defeated.⁶⁴

A relevant juncture in Trujillo's dictatorship came in 1948, perhaps when Trujillo was at his strongest, with world sugar prices booming after World War II. Multiple parties were legally allowed in the Dominican Republic under Trujillo, but at different points in time, parties other than

the *Partido Dominicano* were repressed in practice. For the 1947 election, Trujillo allowed multiple parties to run. World War II had a relatively negative effect on the state's finances, leading to difficulties between 1943 and 1947. Trujillo decided to create the image of integration and plurality by allowing multiple parties to run. The Democratic National Party of Rafael Espaillat, known as *navajita* (little knife), obtained 3 percent of the vote. Espaillat was a loyalist who became chief of the secret service. Another party, the National Labor Party, obtained also 3 percent of the vote. Its 'leader', Francisco Prats Ramírez, was also a loyalist who had also been President of the *Partido Dominicano*. Trujillo won the election with over 93 percent of the vote, and neither of the other two parties won sufficient votes to obtain a single seat in the legislature. After 1948, with the country's economic fortunes reversed and the election won, any party other than Trujillo's Dominican Party was not allowed to operate in practice, even if they remained legal. It was not until 1961, the year of Trujillo's death, that multiple parties operated both de jure and de facto again.⁶⁵

Conclusion

The main theoretical contribution that this article wants to make is that autocrats, when faced with a particularly difficult predicament, have often resorted to a relatively unknown and counterintuitive tactic to retain power: they expand, rather than shrink, the ruling coalition and use formal institutions purely as signaling devices meant to generate commitment from new members and communicate credibly to the rank-and-file that the leader is too strong for a coup to succeed. Many instances of this exist throughout history. When Rafael Trujillo came to power, for example, in the Dominican Republic in 1930, he moved quickly in the first six months of his rule to create a large party apparatus and expand the country's senate. In the case of Morocco, which Gandhi

uses in her book,⁶⁶ King Mohammed V faced strong internal opposition upon his return to the country as rightful King in 1957 just after independence from France. Within a few months of his arrival, to counter the powerful movement that sought to impede his reign, he established the country's first Parliament and filled it with 75 loyalists. The celerity with which the institution was created, coupled with the fact that loyalists were placed in positions of influence, lends credence to the idea that the institution served as a way to expand the coalition, weaken the relative power of the opposition group, and tell potential plotters that staging a coup was the wrong choice.

The formal model I have introduced in this paper captures both of these relevant dynamics. On the one hand, and most importantly, using institutions as a public signal that the ruling coalition has expanded directly increases the probability of winning a coup, since more members of the ruling coalition and the rank-and-file perceive the signal and decide not to join a coup if it is staged. In doing so, the payoffs for staging a coup for the plotters are lower after the coalition has expanded, which makes them more likely to not stage a coup in the first place.

The main results of this paper are straightforward and intuitive: very strong leaders, who enjoy enough support from their coalition to survive virtually any coup, prefer not to institutionalize. The weakest leaders, who cannot afford the expansion, will not expand. Given the uncertainty around the outcome of a coup, there is a weak and a strong type that can afford to send the signal and do so to obtain a higher probability of surviving the coup or deterring it altogether.

This article bridges an important gap between the literature on coups and dictatorial consolidation and the one on power-sharing institutions in authoritarian regimes. I provide a new theory for the emergence of a very specific set of formal power-sharing institutions in dictatorship: formal organizations such as political parties and legislatures created or completely reconstructed by the leader. Especially important is to consider actions by a leader in times of crisis, particularly

at the outset of rule and after a severe shock. In these times, fewer leaders are likely to be strong enough to survive any coup, and visible dwindling support makes more leaders likely to engage in signaling of the type advanced in this paper. More leaders, that is, are likely to fall within the range of types that decide to expand the coalition in times of crisis. Once created, these institutions are likely to persevere at least during the leader's tenure.

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² Carles Boix and Milan Svobik, "The Foundations of Limited Authoritarian Government: Institutions, Commitment, and Power-sharing in Dictatorships," *The Journal of Politics* 75 (April 2013), 300–16.

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⁴ Singh, 2014.

⁵ Little, 2017.

⁶ See Ronald Wintrobe, *The Political Economy of Dictatorship* (New York: Cambridge University Press, 2000); Bruce Bueno De Mesquita, Alastair Smith, James D. Morrow and Randolph M. Siverson, *The Logic of Political Survival* (Boston: MIT press, 2004); Milan W. Svobik, "Power Sharing and Leadership Dynamics in Authoritarian Regimes," *American Journal of Political Science* 53 (April 2009), 477–94.

⁷ Svolik, 2009.

⁸ Stephen Haber, “Authoritarian Government,” in Barry Weingast and Donald Wittman, eds., *The Oxford handbook of political economy* (Oxford: Oxford University Press, 2006).

⁹ Leonardo R. Arriola, “Patronage and Political Stability in Africa,” *Comparative Political Studies* 42 (October 2009), 1339–62.

¹⁰ Gandhi, 2008.

¹¹ Little, 2017; Singh, 2014.

¹² Svolik, 2009.

¹³ Daron Acemoglu, Davide Ticchi and Andrea Vindigni, “A Theory of Military Dictatorships,” *American Economic Journal: Macroeconomics* 2 (January 2010), 1–42; Timothy Besley and James Robinson, “Quis Custodiet Ipsos Custodes? Civilian Control over the Military,” *Journal of the European Economic Association* 8 (April-May 2010), 655–63.

¹⁴ Jonathan Powell, “Determinants of the Attempting and Outcome of Coups d’État,” *Journal of Conflict Resolution* 56 (December 2012), 1017–40.

¹⁵ Barbara Geddes, “What Do We Know about Democratization after Twenty Years?” *Annual review of political science* 2 (1999), 115–44; Little, 2017.

¹⁶ See Juan J. Linz, “Totalitarian and Authoritarian Regimes,” in Fred Greenstein and Nelson Posby, eds., *Handbook of political science* (Reading, Mass: Addison-Wesley Pub. Co., 1975), 182-207; Guillermo O’Donnell, *Modernization and bureaucratic-authoritarianism: Studies in South American politics* (Berkeley: University of California Press, 1973); Steven Levitsky and Lucan Way, “The Rise of Competitive Authoritarianism,” *Journal of Democracy* 13 (April 2002), 51–65; Steven Levitsky and Lucan Way, *Competitive Authoritarianism: Hybrid*

Regimes after the Cold War (New York: Cambridge University Press, 2010).

¹⁷ Gandhi, 2008.

¹⁸ Boix and Svobik, 2013.

¹⁹ Jennifer Gandhi and Adam Przeworski, “Cooperation, Cooptation, and Rebellion under Dictatorships.” *Economics & Politics* 18 (March 2006), 1–26.

²⁰ Wright, 2008.

²¹ Joseph Wright and Abel Escribà-Folch, “Authoritarian Institutions and Regime Survival: Transitions to Democracy and Subsequent Autocracy.” *British Journal of Political Science* 42 (February 2012), 283–309.

²² Jason Brownlee, *Authoritarianism in an Age of Democratization* (New York: Cambridge University Press, 2007), 33.

²³ See Geddes, 1999.

²⁴ Dan Slater, *Ordering power: Contentious politics and authoritarian leviathans in Southeast Asia* (New York: Cambridge University Press, 2010).

²⁵ Wright and Escribà-Folch, 2012.

²⁶ Beatriz Magaloni, *Voting for autocracy: Hegemonic party survival and its demise in Mexico* (New York: Cambridge University Press Cambridge, 2006).

²⁷ Haber, 2006.

²⁸ Michael Albertus and Victor Menaldo, “If You’re against them You’re with us: The Effect of Expropriation on Autocratic Survival.” *Comparative Political Studies* 45 (August 2012), 973–1003.

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- ²⁹ Haber, 2006, p. 697.
- ³⁰ Svulik, 2009; Little, 2017.
- ³¹ Robert D. Crassweller, *Trujillo: The life and times of a Caribbean dictator* (New York: Macmillan, 1966).
- ³² Little, 2017; Singh, 2014.
- ³³ Geddes, 1999.
- ³⁴ Little, 2017.
- ³⁵ Singh, 2014.
- ³⁶ Ibid.
- ³⁷ Institutional expansion occurs through existing institutions, the creation of new institutions, or replacing old institutions with new ones.
- ³⁸ Scott Gehlbach and Philip Keefer, “Investment without Democracy: Ruling-party Institutionalization and Credible Commitment in Autocracies.” *Journal of Comparative Economics* 39 (June 2011), 123–39; Gandhi, 2008; Wright, 2008.
- ³⁹ Brownlee, 2007; Gandhi 2008; Gelbach and Keefer, 2011; Scott Gehlbach and Philip Keefer. 2012. “Private Investment and the Institutionalization of Collective Action in Autocracies: Ruling Parties and Legislatures.” *The Journal of Politics* 74 (April 2012), 621–35; Wright, 2008; Wright and Escribà-Folch, 2012.
- ⁴⁰ Extending the logic to other institutions, such as electoral processes or the judiciary (Ginsburg and Moustafa 2008), is beyond the scope of this paper. See Jennifer Gandhi and Ellen Lust-Okar, “Elections under Authoritarianism.” *Annual Review of Political Science*, 12 (2009) 403–22; Tom Ginsburg and Tamir Moustafa, *Rule by law: the politics of courts in authoritarian regimes*. (New York: Cambridge University Press, 2008).

⁴¹ See Ellen Lust-Okar, *Structuring Conflict in the Arab World: Incumbents, Opponents, and Institutions*. (New York: Cambridge University Press, 2005).

⁴² Abel Escribà-Folch, “Repression, Political threats, and Survival under Autocracy.” *International Political Science Review* 34 (November 2013), 543–60; Erica Frantz and Andrea Kendall-Taylor, “A Dictator’s Toolkit: Understanding how Co-optation Affects Repression in Autocracies,” *Journal of Peace Research* 51 (May 2014), 332–46.

⁴³ See Singh, 2014.

⁴⁴ Milan W. Svobik, *The Politics of Authoritarian Rule* (New York: Cambridge University Press, 2012).

⁴⁵ Singh, 2014.

⁴⁶ The size of the ruling coalition may account for part of the variation in authoritarian regime types. Highly personalist regimes, such as Trujillo’s, tend to function through large coalitions and bureaucracies. To keep everyone at bay and prevent coups and revolts, the leader may require higher levels of adoration. This counter-balances the risk of enlarged coalitions. Monarchies and other regimes with small inner circles are generally less personalist.

⁴⁷ I have not included a cost to the leader of fighting for simplicity; adding it does not substantively alter the results, as the probability captures this to a large extent. Plotters do have a cost to reflect the risk they take in attempting a coup, as otherwise they would face no penalty.

⁴⁸ I have simplified the game so that all leaders attempt to fight. This makes the model more workable without altering the results. In fact, because weak leaders here are stronger, finding an equilibrium in which they prefer to expand is harder under this assumption. A negative

cost could be included to captures the cost of losing control of government plus other costs associated with resigning, such as restrictions on freedom, audience costs that may preclude him from holding office in the future, or exile.

⁴⁹ I assume that all strong types send the signal, $\iota_s < G(\pi_s - \phi_s)$, to keep the model tractable.

Since the *relative* cost of expanding is lower for strong leaders, this assumption does not affect the results.

⁵⁰ The derivative of β with respect to π_s is $\frac{d\beta}{d\pi_s} = \frac{\theta G}{(\theta-1)[G(\pi_w-1)+c]}$.

⁵¹ The derivative of β with respect to c is $\frac{d\beta}{dc} = \frac{\theta G(\pi_s - \pi_w)}{(1-\theta)[G(\pi_w-1)+c]^2}$. Increases in c decrease the denominator. The term is positive.

⁵² The derivate of t with respect to π_w is $\frac{dt}{d\pi_w} = \frac{G(1-\phi_w)-i_w}{G(1-\pi_w)}$.

⁵³ See James T. Quinlivan, “Coup-proofing: Its Practice and Consequences in the Middle East.” *International Security* 24 (Fall 1999), 131–65; Powell, 2012.

⁵⁴ Singh, 2014.

⁵⁵ Richard Lee Turits, *Foundations of Despotism: Peasants, the Trujillo Regime, and Modernity in Dominican History* (Palo Alto, CA: Stanford University Press, 2003).

⁵⁶ Crassweller, 1966.

⁵⁷ Little, 2017.

⁵⁸ Crassweller, 1966.

⁵⁹ Michael R. Hall, *Sugar and Power in the Dominican Republic: Eisenhower, Kennedy, and the Trujillos* (Westport, CT: Greenwood Publishing Group, 2000).

⁶⁰ Ibid.

⁶¹ Crassweller, 1966.

⁶² José Antonio Cheibub, Jennifer Gandhi and James Raymond Vreeland, “Democracy and Dictatorship Revisited,” *Public Choice* 143 (April 2010), 67–101.

⁶³ Turits, 2003; Crassweller, 1966.

⁶⁴ Crassweller, 1966.

⁶⁵ Cheibub, Gandhi and Vreeland, 2010; Crassweller, 1966; Lauren H. Derby, *The Dictator’s Seduction: Politics and the Popular Imagination in the Era of Trujillo* (Durham, NC: Duke University Press, 2009); Turits, 2003.

⁶⁶ Gandhi, 2008.