Transparency, Protest and Democratic Stability*

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Abstract

Democratic rule is maintained so long as all relevant actors in the political system comply with the institutional rules of the game – democratic institutions must be self-enforcing. We examine the role of transparency in supporting a democratic equilibrium. Transparency improves the functioning of elections: in transparent polities, elections more effectively resolve adverse selection problems between the public and their rulers. Transparency increases popular satisfaction with democracy and inhibits challenges to the democratic order. We provide a game-theoretic model, test these claims, and find they enjoy empirical support. Transparency is associated with a reduction in both the probability of democratic collapse and of the irregular removal of democratic leaders. Transparency stabilizes democratic rule.

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When and why do democratic regimes enjoy periods of stable rule? When, contrastingly, will democracy be prone to instability and autocratic reversions? Recent events in Thailand, Egypt, and Ukraine render these questions, which have long been at the center of political science, all the more relevant.

For democracy to be stable, it must be self-enforcing: all relevant political actors agree to comply with the 'rules of the game' (Linz, 1978; Schedler, 1998; Schmitter, 1992). When all other actors choose to comply with democratic norms, no one actor can have an incentive to unilaterally deviate (Przeworski, 1991, 2005; Weingast, 1997).

Recent work focuses on the compliance of political elites with the democratic equilibrium. Two theoretical perspectives dominate this literature: One emphasizes intertemporal trade-offs faced by political leaders. For democracy to remain stable, elites facing electoral defeat must prefer to accept this (temporary) set-back and await the (uncertain) prospect of future electoral victory, rather than resorting to force to implement their preferred agenda (e.g., Boix, 2003; Boix and Stokes, 2003; Przeworski, 1991, 2005; Przeworski, Rivero and Xi, 2013; Scartascini and Tommasi, 2012; Wantchekon, 2004). The other perspective follows Weingast (1997) in emphasizing the populace's role in preventing elite encroachments on democratic freedoms. For democracy to survive citizens must be willing to act against anti-democratic challengers (see, for instance, Fearon, 2011; Hyde and Marinov, 2014; Little, LaGatta and Tucker, 2015).

In this paper, we take a different tack. Here we focus on the *public's* satisfaction with the rules of the (democratic) game. For democracy to remain an equilibrium, members of the electorate must prefer to accept election results, rather than turning to undemocratic means of ousting their leaders. Absent this preference, citizens might turn to the streets and directly seek to remove elected leaders through mass protest (Svolik, 2013). More commonly, citizen dissatisfaction and protest might open the door to coups by anti-democratic elites, as recent events in Egypt and Thailand can attest (Meirowitz and Tucker, 2013). A lack of confidence in the efficacy of electoral institutions implies that citizens will be unwilling to check encroachments by anti-democratic elites and indeed may support those who would subvert democracy.

We emphasize the importance of transparency – which we define as the availability of policy-relevant information on aggregate economic outcomes – to the stabilization of democracy. High levels of transparency ensure that elections are effective in disciplining democratic leaders. Leaders who have performed poorly are more likely to be removed via the ballot box, and those who perform well are more likely to be retained, as transparency rises. Because elections and extra-constitutional actions act as substitute mechanisms by which the populace might discipline their leaders, when elections perform better, the need to resort to the streets declines. As citizen sat-

isfaction with democratic institutions rises, the tendency to protest against the sitting leadership – as well as the frequency of coups taken in the wake or in anticipation of such protests – declines.

Empirically, we examine the survival of democratic spells, using the coding of Przeworski and Limongi (1997) (see also Boix and Stokes, 2003). The results confirm our theory: More transparent democracies are less likely to revert to autocracy. We additionally demonstrate that leaders in transparent democracies are less likely to be removed through extra-constitutional methods, and more likely to experience constitutional removal, than their counterparts in opaque democracies.

Transparency and the Legitimacy of Elections

Democracy requires compliance on the part of the citizenry. Of course, democracy may be overthrown by members of the elite, via a coup or autogolpe. However, citizens may also take action against democratically elected leaders. Citizens may be motivated to turn to the streets due to the perception that democratic institutions have proved ineffective in disciplining their leaders.[1] Alternatively, citizens who become disaffected with democracy may support anti-democratic factions or elites who challenge democratic institutions, or may fail to rally in support of democracy when such challenges emerge. Indeed, citizen mobilization and elite challenges often go hand-in-hand (Casper and Tyson, 2014). Coups that follow protests are a particulary common cause of democratic breakdown (Linz, 1978).

For these reasons, theorists of democratic consolidation stress the importance of public attitudes toward democracy.[2] Diamond (1994, 15) contends that, "*Consolidation* is the process by which democracy becomes so broadly and profoundly legitimate among its citizens that it is very unlikely to break down." Linz (1978, 17) argues that, "Democratic legitimacy ... requires adherence to the rules of the game by *both a majority of citizens* and those in positions of authority..." (emphasis added). When citizens disregard democratic norms, or hold democratic institutions in low esteem, the democratic order is jeopardized. Svolik (2013, 686) terms this danger the 'trap of pessimistic expectations,' and argues that "[w]hen it occurs, it undermines the public's willingness to defend democracy against attempts to subvert it, thus eliminating a key check on politicians or

[1] For instance, many Egyptians pointed to the Morsi administration's incompetence and consolidation of power as causes for the protests that ultimately led to his ousting. (See "Egypt's Tragedy,", *The Economist,* July 6, 2013.) Thai protesters similarly claimed that democracy proved an insufficient means of limiting the claimed abuses of the Shinawatra government. (See "A Symbolic Exercise," *The Economist,* February 2, 2014.)

[2] We use the 'narrow' definition of democratic consolidation in this paper, as laid out by Schedler (1998). We define consolidation as simply reflecting the stability, or predicted stability, of electoral rule. We thus use the terms 'democratic stability' and 'democratic consolidation' interchangeably.

groups with authoritarian ambitions."

While the literature on democratic consolidation has devoted substantial attention to the role of public attitudes in sustaining democracy, it has paid less attention to the forces that shape these attitudes. In this paper we argue that these attitudes are a function, in part, of the informational environment in which democracy is situated. Where large amounts of information on the government's performance is made publicly available – and is known to be publicly available – democratic elections will function relatively well. Elections will enable citizens to throw the bums out, should their leaders, in fact, prove to be bums (Przeworski, Stokes and Manin, 1999). In transparent polities, therefore, elections will function well – garnering outcome-legitimacy for the constitutional system.

Moreover, since information is publicly available, citizens will recognize that their fellows will also be acting in an informed manner in the voting booth. Transparency makes it more difficult to castigate portions of the electorate as irrational or ill-informed, enhancing the procedural legitimacy of democratic rule.

In what follows, we consider a political environment in which the voters, *en masse*, prefer to reelect competent leaders and evict the incompetent. Each voter has his or her own sources of information about how well the leader is doing – a private signal – and the public at large has information that is commonly known and shared by all – a public signal. More transparency means that the public signal is a more reliable, stronger signal.

When the polity is opaque, the public signal is not very helpful. Citizens must necessarily rely on their private experiences (signals) to infer the state of the economy as a whole. These private signals largely dictate their behavior in the voting booth. Poor leaders are therefore likely, through good luck, to be retained and good leaders, through bad luck, to be removed. As public information becomes more available – i.e., as the polity becomes more transparent – citizens' will increasingly rely on the (increasingly informative) public signal rather than their (idiosyncratic) private signals. Voting behavior will therefore align more closely with incumbent performance, such that good leaders are more likely to be retained and poor leaders to be removed.

Even in the most transparent polities, however, incompetent – or corrupt – incumbents may be retained with positive probability. This probability shrinks as transparency rises, but never falls to zero. Individual citizens may be fooled by bad luck – the realization of their public and private signals may indicate that a bum of an incumbent should be retained.

However, citizens gain additional information about incumbent performance by virtue of the election process itself. An individual learns of others' evaluations of the incumbent – directly through election returns, as well as indirectly through campaign rallies and displays of public

enthusiasm for candidates. Citizens therefore learn more about the 'type' of incumbent they face by the conclusion of the election process – in our model they learn this type with certainty. Incumbents who perform well in elections, given the information publicly available *ex ante*, can be inferred to be good types; while those who under-perform can be inferred to be bad (Fearon, 2011). Each citizen recognizes that the incumbent's over (under) performance in the election must be attributed to the positive (negative) private signals received by her fellows. As the size of the electorate grows, the amount of information conveyed through the election process rises. Elections act as a means of aggregating the private information of all voters.

It is possible, therefore, that at the conclusion of an election, citizens arrive at the realization that they have just re-elected a bad leader. In particular, this will occur when leaders win elections by slim margins – smaller than would be expected by the public signal of their prior performance. When this takes place, elections lose outcome-legitimacy and citizens grow disaffected with democracy.

Of course, if, at the close of elections, citizens realize they have retained a good leader (or removed a bad one), no such disaffection arises. The electoral system has served its role in screening politicians well. Since the probability that a bad type is retained falls in transparency, so too then does the risk of citizen disaffection.

In our theoretical model, we then consider the incentives of citizens to arise, in mass, against the government. We focus on this form of threat in our model because it is likely to pose a 'hard case' for our theory. This is because, while information may improve the functioning of the electoral system, existing work also demonstrates that public information may ease coordination problems among the populace, facilitating popular protest. For instance, in a closely related model, Hollyer, Rosendorff and Vreeland (2015) find that transparency *increases* the risk of mass unrest in autocracies. Hence, if transparency unambiguously reduces the threat of mass mobilization, it is likely to also reduce other threats to the democratic order.

Of course, democratic regimes also often collapse as a result of coups or autogolpes (Svolik, 2015). We believe our theory also speaks to these, alternative, threats to the democratic regime. Coups against democratic regimes often take place during or immediately following mass protest – a sequence of events Linz (1978) points to as the most common means of democratic collapse. Events in recent years in Thailand, Egypt and Ukraine would seem to attest to this correlation. Casper and Tyson (2014) provide a theoretical model, based on an informational logic, as to why this is the case: protests help to inform elites of the likely durability of the regime – the value of a coup to these elites rises as protest participation increases. More generally, a disaffected citizenry is unlikely to buttress the democratic regime against anti-democratic challengers, as argued by

Svolik (2013) and Weingast (1997) (on a related point, see Meirowitz and Tucker, 2013). So our argument holds that transparency insulates democratic regimes against *both* popular protest and elite coups.

We stress the relationship between the performance and the legitimacy of electoral institutions. As Diamond notes, "the democratic system must produce sufficiently positive policy outputs to build broad political legitimacy," (1999, 76). We acknowledge legitimacy may take on a broader definition, encompassing a logic that is not merely instrumental.[3] Our contention here is merely that, *ceteris paribus*, elections are more likely to prove legitimate when they adequately solve issues of adverse selection.

Existing Literature: Democratic Consolidation

This paper relates to a literature on democratic consolidation that is far too vast to fully survey here. We note, however, that our emphasis on the importance of the legitimacy of elections in the eyes of the citizenry is widely shared in this literature. A consensus holds that democracies become consolidated as political actors come to accept the 'rule of the [democratic] game' (Diamond, 1994, 1999; Linz, 1978; O'Donnell, 1996; Schedler, 1998; Schmitter, 1992). Differences emerge, however, as to what factors promote such legitimation. Some emphasize the importance of civil society (Diamond, 1994) or associational groups (Schmitter, 1992), others the extent of participation in electoral processes (Wright, 2008). We share an emphasis on the importance of agency problems (government efficacy) under democracy with Linz (1978) and Diamond (1999). Our contribution is to stress the role transparency plays in stabilizing democracy.

Our approach perhaps bears the closest resemblance to Svolik (2013), who argues that democracies can fall into a 'trap' in which citizens' low esteem for democratic institutions encourages the entry of corrupt or incompetent politicians into political life, reinforcing citizens' initially low opinions. Analogously, Meirowitz and Tucker (2013) argue that experiences of misrule following democratization may lead citizens to become disenchanted with the quality of the universe of possible elites, and thus unwilling either to protect democratic institutions or to rise up against corrupt leaders.

Other authors emphasize the importance of structural factors to democratic survival (Huber, Rueschemeyer and Stephens, 1993; Lipset, 1959; Moore, 1966; Slater, 2009). Most significantly, economic development is strongly (positively) correlated with democratic survival (Przeworski

[3] Experimental evidence suggests that elections may confer legitimacy, regardless of their outcomes (Grossman and Baldassarri, 2012; Olken, 2008).

et al., 2000). Contrastingly, Slater (2009) contends that the autonomy of communal elites explains the success or failure of democratization. We abstract away from such concerns in our theoretical account. We do so not because we think structural factors unimportant, but because they are tangential to the mechanisms that are our focus.

We also draw heavily on a literature that emphasizes the informational problems inherent in mass mobilization, and the role of elections in addressing these problems. Early models of protest noted the coordination issues inherent in mobilization (Kuran, 1991; Lohmann, 1993).[4] A growing literature stresses the role of elections in resolving these problems. Fearon (2011) (building on the insights of Weingast, 1997) points out that elections can enable citizens to discipline rulers who infringe on the democratic rules of the game (see also, Bunce and Wolchik, 2011; Egorov and Sonin, 2012; Hyde and Marinov, 2014; Little, LaGatta and Tucker, 2015; Tucker, 2007).

Within this literature on information and protest, we particularly draw on Hollyer, Rosendorff and Vreeland (2015), who examine the relationship between transparency and regime stability in autocracies. Here we introduce elections to the game form offered in that earlier work, and empirically, we use the same definition of transparency. The effect is to highlight the fundamental role political institutions play in moderating the relationship between information and unrest. Transparency *stabilizes* democracies, even as it *destabilizes* autocracies.

Definition of Transparency

Transparency has many facets, and we stress the importance of using a measure of transparency that reflects the aspect employed by our theory. We use the term transparency to mean the disclosure of information, which is relevant to policy outcomes, to the mass public. Information must be credible if it is to cause citizens to update their beliefs – otherwise, it will simply be disregarded. Information must be pertinent to public policy if it is to enable citizens to update their beliefs regarding government performance, and thus influence their voting behavior. Citizens must be able to access such information. Moreover, it must be common knowledge that such information is disclosed if any individual citizen is to believe that *others* are similarly able to make informed voting decisions.

We particularly emphasize the importance of the availability of information on aggregate policy *outcomes*. In many treatments of political accountability – particularly where the informational

[4] A more recent literature employs a global games (Morris and Shin, 2001) informational structure to model protests. Examples include Bueno de Mesquita (2010), Shadmehr and Bernhardt (2011, 2014) and Little, LaGatta and Tucker (2015). Shadmehr and Bernhardt (2015) similarly consider informational availability – in their example reflecting state censorship – and its relation to mass mobilization.

environment is an exogenous parameter in the model and the distribution of any noise in the outcome observed by the public is additively separable from the quality of government efforts they seek to infer – greater information regarding these outcomes increases government incentives to exert effort on the public's behalf (Dewatripont, Jewitt and Tirole, 1999; Holmstrom, 1982). This is in contrast to information about the *policies* that are adopted or on details of the policy-making process, which may distort government decision-making (Prat, 2005; Stasavage, 2004). Insofar as information pertaining to policy outcomes induces governments to adopt desirable policies, such information improves citizen welfare. Though, in some circumstances, stronger incentives for 'good' government behavior may reduce the ability of citizens to select the best possible representatives, as 'good' types of agents pool with 'bad,' implying that the welfare implications of information are more mixed over the long term (Ashworth and Bueno de Mesquita, 2014). Information on *aggregate* outcomes is most likely to be useful when policies are complex and have consequences for the broad populace – rather than highly targeted groups (Hollyer, Rosendorff and Vreeland, 2013). Since our emphasis is on the broad performance of the government – and we will particularly focus on economic performance – the disclosure of information takes on particular significance.

Our empirical measure of transparency is drawn from the HRV Index (Hollyer, Rosendorff and Vreeland, 2014). This measure treats transparency as a latent predictor of the reporting/non-reporting of data to the World Bank's *World Development Indicators* (WDI) data series, which is extracted using an item response model. Since the World Bank, and the international organizations with which it works, impose standards of reporting on these data, they must pass some minimal threshold of credibility.[5] Since governments are unlikely to directly disclose information to third party organizations if attempting to withhold this information from their citizenry, the HRV measure proxies for the public availability of credible information. Given the substantive focus of the WDI on economic aggregates, this information pertains directly to citizen welfare and a variety of common targets for government policy. We thus believe the HRV index captures the three aspects of information emphasized above: It proxies for (1) the public availability of (2) credible information pertaining to (3) policy outcomes impacting broad aggregations of the citizenry.

To be more precise about the HRV measure: It is constructed based on an item response model fit to a binary measure of whether a given variable j is reported by a given country c in a particular year t. This model summarizes reporting of 240 variables by 125 countries over 31

[5]We do not expect citizens to directly access this information, though the domestic press and researchers may do so. Rather, the HRV index treats disclosure to the Bank as a proxy for the availability of credible economic information. Governments may release false information to the public, but if they do so regularly, citizens will disregard government disclosures.

years (1980-2010). Hollyer, Rosendorff and Vreeland (2014) select the 240 variables included in the model (out of some 1,265 in the WDI as a whole) to (1) ensure that definitions are consistent over time (to be included in the index, a variable must be reported by at least one country in every year from 1980-2010), (2) eliminate variables that are clearly constructed by the World Bank or partner organizations without government input (e.g., results of the Doing Business Surveys) or are reported for only a subset of countries (e.g., measures of receipts of Official Development Aid), and (3) to avoid multiple measures of the same underlying data (e.g., measures reported in different currencies). They then estimate the value of transparency using a system of 240 equations (one for each variable j), where reporting in a given country year is treated as a function of a latent transparency value, a coefficient on this transparency term, and an intercept coefficient. The measurement model thus adjusts for the fact that some data are easier to collect than others, and for the fact that the reporting of some items is more reflective of a country-year's general tendency to disclose. In effect, the reporting of a variable that is highly predictive of disclosing other data is given greater weight than the reporting of data that is not predictive of a general tendency to disclose.[6]

The HRV index thus provides a continuous measure, based on objective information, with a consistent definition over time of a government's tendency to report credible information on aggregate policy-relevant outcomes – and proxies for the availability of such information to the public. We therefore believe it maps closely into our parameter of theoretical interest, the precision of a shared public signal on the state of the economy, which we introduce in our model below. It also provides superior temporal and geographic coverage relative to commonly used measures of alternative aspects of the informational environment.

We acknowledge, however, that our definition of transparency is a narrow one. Broader definitions can pertain to any aspect of information transmission within a given policy. These might include the openness of political institutions (Broz, 2002; Dahl, 1971), freedom of the press or circulation of the press (Adserà, Boix and Payne, 2003; Brunetti and Weder, 2003), or the presence of freedom of information laws (Berliner, 2011; Islam, 2006), or the availability of different subsets of information (Copelovitch, Gandrud and Hallerberg, 2015). We prefer a narrow conception of transparency here for reasons of conformity with our theoretical model. We also note that definitions that incorporate political openness may create a tautological relationship between

[6]Notice that, if the World Bank relies on sources other than national governments as the originating source for information – as may be true for trade data, which may be collected from either the importing or exporting country – this variable will be down-weighted in the HRV index so long as most other data originate with national governments. Since, presumably, the reporting of such variables will be largely orthogonal to the reporting of other data for which national governments are the only source, the algorithm places less weight on this information.

our explanatory (transparency) and outcome (democratic collapse) variables.

Model

In what follows, we present a model of transparency, voting and irregular leader removal. This model is an extension of Hollyer, Rosendorff and Vreeland (2015), who consider the influence of transparency on the stability of autocratic governments – this model is distinct in that we introduce elections to the game form. The presence of free and fair elections dramatically alters the results of Hollyer et al., who find that transparency reduces regime stability in autocracies. This is because of the informational role of elections: The voting process serves to aggregate the private signals of all citizens, such that all citizens – after elections have concluded – are fully informed of the government's type, regardless of the level of transparency. The informational environment then only influences the electoral process and does not influence the ability to mobilize. Since transparency improves the functioning of the electoral process, the reliance on irregular leader removal falls as transparency rises.

Model Primitives

Consider an interaction between a democratic leader L and a mass of citizens. Each citizen is denoted i where i is indexed over the unit interval $i \in [0, 1]$.

Citizens seek to infer the leader's type, which may be either 'good' or 'bad.' A leader's type may refer to his level of skill, competence, or honesty. 'Good' leaders will return better economic performance than 'bad' leaders. Citizens seek to remove 'bad' leaders from office, while retaining 'good' types.

So, L may be of one of two types, $\theta \in \{0, 1\}$. Nature chooses L's type θ where $\theta = 1$ with probability p and $\theta = 0$ with probability $1 - p$. In each period during which she is in office, L chooses whether or not to provide a public good $G_t \in \{0, 1\}$, where $t \in \{1, 2\}$ denotes the period of play. L's utility from doing so is a function of her type, such that in each of two periods:[7]

$$u_{L,t}(G_t; \theta) = \begin{cases} 1 \text{ if } G_t = \theta \\ 0 \text{ otherwise} \end{cases}$$

$$u_L = \sum_{t=1}^{2} u_{L,t}(G_t; \theta)$$

[7] Actors do not discount over time. The results would be unchanged by including a discount factor.

L's choice regarding public goods provision $G_t \in \{0, 1\}$ has implications for economic outcomes: Each citizen i receives an income $y_{i,t} = G_t\gamma + \epsilon_{i,t}$, where $\epsilon_{i,t} \underset{\text{iid}}{\sim} N(0, \sigma_y^2)\ \forall\ i, t$, and γ is a strictly positive constant. The standard deviation of individual outcomes, $\sigma_y > 0$, captures factors exogenous to government policies that may shift a given citizen's economic welfare. Each citizen observes $y_{i,t}$, but does not observe the value of G_t. In observing first period income, $y_{i,1}$, the citizen is also receiving a signal about the type of government she is facing.

In the first period of play, all citizens *also* receive a public signal of the state of the economy s. We assume that $s = G_1\gamma + \rho$, where $\rho \sim N(0, \sigma_s^2)$ and $E[\rho\epsilon_{i,t}] = 0\ \forall\ i, t$, where $\sigma_s > 0$ is the standard deviation of this publicly observed signal. The signal s is meant to depict the role of publicly disclosed aggregate economic data, which enable citizens to form beliefs about government performance. As more information is made available, citizens are better able to discern the role of government policies in shaping economic outcomes – consequently σ_s shrinks; σ_s is thus a measure of the inverse of transparency (i.e., of opacity). Since s depicts the public disclosure of *aggregate* economic data, we further assume that $\sigma_s < \sigma_y$.

After receiving both her signals (public and private), each citizen may cast a vote for or against the incumbent $v_i \in \{0, 1\}$, where $v_i = 1$ denotes a vote for removal. Let the mass of citizens voting for removal be $V \equiv \int_0^1 v_i di$. If $V \geq \frac{1}{2}$, L is removed from office; if $V < \frac{1}{2}$, L is retained. Citizens suffer no direct cost, nor enjoy any direct benefit, from their voting decision. After the election V is revealed to all actors.

If L is retained in office, each citizen i may mobilize in an attempt to bring about her ouster.[8] Let $a_i \in \{0, 1\}$ denote the decision to mobilize, where $a_i = 1$ indicates mobilization. Mobilization may be thought of as either directly ousting the incumbent or as creating opportunities for third parties to remove the incumbent – e.g., via a coup. Since our focus is on citizen behavior, we collapse both threats to the regime into the decision to protest. Denote the total mass of citizens who engage in unrest as $A \equiv \int_0^1 a_i di$. If A exceeds (weakly) some exogenous threshold $T \in (0, 1)$, the sitting government will be removed and replaced by a new L, whose type is drawn with the same distribution as the prior leader. We define an indicator function $R(A)$ to denote removal, such that:

$$R(A) = \begin{cases} 1 \text{ if } A \geq T \\ 0 \text{ otherwise.} \end{cases}$$

[8] While we recognize that such mobilization is 'unthinkable' in many advanced democracies, we do not restrict the scope of our analysis to 'new' democracies. We believe that democratic consolidation is a condition that should be derived from the equilibrium of the model – not a condition to be assumed by restricting the action space of citizens. We would like to thank John Freeman for clarifying this point.

Engaging in mobilization entails a cost of $\kappa > 0$ for each citizen. However, if the collective protest is successful in removing the sitting leader, each citizen that participates in these protests gains a benefit $\beta > \kappa$. These benefits may be thought of as the psychological returns from participating in the successful overthrow of the *ancien regime*, or as the likelihood of favors from any new regime that replaces the old (Olson, 1971). Each citizen's utility function is:

$$u_i(y_{i,1}, y_{i,2}, a_i; A) = y_{i,1} + y_{i,2} + a_i[R(A)\beta - \kappa].$$

The order of play is:

1. Nature chooses L's type, $\theta \in \{0, 1\}$. The value of θ is revealed to L, but not to any citizen.
2. L chooses whether or not to provide the public good $G_1 \in \{0, 1\}$.
3. Nature chooses $\epsilon_{i,1} \; \forall \; i$. Nature also chooses ρ. $y_{i,1}$ is revealed to each citizen i, but not to any other citizen. s is revealed to all actors.
4. Each citizen chooses $v_i \in \{0, 1\}$. $V = \int_0^1 v_i di$ is revealed to all citizens. If $V \geq \frac{1}{2}$, L is removed and replaced by another government, whose type θ is chosen by Nature.
5. If $V < \frac{1}{2}$, the incumbent, L, is retained in the election. Each citizen may choose whether or not to engage in collective action $a_i \in \{0, 1\}$. If $A \geq T$, L is removed and replaced by another government, whose type θ is chosen by Nature. If $A < T$, L remains in office.
6. The sitting L chooses the value of $G_2 \in \{0, 1\}$.
7. Nature chooses $\epsilon_{i,2} \; \forall \; i$. $y_{i,2}$ is revealed to each citizen and the game ends.

Equilibrium

This game gives rise to a multiplicity of perfect Bayesian equilibria (Fudenberg and Tirole, 1991). With a continuum of citizens, voting decisions may be non-strategic. Coordination problems in the mobilization stage of the game similarly give rise to multiple equilibria.

We narrow the set of equilibria to our model by restricting player strategies in the following manner: First, we assume that citizens vote sincerely. That is, a citizen i will vote to remove the incumbent (set $v_i = 1$) if and only if the posterior belief that leader is competent (after both the private and public signal, but before the election) is lower than what the voters might expect if the leader is replaced. That is $Pr(\theta = 1 | y_{i,1}, s) \leq p$. Second, we assume that a citizen i will never

mobilize to overthrow the leader if she believes, with certainty, that L is a good type. That is, we require that $a_i = 0$ if $Pr(\theta = 1|V, s) = 1$. This rules out (perverse) equilibria in which all citizens coordinate on removing a leader known – with certainty – to be a good type.

Before we characterize the equilibrium, a definition is necessary.

Definition 1. *Define $\tilde{y}(s)$ implicitly by $Pr(\theta = 1|\tilde{y}(s), s) = p$ and define*

$$V(s; G_1) = \begin{cases} \Phi(\frac{\tilde{y}(s)}{\sigma_y}) \text{ if } G_1 = 0 \\ \Phi(\frac{\tilde{y}(s)-\gamma}{\sigma_y}) \text{ if } G_1 = 1. \end{cases}$$

where Φ is the cdf of the standard normal distribution.

Lemma 1 (in the Appendix) establishes that $\tilde{y}(s) = \frac{\gamma}{2}(\frac{\sigma_y^2}{\sigma_s^2} + 1) - \frac{s\sigma_y^2}{\sigma_s^2}$. This is the value of the private signal such that any individual having received that private signal $\tilde{y}(s)$, and public signal s is indifferent between reelecting and evicting the incumbent.

A monotone perfect Bayesian equilibrium will consist of the following: (1) An action pair for each voter mapping their signals into actions, $v_i : \mathbb{R}\times\mathbb{R} \to \{0, 1\}$ and $a_i : \mathbb{R}\times\mathbb{R}\times[0, 1] \to \{0, 1\}$. (2) A strategy for L from type- to action-space, $G_t : \{0, 1\} \to \{0, 1\}$. (3) Posterior beliefs $Pr(\theta = 1|y_{i,1}, s)$ and $Pr(\theta = 1|V, s)$.

Characterizing the equilibrium, we have:

Proposition 1. *The following strategies and beliefs constitute a perfect Bayesian equilibrium. For the leader of type θ, $G_t = \theta$ for $t = 1, 2$. For the citizens, their voting and mobilization strategies are*

$$v_i = \begin{cases} 1 \text{ if } y_{i,1} \leq \tilde{y}(s) \\ 0 \text{ otherwise.} \end{cases}$$

$$a_i = \begin{cases} 1 \text{ if } V > V(s; 1) \\ 0 \text{ otherwise.} \end{cases}$$

Posterior beliefs (after both the private and public signals but before the vote) are $Pr(\theta = 1|y_{i,1}, s) = \frac{p\phi(\frac{y_{i,1}-\gamma}{\sigma_y})\phi(\frac{s-\gamma}{\sigma_s})}{p\phi(\frac{y_{i,1}-\gamma}{\sigma_y})\phi(\frac{s-\gamma}{\sigma_s})+(1-p)\phi(\frac{y_{i,1}}{\sigma_y})\phi(\frac{s}{\sigma_s})}$ and after the vote, but before political action:

$$Pr(\theta = 1|V, s) = \begin{cases} 0 \text{ if } V > V(s, 1) \\ 1 \text{ otherwise.} \end{cases}$$

All proofs are in the Appendix.

Along the equilibrium path, good types of government provide public goods; bad types do not. Hence, bad types experience a larger number of votes to remove; good types a smaller number: $V(s;1) < V(s;0)$ for all s. After the vote, all voters observe the vote counts. With a continuum of voters, the public signal and type of leader provide a map into a unique vote total $\mathbb{R} \times \{0,1\} \to \mathbb{R}$ – implying that, if a voter knows the vote total for a given leader and the public signal, she can invert this mapping to deduce the leader's type. Informally, if a leader receives relatively weak (strong) electoral support, given the public signal, then it must be the case that voters' private signals were predominantly bad (good). Since these private signals are unbiased, and the number of voters is large, it must then be the case that the leader is bad (good).

If for some s, $V(s;1) < \frac{1}{2} < V(s;0)$ then a good type is reelected and a bad type is removed from office via the electoral process. There is no post-election mobilization or political action, the democratic process has worked to solve the adverse selection problem.

However it is possible in equilibrium that even though there are more votes to remove a bad leader (than a good leader), the threshold to actually remove the (bad) leader from office might not be breached. This occurs in the case where the public signal happened to be a good draw. As described above, all citizens are fully informed after the election that a bad leader has been reelected. Voters are dissatisfied with this outcome and take to the streets to ensure – whether directly or indirectly – the incumbent's ouster. By contrast, voters do not mobilize against a good leader should she be reelected.

Finally, it is possible that even good types can be removed by the election when $V(s;1) > \frac{1}{2}$. This occurs when a good leader is subject to bad shocks. Again, however, there is no political action, since the leader has been removed by the democratic process.

Comparative Statics

We would like to explore the effect of transparency on the degree to which the political institutions are able to discriminate between the survival in office of 'good' versus 'bad' types. Since citizens engage in mobilization if and only if a 'bad' incumbent is reelected, the question becomes: Does transparency enhance the likelihood that 'bad' types are removed via the electoral process? The answer is yes.

Definition 2. *Define $\tilde{s}$ implicitly by $\Phi(\frac{\tilde{y}(\tilde{s})}{\sigma_y}) = \frac{1}{2}$ and define $\underset{\sim}{s}$ implicitly by $\Phi(\frac{\tilde{y}(\underset{\sim}{s})-\gamma}{\sigma_y}) = \frac{1}{2}$.*

We show in Lemma 2 in the Appendix that $\tilde{s}$ and $\underset{\sim}{s}$ are well defined. If $s \geq \tilde{s}$, governments of all types will be reelected. If $s \leq \underset{\sim}{s}$, governments of all types are voted out of office. If $s \in (\underset{\sim}{s}, \tilde{s})$,

then governments are voted out of office if and only if $\theta = 0$. The probability that a government of type $\theta = 0$ is voted out of office is $\Phi(\frac{\tilde{s}}{\sigma_s})$, and the probability that a government of type $\theta = 1$ is voted out of office as $\Phi(\frac{\tilde{s}-\gamma}{\sigma_s})$. The extent to which electoral survival is conditioned on policy decisions or, equivalently, a government's type is what we call the *electoral discrimination* $= \Phi(\frac{\tilde{s}}{\sigma_s}) - \Phi(\frac{\tilde{s}-\gamma}{\sigma_s})$.

Proposition 2. *Electoral discrimination is strictly rising in transparency (falling in σ_s).*

As transparency rises, the probability that a government of type $\theta = 0$ is voted out of office rises, while the probability that a government of type $\theta = 1$ is voted out falls. The electoral process is better at solving the problem of adverse selection as transparency rises.

Low-type $\theta = 0$ governments return unambiguously worse performance – i.e., $G_1 = 0$. Empirically, one might regard L's choice of $G_1 \in \{0, 1\}$ as reflected in rate of economic growth. In equilibrium, leaders will be voted out of office more frequently when this rate is low than when it is high. Proposition 2 indicates that transparency moderates this tendency – the sensitivity of election outcomes to performance rises in transparency.

In equilibrium, if a low type leader survives in office, the voters mobilize for his 'irregular' removal. Since democratic collapse takes place when poor leaders are reelected, this probability is given by $(1-p)[1-\Phi(\frac{\tilde{s}}{\sigma_s})]$, the *ex ante* probability that L is a 'bad' type $\theta = 0$ multiplied by the probability that such a type survives the electoral process. Recall that our empirical proxy for G_1 (or, equivalently, θ) is the growth rate – leaders are only ousted through undemocratic methods when the growth rate is poor.

Increased transparency make elections more effective in ousting bad leaders. Since irregular removal takes place only when a bad leader is retained, the risk of democratic collapse is falling in transparency.

Proposition 3. *The probability of democratic collapse is strictly falling in transparency (rising in σ_s).*

Put another way, Proposition 3 holds that the relationship between leader performance and regime stability is moderated by transparency. Leaders who achieve strong economic growth never inspire instability; those who return low growth face a high probability of irregular ouster in opaque environments, and a high probability of electoral defeat in transparent.[9] We clarify this claim in the following remark:

[9] In our model, all uncertainty for citizens is resolved once voting takes place, given a continuum of citizens and the perfect reporting of vote totals. Intuitively, our comparative static claims should continue to hold if voters held some residual uncertainty, as would take place, for instance, if vote returns were reported with error.

Proposition 2 – electoral discrimination rises with transparency – is likely to be unaffected by error in the vote

Remark 1. *The difference in the probability of democratic collapse between when $G_1 = 1$ and when $G_1 = 0$ is strictly falling in transparency (rising in σ_s).*

Model Extension

In our baseline model, the incumbent's type $\theta \in \{0, 1\}$ is wholly determinative of her strategy in equilibrium. In the Appendix, we present an extension to the baseline model in which 'bad' types of leaders may have an incentive to mimic good types. Leaders attach a value to holding office, implying that they may deviate from their primitive preferences over policy in order to retain power. We show that the comparative static conclusions documented above continue (weakly) to hold in the extended model. We say weakly because for sufficiently high values of transparency, leaders pool on 'good' behavior and no leader faces irregular removal in equilibrium (for a similar result, see Ashworth and Bueno de Mesquita, 2014). The probability of irregular removal is invariant in transparency, and equal to zero, above this threshold.

Empirics

Data Description

The unseating of democratically elected leaders via extra-constitutional means increases the risk of autocratic reversion. At the very least, such actions entail the temporary suspension of democracy and, often, lead to the accession of leaders or movements with anti-democratic aspirations.

count, since in expectation, good types receive fewer votes to remove than bad types. So if the error is unbaised we could restate the finding such that observed vote totals are a probabilistic, rather than deterministic, mapping from the realization of the public signal s.

The claim that protest removes a leader if, and only if, a bad type is reelected – which helps to drive Proposition 3 – may be more subtely affected by error in the vote counts. If the error is unbiased, in expectation 'good' leaders will attract more votes than 'bad.' Hence, voters may still condition their decision to protest on the reported vote total, such that victories that are closer than anticipated given the value of a the public signal s draw greater protest than those that are more lopsided in favor of the incumbent. Protest may now sometimes occur when a good type is reelected; though this should occur less frequently than protest to remove a low type incumbent who was reelected.

Now as transparency rises, electoral victory is an increasingly precise signal that the leader is a good type. This effect would tend to reduce the probability of mobilization following an election, as is consistent with Proposition 3. Notice further that the discrepancy in vote totals across types of leader, for any given value of the public signal, tends to fall in transparency $\lim_{\sigma_s \to 0} V(s, 0) - V(s, 1) = 0 \; \forall \; s$. Were vote totals reported with an additive unbiased error, this implies that citizens will be less able to determine the type of a reelected incumbent, based on his vote share, as transparency rises. Voters must increasingly rely on the public signal s – which must be positive if an incumbent is to survive the election – and the fact of reelection itself to update their beliefs; their posterior on seeing an incumbent reelected should increasingly be that the leader is a good type for any realized vote total. Again, adding residual uncertainty would, we expect, leave the comparative static predictions in Proposition 3 unchanged.

This claim is given weight by Goemans, Gleditsch and Chiozza (2009), who, using a different definition of reversion than that used here, demonstrate that autocratic reversions are roughly four times more likely in years with irregular leader removals than those without – a difference that a simple test of proportions indicates is highly significant. We therefore first examine the relationship between transparency and the hazard of autocratic reversion.

Our definition of democracy for this purpose is drawn from the *Democracy and Development Revisited* (DD) dataset compiled by Cheibub, Gandhi and Vreeland (2010). The DD dataset uses the coding scheme pioneered in Alvarez et al. (1996), in which democracy is coded as a binary $\{0, 1\}$ indicator equal to 1 if both the legislative and executive branches are selected via competitive elections between contesting political parties. For a country to be considered a democracy, there must be at least one change in the party in power. All years under the same constitutional regime prior to this transfer of power are retroactively coded as democratic.

The DD indicator applies a particularly restrictive definition of democracy. For this reason, democratic transitions are rare events in our sample, there are no more than 19 such transitions in our dataset. While this restriction limits our statistical power, we prefer the DD definition given the crisp manner with which it identifies regime-type transitions. Moreover, the relatively restrictive criteria for inclusion helps to ensure that only states that hold informative elections – as assumed in our model – enter the sample. We fit our model using a relaxed definition of democracy in the Appendix.

In addition to the democracy indicator, we draw several control variables from the DD data. A contested literature points to differences in the stability of parliamentary and presidential regimes (e.g. Cheibub, 2007; Lijphart, 1992). We therefore control for a binary indicator of whether the government is run via a parliamentary system, and another indicator equal to one if the political regime involves a mixed parliamentary/presidential style system.

We also examine the relationship between transparency and the hazard of *leader* removal. Here our observation is the democratic leader-year, where democracy is defined according to the *DD* dataset described above. Our data on leader exits is drawn from the *Archigos* dataset, which codes exits as regular (leaders voted out of office, subject to term limits, or retired), irregular (leaders ousted via extra-constitutional methods), due to death by natural causes or suicide, or due to foreign interventions. We are particularly interested in regular and irregular leader exit.

Our empirical measure of transparency (the inverse of σ_s in our model) is the HRV Index (Hollyer, Rosendorff and Vreeland, 2014), which measures the extent to which governments collect and disseminate aggregate economic data. As discussed above, this measure captures the disclosure of credible aggregate economic information.

An important concern, when working with these data, is to what extent *transparency* is distinct from *state capacity*. As Hollyer, Rosendorff and Vreeland (2014) argue, these concepts need not be viewed as contrary to one another – regardless of whether opacity results from a government decision not to disclose or from a government's inability to disclose, citizens remain uninformed. The finding that transparency destabilizes autocracies (Hollyer, Rosendorff and Vreeland, 2015) further suggests that the HRV index is picking up information transmission rather than merely state capacity. Presumably, capable autocrats are less prone to mass unrest than incapable ones.

Nonetheless, one must be concerned that our measure of transparency is correlated with state capacity, and capacity – rather than transparency – drives the relationship with regime collapse. This risk is particularly great given existing findings that high-income democracies rarely experience autocratic reversals (Gassebner, Lamla and Vreeland, 2013; Przeworski et al., 2000). To allow for this possibility, we control for GDP *per capita* in all specifications. We also control for a history of past autocratic reversions, which may also correlate with capacity.

We additionally control for a variety of other economic factors. These include measures of economic growth (the percentage change in real GDP *per capita*), which we treat as a measure of government's economic performance. We also include a measure of economic openness ($\frac{Exports+Imports}{GDP}$). This control is valuable given potential linkages between economic and political liberalization, and given that open economies are more likely to be subject to exogenous shocks to economic performance than closed, and thus economic performance may be less valuable a signal of government competence as trade dependence rises (Duch and Stevenson, 2008).

These measures are all drawn from the Penn World Table (PWT) version 6.3 (Heston, Summers and Aten, 2009). The PWT offers several advantages as a measure of economic performance for this study: First, the PWT data are adjusted and interpolated by external researchers with no affiliation to reporting governments (though, the underlying data are still based on national accounts). The PWT can thus be seen as a proxy for true economic performance (G_t in our model) rather than as a realization of the public signal s.[10]

Second, country time-series included in the PWT are uninterrupted. This is important when employing a measure of data missingness – such as the HRV index – as an explanatory variable. Were missing data present in the PWT, it is likely that missing values would correlate with transparency levels. Listwise deletion would therefore censor variation in a key explanatory variable, potentially inflating standard errors and understating measures of model fit.

These empirical covariates map into our theoretical parameters in the following manner:

[10]For details, see Summers and Heston (1991).

Table 1: Summary Statistics

Variable	Mean	Stand. Dev.	Min.	Max.
Transparency	2.50	2.19	-1.37	9.98
Growth (pct. GDP)	1.81	4.24	-26.2	31.9
GDP *per capita* (thousands 2005 PPP USD)	12.8	10.4	0.37	46.7
Ec. Openness (pct. GDP)	64.6	34.5	10.3	222
Parliamentary	0.42	0.49	0	1
Mixed System	0.18	0.38	0	1

Transparency reflects the inverse of the standard deviation of the public signal ($\frac{1}{\sigma_s}$). We contend that, as governments release more credible economic data to the World Bank, more information on the state of the economy is likely to be available to domestic citizens. The greater the range of data disclosed, the more likely it is that citizens are able to attribute changes in economic performance government policies. Critically, they are also aware that *other* citizens are likely to be able to do the same.

We treat economic growth as reported by the PWT as a reflection of the government's public goods decision $G_t \in \{0, 1\}$. In the model, better government performance ($G_t = 1$) is reflected in higher incomes for all citizens. We interpret growth as reflecting the government's true performance (G) and *not* the realization of the public signal regarding this performance (s). Notice that, in our model, transparency affects leader survival through the realization of s – if we condition on s, transparency exerts no additional role.[11] We conceive of s as capturing contemporaneous statements by the government regarding the state of the economy. In our empirical model, s is not observed.

Finally, we map the realization of $R(A) \in \{0, 1\}$, the indicator function for the overthrow of an elected leader, into both the collapse of democracy (as defined by the DD dataset) and (alternatively) into the irregular removal of a democratic leader (from Archigos).

Proposition 3 tells us that the probability of either democratic collapse or irregular leader removal should fall in transparency, as defined by the HRV index. The equilibrium described in Proposition 1 documents that collapse/irregular removal takes place only if $G_1 = 0$ – i.e., if economic performance is poor. Empirically we interpret this proposition to mean that the probability

[11] Formally, the equilibrium strategies of all citizens are conditioned on the realization of s and the vote total $V(s, G_1)$. Collapse takes place only in the instance where $G_1 = 0$ and s is a 'good' draw. Transparency influences the likelihood of collapse insofar as a 'good' draw of s grows increasingly unlikely when $G_1 = 0$ as transparency rises.

of collapse/irregular removal falls in economic growth, as defined by the PWT. Finally, Remark 1 holds that the difference between the probability of collapse when $G_1 = 1$ (which is equal to zero) and that probability when $G_1 = 0$ (which is strictly greater than zero) falls in transparency. Taken together, we interpret these propositions as indicating that the correct empirical model should regress our indicators of collapse on transparency, economic growth, and their interaction. The coefficients on the transparency and economic growth terms should both be negative, while the coefficient on the interaction term should be positive.

Notice further that Proposition 2 holds that 'electoral discrimination' should be rising in transparency. Electoral discrimination, in this instance, refers to the difference in the incumbent's vote share conditional on $G_1 = 1$ as compared to a counterfactual in which $G_1 = 0$. While we do not have data with wide coverage reporting incumbent vote shares, we can map this term into the *regular* removal of democratic leaders – the probability of regular leader removal must rise as the incumbent's vote share falls. The equilibrium described in Proposition 1 holds that the incumbent's vote share is strictly lower when $G_1 = 0$ than when $G_1 = 1$ – i.e., the probability of regular leader removal is falling in economic growth. Proposition 2 indicates that this marginal effect should rise in transparency. Hence, any empirical model should include regular leader removal regressed on economic growth, transparency, and their interaction. The coefficient on both economic growth and on the interaction term should be negative. Our model does not provide a clear prediction with regard to the coefficient on transparency in this model. However, given that all democratic leaders must eventually be ousted from office through some means, and that transparency is anticipated to reduce the probability of irregular removal, it stands to reason that it must also increase (slightly) the likelihood of regular leader removal.

Democratic Survival

We begin our analysis by focusing on democratic-to-autocratic transitions. The unit of observation is the democratic spell-year, where a democratic spell is defined as one or more continuous years of democratic rule.

Of course, governments are not randomly assigned a level of transparency, raising the risk of potential bias. We attempt to control for major threats to inference by controlling for alternative factors that have been linked to democratic consolidation and which are likely to correlate with the HRV index – GDP *per capita*, past histories of collapse, institutional features (parliamentarism), and a general tendency toward economic openness. However, we acknowledge that threats to inference cannot be entirely ruled out and some bias is likely to remain. We attempt to buttress our findings by examining a variety of outcomes – regime transition, irregular and regular leader

removal. We further note that, when using the DD definition of transition, very few terms robustly correlate with autocratic reversion once GDP *per capita* and histories of democratic collapse have been controlled for (Gassebner, Lamla and Vreeland, 2013). While our empirical results cannot be taken as definitive evidence of a causal effect of transparency on democratic stability, they are supportive of our theoretical account which holds that transparency bolsters democratic legitimacy.

To test the relationship between transparency and autocratic reversions, we use Cox proportional hazards regressions, where the baseline hazard rate is estimated using conditional gap time models. Conditional gap time models stratify the baseline hazard rate based on some (potentially multichotomous) indicator variable. In so-doing, they flexibly control for the manner in which this term may shift the hazard rate – both the shape and the level of the baseline hazard may differ across strata (Box-Steffensmeier and Zorn, 2002).

Specifically, we stratify the baseline hazard rate based on the frequency with which a given country has experienced democratic collapses in the past. Substantial evidence exists that past instability predicts future instability (Gandhi and Przeworski, 2007; Meirowitz and Tucker, 2013). We thus estimate models where we stratify the baseline hazard rate based on an indicator for whether there has been a prior transition, or, alternatively, an ordered variable based on the number of prior transitions. As a final robustness test, we simply include a control for a $\{0, 1\}$ indicator for past reversions.

We estimate models of the following form:

$$\begin{aligned} h_d(t, p_d) &= h_0(t, p_d) e^{\mathbf{X_{d,t}}\beta} \\ \mathbf{X_{d,t}}\beta &= \beta_0 + \beta_1 Transparency_{d,t-1} + \beta_2 Growth_{d,t-1} \\ &\quad + \beta_3 Transparency_{d,t-1} \times Growth_{d,t-1} + \mathbf{Z_{d,t-1}}\psi \end{aligned} \tag{1}$$

where d denotes democratic-spell, t denotes years of continuous democratic rule, and $\mathbf{Z_{d,t-1}}\psi$ is a vector of controls and associated coefficients. $h_0(t, p_d)$ is the baseline hazard rate, where p_d is an indicator for past reversions. All standard errors are clustered by democratic-spell. Our primary hypothesis, as outlined in Proposition 3 holds that $\beta_1 < 0$. Our model further posits that collapse should take place only in the event that $G_1 = 0$. Here, we proxy for G_t by using economic growth – hence, we hypothesize that $\beta_2 < 0$. Finally, Remark 1 suggests that the importance of growth to regime stability should be falling in transparency, i.e., $\beta_3 > 0$. Given potential modeling issues with such interaction terms (Berry, DeMeritt and Esarey, 2010; Hainmueller, Mummolo and Xu, 2016), we also present models without this interaction in the Appendix.

Results from these regressions are presented in Table 2. The first three columns present coefficient estimates from a conditional gap time model in which the baseline hazard rate is stratified by whether or not there was a prior transition, the next three present similar models stratified based on the number of prior transitions, and the final three present estimates with a control for an indicator of prior transitions. Table 2 presents estimates of coefficient values, not hazard ratios. In all cases, we initially present results with a full set of controls. We then drop controls that are not included based on the theoretical model, to ensure these are not inducing over-fitting or post-treatment bias. Finally, we present the binary relationship between transparency and regime collapse.

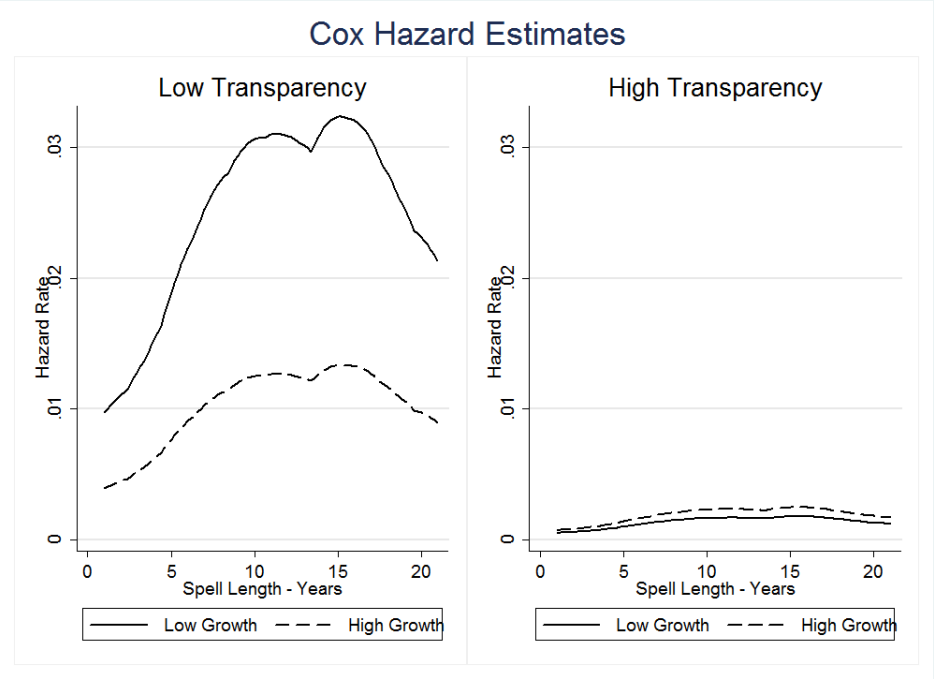
As can be seen from Table 2, the coefficient on transparency is consistently negative and large. 95% confidence intervals are bounded away from zero in all but two specifications – the p-value in one exceptional case is 0.052. The point estimates suggest that a one standard deviation increase in transparency serves to reduce the hazard of democratic collapse by between 45 and 85 percent, when economic growth is at its mean level in the sample.

Figure 1 presents estimates of the smoothed hazard function from the model in the eighth column of Table 2. The figure to the left presents estimates from when transparency is one standard deviation below its sample mean; while, the figure to the right presents the smoothed hazard when transparency is one standard deviation above this mean. Dashed lines depict the estimated hazard when growth is one standard deviation above its mean; solid lines depict the same when growth is one standard deviation below. As can be readily seen, an increase in transparency is associated with a marked decline in the estimated hazard rate.

Table 2: Transparency and the Hazard of Democratic Collapse

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	-0.642**	-0.697***	-0.703***	-0.545*	-0.634***	-0.621***	-0.335	-0.586***	-0.611***
	[-1.227,-0.057]	[-1.121,-0.273]	[-1.114,-0.291]	[-1.095,0.006]	[-1.028,-0.241]	[-1.036,-0.206]	[-0.796,0.127]	[-0.965,-0.207]	[-0.967,-0.255]
Growth	-0.141***	-0.109***		-0.127***	-0.103***		-0.123***	-0.117***	
	[-0.208,-0.073]	[-0.165,-0.054]		[-0.193,-0.060]	[-0.158,-0.048]		[-0.185,-0.062]	[-0.176,-0.058]	
Transparency ×	0.031	0.037		0.060***	0.055**		0.027	0.033	
Growth	[-0.047,0.109]	[-0.059,0.132]		[0.015,0.105]	[0.003,0.107]		[-0.051,0.106]	[-0.053,0.119]	
GDP *per capita*	-0.209*			-0.156			-0.207*		
	[-0.432,0.015]			[-0.396,0.083]			[-0.422,0.009]		
Ec. Openness	-0.001			-0.004			-0.003		
	[-0.021,0.019]			[-0.025,0.016]			[-0.023,0.017]		
Parliamentary	2.103***			1.959***			1.158**		
	[0.842,3.364]			[0.846,3.072]			[0.042,2.274]		
Mixed System	0.691			0.628			0.447		
	[-0.585,1.967]			[-0.697,1.953]			[-0.882,1.777]		
Prior Transition							1.531***	1.094**	0.907*
							[0.372,2.691]	[0.135,2.054]	[-0.061,1.875]
# of Subjects	88	88	88	88	88	88	88	88	88
# of Failures	19	19	19	19	19	19	19	19	19

Cox proportional hazards regressions of the hazard of democratic collapse. The models depicted in the first two columns, the middle two columns, and the last two columns differ in the manner in which they deal with countries that experience prior autocratic spells. Those in the first two columns report a conditional gap time model wherein the baseline hazard is separately estimated for regimes that experience a prior transition and for those that did not. Those in the next two columns estimate separate baseline hazards based on the number of prior transitions. Those in the final two columns examine only autocratic spells that did not experience a prior transition. We present estimates of coefficient values, not hazard ratios, with 95 percent confidence intervals are presented in brackets. All standard errors have been clustered by democratic spell.



Smoothed estimates of the hazard rate as derived from the Cox Model in eighth column of Table 2. The $Prior\ Transition$ term is held at 0.

Figure 1: Democracy Hazard Rates as a Function of Transparency and Growth

These results thus offer support for Proposition 3 – as levels of transparency rise, the risk of democratic collapse sharply declines. Transparency reinforces democracy.

Consistent with our theory, economic growth is consistently negatively associated with the hazard of autocratic reversion. This result is significant at the 95 percent level in all specifications. Consistent with Remark 1, coefficients on the interaction between transparency and economic growth are consistently positive, indicating that variations in growth rates have a diminished impact on the survival of highly transparent regimes. These coefficients are imprecisely estimated in some specifications, however. We fit robustness checks excluding this interaction term, which produce substantively similar findings regarding the unconditional effect of transparency.

Interestingly, the coefficients on GDP *per capita* are imprecisely estimated in these regressions, and the coefficients on this term are relatively small. This is perhaps unsurprising, given the correlation between GDP *per capita* and our transparency measure. However, it does suggest, that transparency is *part* of the mechanism underlying existing findings that high-income democracies are less susceptible to collapse (Boix, 2003; Boix and Stokes, 2003; Przeworski and Limongi, 1997; Przeworski et al., 2000).

Democratic Survival Robustness

We additionally conduct a series of robustness checks of our baseline specifications as reported in Table 2, which we present in the Appendix. Several of these robustness checks pertain specifically to the models examining democratic survival: we employ an alternative definition of democracy and test several alternative estimating equations. Other robustness checks involve the introduction of further controls. We also assess the robustness of our results regarding leader survival (below) to the inclusion of the controls.

To be more precise, we assess the robustness of our results above to the inclusion of five additional controls. These include: A measure the leader's relation to the military, operationalized as a binary indicator of whether a given leader has had a military career drawn from Cheibub, Gandhi and Vreeland (2010);[12] Measures of whether a given country was the location of (1) a war or (2) a lesser military conflict or war drawn from the UCDP/PRIO database on armed conflict, version 4-2015 (Gleditsch et al., 2002; Pettersson and Wallensteen, 2015); Measures of the frequency of natural disasters in a given year, and the number of deaths caused by natural disasters in a given year from Quiroz Flores and Smith (2013), who – in turn – obtain their data from the Emergency Events Database of the Centre for Research on the Epidemiology of Disasters.

Adding these controls does not substantively affect our results. Point estimates are similar in direction and magnitude to the baseline, as are levels of precision. Our estimates are robust to these potential confounds. Results are presented and discussed in detail in the Appendix.

Leader Survival

In this section of the paper, we concentrate on the removal of democratic *leaders* – through regular (constitutional) and irregular (extra-constitutional) methods – rather than the survival of democratic *regimes*.

To do this, we rely on the *Archigos* dataset, which codes leaders' times in office and the manner of their removal (Goemans, 2006). Hence, our unit of observation is the democratic leader-year, where democracy is coded based on the DD dataset used in the regressions above, and our sample runs from 1980-2004. Our theory indicates that transparency should be negatively correlated with the hazard of irregular removal and – insofar as 'bad' leaders are more likely to be voted out of office when transparency is high – positively correlated with the hazard of regular removal.

[12] We acknowledge that this term is somewhat limited in capturing civil military relations, however, it is, to our knowledge, one of the only such measures available for democracies.

We assess these claims through Cox competing hazards regressions, using specifications identical to those employed to assess the hazard of democratic collapse above. Competing hazards regressions assess the hazard of one type of leader removal among many such threats. All democratic leader years in our sample enter both of our regressions. Leaders who are removed, for instance, via irregular methods are coded as having 'failed' in the year of their removal. Leaders who are removed via other methods are censored following their ouster. The competing hazards model operates under the assumption that various forms of removal are independent, conditional on covariates (Gordon, 2002).[13]

We present results from such competing hazards regressions on irregular and regular democratic leader removal in Tables 3 and 4, respectively. Consistent with our theory, transparency is associated with a fall in the hazard of irregular removal and a rise in the hazard of regular removal. Point estimates indicate that a one standard deviation increase in transparency is associated with a reduction in the hazard democratic leaders face of irregular removal of between 50 and 82 percent, when economic growth is at its mean level in the sample. This result is significant at the 90 percent level or above in every specification. Since leaders in transparent democracies are less likely to be removed via extra-constitutional means, they are at increased hazard of being replaced according to constitutional procedures. This translates into a marginally increased hazard of regular removal in each year of their tenure. This effect is significant at the 90 percent level or above in seven of nine specifications.

Remark 1 further holds that, in opaque democracies, under-performing leaders are likely to be ousted through non-democratic means; while in transparent democracies, these leaders are ousted via the ballot box. Our empirical results in this section offer suggestive support for this contention. The coefficient on economic growth is negative in all specifications examining the hazard of irregular removal. However, interpreting this coefficient requires attention to the interaction effect, which is positively signed. When this interaction is taken into account, the model indicates that in opaque democracies, low growth is associated with an increased hazard of irregular removal. This effect is attenuated as transparency rises. We present Monte Carlo simulations of the effect of an increase in growth, at various levels of transparency, in Table 5.

The results on regular leader removal are somewhat less well-suited to test this aspect of our theory. We contend that leader performance should be more strongly correlated with electoral returns in transparent than opaque democracies. However, our measure of regular leader removal may encompass instances in which leaders retire or face term limits, in addition to instances when leaders are voted out of office. This imprecision in our measure tends to bias against the discovery

[13]For an applied example of the competing hazards approach, see Goemans (2008).

Table 3: Transparency and Irregular Leader Removal

	Cond. Prior Transition			Cond. Num. Transitions			Prior Transition Control		
Transparency	-0.407*	-0.666***	-0.614***	-0.404*	-0.654***	-0.626***	-0.409*	-0.673***	-0.624***
	[-0.815,0.001]	[-0.997,-0.336]	[-0.893,-0.336]	[-0.846,0.038]	[-1.011,-0.297]	[-0.931,-0.322]	[-0.823,0.004]	[-1.012,-0.334]	[-0.911,-0.337]
Growth	-0.069**	-0.064**		-0.064**	-0.058*		-0.062**	-0.059*	
	[-0.121,-0.016]	[-0.119,-0.008]		[-0.123,-0.006]	[-0.121,0.006]		[-0.121,-0.003]	[-0.118,0.000]	
Transparency ×	0.045	0.051*		0.042	0.049		0.042	0.048	
Growth	[-0.019,0.109]	[-0.009,0.112]		[-0.029,0.113]	[-0.018,0.117]		[-0.026,0.110]	[-0.017,0.112]	
GDP *per capita*	-0.133*			-0.115*			-0.131*		
	[-0.271,0.006]			[-0.246,0.015]			[-0.266,0.004]		
Ec. Openness	-0.003			-0.005			-0.003		
	[-0.012,0.007]			[-0.016,0.006]			[-0.013,0.007]		
Parliamentary	1.244**			1.174**			1.208**		
	[0.252,2.235]			[0.201,2.148]			[0.180,2.237]		
Mixed System	0.610			0.732			0.695		
	[-0.455,1.675]			[-0.417,1.881]			[-0.428,1.818]		
Prior Transition							1.343***	1.066***	1.032***
							[0.423,2.262]	[0.320,1.813]	[0.264,1.800]
# of Subjects	442	442	442	442	442	442	442	442	442
# of Failures	27	27	27	27	27	27	27	27	27

Cox competing hazards regressions of the hazard of irregular leader removal in democratic regimes. The models depicted in the first two columns, the middle two columns, and the last two columns differ in the manner in which they deal with countries that experience prior autocratic spells. Those in the first two columns report a conditional gap time model wherein the baseline hazard is separately estimated for regimes that experience a prior transition and for those that did not. Those in the next two columns estimate separate baseline hazards based on the number of prior transitions. Those in the final two columns examine only autocratic spells that did not experience a prior transition. We present estimates of coefficient values, not hazard ratios, with 95 percent confidence intervals are presented in brackets. All standard errors have been clustered by leader.

Table 4: Transparency and Regular Leader Removal

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	0.073*	0.068**	0.044	0.064	0.066**	0.047*	0.071*	0.070**	0.046*
	[-0.004,0.151]	[0.007,0.129]	[-0.009,0.097]	[-0.015,0.143]	[0.004,0.127]	[-0.007,0.100]	[-0.006,0.149]	[0.008,0.131]	[-0.009,0.101]
Growth	-0.004	-0.002		-0.007	-0.004		-0.003	-0.001	
	[-0.031,0.024]	[-0.031,0.026]		[-0.035,0.021]	[-0.032,0.025]		[-0.033,0.026]	[-0.031,0.028]	
Transparency ×	-0.008	-0.009		-0.005	-0.007		-0.008	-0.009	
Growth	[-0.022,0.005]	[-0.022,0.004]		[-0.019,0.008]	[-0.020,0.006]		[-0.021,0.004]	[-0.022,0.003]	
GDP *per capita/*	-0.005			-0.003			-0.004		
	[-0.021,0.010]			[-0.019,0.012]			[-0.019,0.012]		
Ec. Openness	-0.003**			-0.005***			-0.003**		
	[-0.006,-0.000]			[-0.008,-0.001]			[-0.006,-0.000]		
Parliamentary	0.186			0.184			0.182		
	[-0.095,0.467]			[-0.099,0.468]			[-0.086,0.450]		
Mixed System	-0.285			-0.278			-0.291		
	[-0.691,0.121]			[-0.689,0.133]			[-0.701,0.120]		
Prior Transition							-0.054	-0.024	-0.004
							[-0.322,0.214]	[-0.241,0.193]	[-0.220,0.212]
# of Subjects	442	442	442	442	442	442	442	442	442
# of Failures	322	322	322	322	322	322	322	322	322

Cox competing hazards regressions of the hazard of regular leader removal in democratic regimes. The models depicted in the first two columns, the middle two columns, and the last two columns differ in the manner in which they deal with countries that experience prior autocratic spells. Those in the first two columns report a conditional gap time model wherein the baseline hazard is separately estimated for regimes that experience a prior transition and for those that did not. Those in the next two columns estimate separate baseline hazards based on the number of prior transitions. Those in the final two columns examine only autocratic spells that did not experience a prior transition. We present estimates of coefficient values, not hazard ratios, with 95 percent confidence intervals are presented in brackets. All standard errors have been clustered by leader.

of any relationship. Nonetheless, the point estimates in Table 4 are consistent with our theory. Again, we present Monte Carlo simulations of the marginal effect of growth, at varying levels of transparency, in Table 5.

Table 5: Estimates Marginal Effects of a One Standard Deviation Increase in Growth

	Transparent	Not Transparent	Difference
Irregular Removal	0.09	-0.14	0.23***
	(0.11)	(0.09)	(0.10)
Regular Removal	-0.22*	-0.02	-0.20
	(0.13)	(0.06)	(0.14)

Estimated marginal effects of a one standard deviation increase in the growth rate, reported as percentage changes in the hazard (divided by 100). Estimates are based on Monte Carlo simulations from the models in the second columns of Table 3 and 4. Transparency levels are set one standard deviation above and below the sample mean. Growth rates are set at their mean and one standard deviation plus the mean, to assess the marginal effect. Standard errors from simulations are reported in parentheses. * denotes significance at the 90 percent level, ** denotes significance at the 95 percent level, *** denotes significance at the 99 percent level.

Leader Removal Robustness

We examine the robustness of our results pertaining to democratic leader-removal, both irregular and regular, to the inclusion of the same battery of additional controls described in the section on autocratic reversions, above.

Our substantive results pertaining to irregular leader removal are unaffected by including these controls. The magnitude of the estimated coefficient on transparency is largely unchanged relative to our baseline specification in all models. In some instances, the precision of our estimates falls slightly in our most exhaustive specifications. However, these controls do not demonstrate a substantively strong nor statistically significant correlation with irregular leader removal. The coefficient on transparency remains statistically significant at the 90 percent level or above in 34 of 45 specifications.

As with our specifications examining irregular leader removal, adding these controls to specifications examining the hazard of regular removal does little to change the magnitude of the

estimated coefficient on our transparency term. However, our baseline estimates are smaller in magnitude and less precisely estimated than in the other two sets of regressions presented thus far. So, unsurprisingly, these results are less robust. In 19 of 45 specifications, the coefficient on transparency remains significant at conventional levels.

Conclusion

Transparency facilitates the consolidation of democratic rule. It does this through a particular mechanism: Increased transparency enhances the popular legitimacy of elections. As transparency rises, elections become more effective means of resolving adverse selection problems in representative government. Citizens, when confident that elections serve to hold their leaders to account, have a diminished incentive to resort to extra-constitutional means of disciplining their leaders. Irregular leader removals do indeed fall in transparency, while regular removals rise.

Our emphasis on the *popular* legitimacy of elections shifts the focus of much recent work on democratic stability and consolidation from the behavior of elites to popular legitimation. We introduce a novel mechanism through which democracy achieves mass legitimation, and thus introduce a novel predictor of democratic stability – namely transparency. Moreover, legitimacy in this context arises from the rational equilibrium strategies of citizens as deduced from a formal model – it is not merely a description of behavioral responses or of (possibly irrational) attitudes.

Together with related work on transparency and mass mobilization in autocracies (Hollyer, Rosendorff and Vreeland, 2015), this paper contributes to a growing literature on the coordination of protest. Fearon (2011); Hyde and Marinov (2014); Little, LaGatta and Tucker (2015) focus on the role of election returns, and Bueno de Mesquita (2010); Shadmehr and Bernhardt (2014) on revolutionary entrepreneurs as solutions to the informational difficulties in coordinating mass unrest. We find that the role of free flows of information in coordinating protests is moderated by the institutional environment. Transparency facilitates mass unrest in autocracies, while it inhibits threats to democratic rule.

References

Adserà, Alícia, Carles Boix and Mark Payne. 2003. "Are You Being Served? Political Accountability and Quality of Government." *The Journal of Law, Economics & Organization* 19(2):445–490.

Alvarez, Mike, Jose Antonio Cheibub, Fernando Limongi and Adam Przeworski. 1996. "Classifying Political Regimes." *Studies in Comparative International Development* 31:3–36.

Ashworth, Scott and Ethan Bueno de Mesquita. 2014. "Is Voter Competence Good for Voters? Information, Rationality and Democratic Performance." *American Political Science Review* 108(3):565–587.

Berliner, Daniel. 2011. "The Political Origins of Transparency.".

Berry, William D., Jacqueline H.R. DeMeritt and Justin Esarey. 2010. "Testing for Interaction Effects in Binary Logit and Probit Models: Is an Interaction Term Necessary." *The American Journal of Political Science* 54(1):248–266.

Boix, Carles. 2003. *Democracy and Redistribution*. Cambridge University Press.

Boix, Carles and Susan C. Stokes. 2003. "Endogenous Democratization." *World Politics* 55(4):517–549.

Box-Steffensmeier, Janet M. and Christopher Zorn. 2002. "Duration Models for Repeated Events." *Journal of Politics* 64(4):1069–1094.

Broz, J. Lawrence. 2002. "Political System Transparency and Monetary Commitment Regimes." *International Organization* 56(4):861–887.

Brunetti, Aymo and Beatrice Weder. 2003. "A Free Press is Bad News for Corruption." *Journal of Public Economics* 87:1801–1824.

Bueno de Mesquita, Ethan. 2010. "Regime Change and Revolutionary Entrepreneurs." *American Political Science Review* 104(3):446–466.

Bunce, Valerie J. and Sharon L. Wolchik. 2011. *Defeating Authoritarian Leaders in Postcommunist Countries*. Cambridge University Press.

Casper, Brett Allen and Scott A. Tyson. 2014. "Popular Protest and Elite Coordination in a Coup d'état." *Journal of Politics* 76(2):548–564.

Cheibub, José Antonio. 2007. *Presidentialism, Parliamentarism, and Democracy*. Cambridge University Press.

Cheibub, José Antonio, Jennifer Gandhi and James Raymond Vreeland. 2010. "Democracy and Dictatorship Revisited." *Public Choice* 143:67–101.

Copelovitch, Mark, Christopher Gandrud and Mark Hallerberg. 2015. "Financial Regulatory Transparency, International Institutions, and Borrowing Costs." Prepared for the 2015 Annual Political Economy of International Organizations Conference.

Crenshaw, Edward M. 1995. "Democracy and Demographic Inheritance: The Influence of Modernity and Proto-Modernity on Political and Civil Rights, 1965 to 1980." *American Sociological Review* 60(5):702–718.

Dahl, Robert A. 1971. *Polyarchy: Participation and Opposition*. Yale University Press.

Dewatripont, Mathias, Ian Jewitt and Jean Tirole. 1999. "The Economics of Career Concerns, Part I: Comparing Information Structures." *Review of Economic Studies* 66:183–198.

Diamond, Larry. 1999. *Developing Democracy: Toward Consolidation*. The Johns Hopkins University Press.

Diamond, Larry Jay. 1994. "Toward Democratic Consolidation." *Journal of Democracy* 5(3):4–17.

Duch, Raymond M. and Randolph T. Stevenson. 2008. *The Economic Vote: How Political and Economic Institutions Condition Election Results*. Cambridge University Press.

Egorov, Georgy and Konstantin Sonin. 2012. "Incumbency Advantages in Non-Democracies." Working Paper, Presented at the 2011 MPSA Annual Meeting.

Fearon, James D. 2011. "Self-Enforcing Democracy." *Quaterly Journal of Economics* 126(4):1661–1708.

Fudenberg, Drew and Jean Tirole. 1991. *Game Theory*. The MIT Press.

Gandhi, Jennifer and Adam Przeworski. 2007. "Authoritarian Institutions and the Survival of Autocrats." *Comparative Political Studies* 40:1279–1301.

Gassebner, Martin, Michael J. Lamla and James Raymond Vreeland. 2013. "Extreme Bounds of Democracy." *Journal of Conflict Resolution* 57(2):171–197.

Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg and Havård Strand. 2002. "Armed Confliect 1946-2001: A New Dataset." *Journal of Peace Research* 39(5):615–637.

Goemans, Hein. 2006. Archigos: A Database on Political Leaders. Paper Presented at the Annual Meeting of the American Political Science Association.

Goemans, Hein E. 2008. "Which Way Out? The Manner and Consequences of Losing Office." *Journal of Conflict Resolution* 52(6):771–794.

Goemans, Hein E., Kristian Skrede Gleditsch and Giacomo Chiozza. 2009. "Introducing *Archigos*: A Data Set of Political Leaders." *Journal of Peace Research* 46(2):269–283.

Gordon, Sanford C. 2002. "Stochastic Dependence in Competing Risks." *American Journal of Political Science* 46(1):200–217.

Grossman, Guy and Delia Baldassarri. 2012. "The Impact of Elections on Cooperation: Evidence from a Lab-in-the-Field Experiment in Uganda." *American Journal of Political Science* 56(4):964–985.

Hainmueller, Jens, Jonathan Mummolo and Yiqing Xu. 2016. "How Much Should we Trust Estimates from Multiplicative Interaction Models? Simple Tools to Improve Empirical Practice.".

Heston, Alan, Robert Summers and Bettina Aten. 2009. Penn World Table Version 6.3. Technical report Center of International Comparisons at the University of Pennsylvania. Center of International Comparisons at the University of Pennsylvania.

Hollyer, James R., B. Peter Rosendorff and James Raymond Vreeland. 2013. "Data Disclosure, Accountability and the Facets of Transparency." Working Paper, Presented at the 2014 MPSA Annual Meeting.

Hollyer, James R., B. Peter Rosendorff and James Raymond Vreeland. 2014. "Measuring Transparency." *Political Analysis* 22(4):413–434.

Hollyer, James R., B. Peter Rosendorff and James Raymond Vreeland. 2015. "Transparency, Protest and Autocratic Instability." *American Political Science Review* 109(4):764–784.

Holmstrom, Bengt. 1982. "Moral Hazard in Teams." *The Bell Journal of Economics* 13(2):324–340.

Huber, Evelyne, Dietrich Rueschemeyer and John D. Stephens. 1993. "The Impact of Economic Development on Democracy." *Journal of Economic Perspectives* 7(3):71–86.

Hyde, Susan and Nikolay Marinov. 2014. "Information and Self-Enforcing Democracy: The Role of International Election Observers." *International Organization* 68(2):329–359.

Islam, Roumeen. 2006. "Does More Transparency Go Along with Better Governance?" *Economics and Politics* 18(2):121–167.

Kuran, Timur. 1991. "Now Out of Never: The Element of Surprise in the East European Revolution of 1989." *World Politics* 44(1):7–48.

Lijphart, Arend, ed. 1992. *Parliamentary Versus Presidential Government*. Oxford University Press.

Linz, Juan J. 1978. *The Breakdown of Democratic Regimes*. The Johns Hopkins University Press chapter Crisis, Breakdown, and Reequilibration, pp. 3–87.

Lipset, Seymor Martin. 1959. "Some Social Requisites of Democracy: Economic Development and Political Legitimacy." *American Political Science Review* 53(1):69–105.

Little, Andrew T., Tom LaGatta and Joshua A. Tucker. 2015. "Elections, Protest and Alternation of Power." *Journal of Politics* 77(4):1142–1156.

Lohmann, Susanne. 1993. "A Signaling Model of Informative and Manipulative Political Action." *American Political Science Review* 87(2):319–333.

Meirowitz, Adam and Joshua A. Tucker. 2013. "People Power or a One Shot Deal? A Dynamic Model of Protest." *American Journal of Political Science* 57(2):478–490.

Moore, Jr., Barrington. 1966. *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*. Beacon Press.

Morris, Stephen and Hyun Song Shin. 2001. "Global Games: Theory and Application." Cowles Foundation Discussion Paper No. 1275R.

O'Donnell, Guillermo. 1996. "Illusions About Consolidation." *Journal of Democracy* 7(2):34–51.

Olken, Benjamin A. 2008. "Direct Democracy and Local Public Goods: Evidence from a Field Experiment in Indonesia." NBER Working Paper 14123.

Olson, Jr., Mancur. 1971. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Harvard University Press.

Pettersson, Therése and Peter Wallensteen. 2015. "Armed Conflicts, 1946-2014." *Journal of Peace Research* 52(4):536–550.

Prat, Andrea. 2005. "The Wrong Kind of Transparency." *The American Economic Review* 95(3):862–877.

Przeworski, Adam. 1991. *Democracy and the Market*. Cambridge University Press.

Przeworski, Adam. 2005. "Democracy as an Equilibrium." *Public Choice* 123:253–273.

Przeworski, Adam and Fernando Limongi. 1997. "Modernization: Theories and Facts." *World Politics* 49.2:155–183.

Przeworski, Adam, Gonzalo Rivero and Tianyang Xi. 2013. "Elections Under the Shadow of Force." Working Paper, Presented at the Workshop on Elections and Political Order, The Carter Center.

Przeworski, Adam, Michael E. Alvarez, José Antonio Cheibub and Fernando Limongi. 2000. *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990*. Cambridge University Press.

Przeworski, Adam, Susan C. Stokes and Bernard Manin. 1999. *Democracy, Accountability, and Representation*. Cambridge University Press.

Quiroz Flores, Alejandro and Alastair Smith. 2013. "Leader Survival and Natural Disasters." *British Journal of Political Science* 43(4):821–843.

Ross, Michael. 2001. "Does Oil Hinder Democracy?" *World Politics* 53(3):325–361.

Scartascini, Carlos and Mariano Tommasi. 2012. "The Making of Policy: Institutionalized or Not?" *American Journal of Political Science* 56(4):787–801.

Schedler, Andreas. 1998. "What is Democratic Consolidation?" *Journal of Democracy* 9(2):91–107.

Schmitter, Phillippe C. 1992. "The Consolidation of Democracy and Representation of Social Groups." *American Behavioral Scientist* 35(4/5):422–449.

Shadmehr, Mehdi and Dan Bernhardt. 2011. "Collective Action with Uncertain Payoffs: Coordination, Public Signals, and Punishment Dilemmas." *American Political Science Review* 105(4):829–851.

Shadmehr, Mehdi and Dan Bernhardt. 2014. "Vanguards in Revolution: Sacrifice, Radicalism and Coercion." http://moya.bus.miami.edu/~mshadmehr/VanguardsInRevolution.pdf.

Shadmehr, Mehdi and Dan Bernhardt. 2015. "State Censorship." *American Economic Journal: Microeconomics* 7(2):280–307.

Slater, Dan. 2009. "Revolutions, Crackdowns, and Quiessence: Communal Elites and Democratic Mobilization in Southeast Asia." *American Journal of Sociology* 115(1):203–254.

Stasavage, David. 2004. "Open Door or Closed Door? Transparency in Domestic and International Bargaining." *International Organization* 58:667–703.

Summers, Robert and Alan Heston. 1991. "The Penn World Table (Mark 5): An Expanded Set of International Comparisons, 1950-1988." *Quarterly Journal of Economics* 106(2):327–368.

Svolik, Milan W. 2013. "Learning to Love Democracy: Electoral Accountability and the Success of Democracy." *American Journal of Political Science* 57(3):685–702.

Svolik, Milan W. 2015. "Which Democracies will Last? Coups, Incumbent Takeovers, and the Dynamic of Democratic Consolidation." *British Journal of Political Science* 45(4):715–738.

Tucker, Joshua A. 2007. "Enough! Electoral Fraud, Collective Action Problems, and Post-Communist Colored Revolutions." *Perspectives on Politics* 5(3):535–551.

Wantchekon, Leonard. 2004. "The Paradox of "Warlord" Democracy: A Theoretical Investigation." *The American Political Science Review* 98.1:17–33.

Weingast, Barry R. 1997. "The Political Foundations of Democracy and the Rule of Law." *The American Political Science Review* 91(2):245–263.

Wright, Joseph. 2008. "Political Competition and Democratic Stability in New Democracies." *British Journal of Political Science* 38(2):221–245.

Proofs of Theoretical Propositions

Lemma 1. $\tilde{y}(s) = \frac{\gamma}{2}(\frac{\sigma_y^2}{\sigma_s^2} + 1) - \frac{s\sigma_y^2}{\sigma_s^2}$.

Proof. From Definition 1, $Pr(\theta = 1|\tilde{y}(s), s) = p$. From Bayes' rule,

$$Pr(\theta = 1|\tilde{y}(s), s) = \frac{p\phi(\frac{\tilde{y}(s)-\gamma}{\sigma_y})\phi(\frac{s-\gamma}{\sigma_s})}{p\phi(\frac{\tilde{y}(s)-\gamma}{\sigma_y})\phi(\frac{s-\gamma}{\sigma_s}) + (1-p)\phi(\frac{\tilde{y}(s)}{\sigma_y})\phi(\frac{s}{\sigma_s})}$$

Setting this equal to p and solving for $\tilde{y}(s)$ yields the result. □

Proof of Equilibrium Existence

Proof of Proposition 1. The leader has a dominant strategy to match her type: L's best response is to set $G_t = \theta$ in $t \in \{1, 2\}$. In the voting stage, given the equilibrium strategies of the leader and the other voters, voter i votes against the incumbent (set $v_i = 1$) if and only if $Pr(\theta = 1|y_{i,1}, s) \leq p$. Substituting the equilibrium interim beliefs and simplifying yields the condition that $v_i = 1$ iff $y_{i,1} < \tilde{y}(s)$. So the voter is playing a best response which is consistent with beliefs. After the voting is complete, and given these strategies by the voters, the number of votes to remove L is given by $V(s; G_1)$, as defined in Definition 1. Notice that, for any value of s, $V(s; 1) < V(s; 0)$ – the vote share of the incumbent is strictly lower if she fails to provide the public good than if she provides the public good. This then implies that – given the public signal – each citizen i can deduce L's type with certainty based on her vote share. More precisely, each citizen i's posterior beliefs will be given by:

$$Pr(\theta = 1|V, s) = \begin{cases} 0 \text{ if } V > V(s; 1) \\ 1 \text{ otherwise.} \end{cases}$$

Given these posterior beliefs, it is an equilibrium response if all voters mobilize if the actual vote count is larger than the expected vote count in the instance that the leader is good, i.e., if $V > V(s; 1)$. If all other voters are mobilizing it is optimal for the i'th voter to mobilize too in order to benefit from participating in a successful uprising; if the other voters are not mobilizing (which happens when $V \leq V(s; 1)$), then there is no benefit to protesting. Hence for voter i a best response is $a_i = 1$ if $V > V(s; 1)$ and 0 otherwise. Finally both interim and posterior beliefs follow Bayes' rule. □

Democratic Discrimination and Transparency

Lemma 2. *$\tilde{s}$ and $\underset{\sim}{s}$ are well-defined.*

Proof. $\Phi(\frac{\tilde{y}(\tilde{s})}{\sigma_y}) = \frac{1}{2}$ and $\tilde{y}(s) = \frac{\gamma}{2}(\frac{\sigma_y^2}{\sigma_s^2} + 1) - \frac{s\sigma_y^2}{\sigma_s^2}$ from Lemma 1. Substituting and solving yields $\frac{\gamma}{2}(1 + \frac{\sigma_s^2}{\sigma_y^2}) = \tilde{s}$. Similarly, $\Phi(\frac{\tilde{y}(s)-\gamma}{\sigma_y}) = \frac{1}{2}$. Substituting and solving yields $\frac{\gamma}{2}(1 - \frac{\sigma_s^2}{\sigma_y^2}) = \underset{\sim}{s}$. □

Discrimination Rises with Transparency

Proof of Proposition 2. Electoral discrimination $= \Phi(\frac{\tilde{s}}{\sigma_s}) - \Phi(\frac{\underset{\sim}{s}-\gamma}{\sigma_s})$. $\frac{\partial}{\partial\sigma_s}[\Phi(\frac{\tilde{s}}{\sigma_s}) - \Phi(\frac{\underset{\sim}{s}-\gamma}{\sigma_s})] = \phi(\frac{\tilde{s}}{\sigma_s})\frac{\partial}{\partial\sigma_s}[\frac{\tilde{s}}{\sigma_s}] - \phi(\frac{\underset{\sim}{s}-\gamma}{\sigma_s})\frac{\partial}{\partial\sigma_s}[\frac{\underset{\sim}{s}-\gamma}{\sigma_s}]$. Now the first term $\phi(\frac{\tilde{s}}{\sigma_s})\frac{\partial}{\partial\sigma_s}[\frac{\tilde{s}}{\sigma_s}] = \phi(\frac{\tilde{s}}{\sigma_s})\frac{\gamma}{2}(\frac{1}{\sigma_y^2} - \frac{1}{\sigma_s^2}) < 0$ since

$\sigma_s < \sigma_y$ and $\phi(\cdot) > 0$. The second term $\phi(\frac{\tilde{s}-\gamma}{\sigma_s})\frac{\partial}{\partial\sigma_s}[\frac{\tilde{s}-\gamma}{\sigma_s}] = \phi(\frac{\tilde{s}-\gamma}{\sigma_s})\frac{\gamma}{2}(\frac{1}{\sigma_s^2} - \frac{1}{\sigma_y^2}) > 0$ again since $\sigma_s < \sigma_y$. Hence $\frac{\partial}{\partial\sigma_s}[\Phi(\frac{\tilde{s}}{\sigma_s}) - \Phi(\frac{\tilde{s}-\gamma}{\sigma_s})] < 0$. □

Unrest Falls with Transparency

Proof of Proposition 3. Mass unrest takes place in equilibrium if and only if an incumbent of type $\theta = 0$ survives the electoral stage of the game which occurs with the ex ante probability of $1 - \Phi(\frac{\tilde{s}}{\sigma_s})$. Then $\frac{\partial}{\partial\sigma_s}\left[1 - \Phi(\frac{\tilde{s}}{\sigma_s})\right] = -\phi(\frac{\tilde{s}}{\sigma_s})[\frac{\partial}{\partial s}\frac{\tilde{s}}{\sigma_s}]$. From the proof of Proposition 2, $\frac{\partial}{\partial s}\frac{\tilde{s}}{\sigma_s} < 0$. Since ϕ is the pdf of the standard normal (and hence positive), $\frac{\partial}{\partial\sigma_s}\left[1 - \Phi(\frac{\tilde{s}}{\sigma_s})\right] > 0$. The probability of unrest under democracy is falling in transparency. □

Correlation between Economic Performance and Democratic Collapse Falls with Transparency

Proof of Remark 1. The probability of democratic collapse given $G_1 = 1$ is fixed and equal to zero. The probability of democratic collapse given $G_1 = 0$ is given by $1 - \Phi(\frac{\tilde{s}}{\sigma_s})$, which, as is established in Proposition 3 is falling in transparency. Hence, the difference in the probability of democratic collapse given $G_1 = 1$ and $G_1 = 0$ is falling in transparency. □

Model Extension

Consider a game identical to that above, save only for the utility function of the incumbent L. Define L's utility in each period t as:

$$u_{L,t}(G_t;\theta) = \begin{cases} 1 + B \text{ if } G_t = \theta \text{ and in office} \\ B \text{ if } G_t \neq \theta \text{ and in office} \\ 0 \text{ otherwise.} \end{cases}$$

where $B > 0$ denotes the rents from office. L has a primitive preference for matching her action G_t with her type θ. But, L also prefers to retain office, and thus gain access to the rents B. L may, therefore, deviate from her preferred choice of G_1 if doing so increases her chance of remaining in office.

The extended model may give rise to both pooling and separating equilibria. We characterize the separating and pooling equilibria; we also offer a lemma and a proposition. Proofs appear at the end of this section.

Proposition 4. *If* $\Phi(\frac{\underset{\sim}{s}-\gamma}{\sigma_s}) \geq \frac{B}{1+B}$*, then the following strategies and beliefs constitute a (separating) PBE to the extended model. For the leader of type* θ*,* $G_t = \theta$ *for* $t = 1, 2$*. For the citizens, their voting and mobilization strategies are*

$$v_i = \begin{cases} 1 \text{ if } y_{i,1} \leq \tilde{y}(s) \\ 0 \text{ otherwise.} \end{cases}$$

$$a_i = \begin{cases} 1 \text{ if } V > V(s;1) \\ 0 \text{ otherwise.} \end{cases}$$

Posterior beliefs (after both the private and public signals but before the vote) are $Pr(\theta = 1|y_{i,1}, s) = \frac{p\phi(\frac{y_{i,1}-\gamma}{\sigma_y})\phi(\frac{s-\gamma}{\sigma_s})}{p\phi(\frac{y_{i,1}-\gamma}{\sigma_y})\phi(\frac{s-\gamma}{\sigma_s})+(1-p)\phi(\frac{y_{i,1}}{\sigma_y})\phi(\frac{s}{\sigma_s})}$ *and after the vote, but before political action:*

$$Pr(\theta = 1|V, s) = \begin{cases} 0 \text{ if } V > V(s,1) \\ 1 \text{ otherwise.} \end{cases}$$

Strategies in this separating equilibrium are analogous to those described in the baseline model. Good incumbents set $G_t = 1$ in both periods, as this both satisfies their primitive preference and maximizes their chance of retention. This is a dominant strategy. Bad types also play according to type, setting $G_t = 0$. In the second period, this also constitutes a dominant strategy. In the first period, the bad incumbent considers improving her chances of retention (from zero) by (deviating and) providing the public good. However, her risk of removal even after setting $G_1 = 1$, defined as $\Phi(\frac{\underset{\sim}{s}-\gamma}{\sigma_s})$, remains sufficiently high that she prefers to act according to type. Given that L plays according to type, each citizen is faced with exactly the same voting and mobilization decisions a described above. Each i thus chooses to vote against the incumbent if $y_i < \tilde{y}(s)$ and to mobilize against a reelected leader if $V > V(s;1)$.

However, this separating equilibrium exists only for a subset of parameter values. More precisely, this separating equilibrium exists only if the level of transparency is sufficiently low (σ_s is sufficiently high) relative to the value of holding office B. For a sufficiently high value of holding office, this separating equilibrium will not exist for any value of transparency. We define the value of B below which a separating equilibrium exists as $\bar{B}$ and the requisite value of σ_s necessary for a separating equilibrium for a given $B \leq \bar{B}$ as $\sigma_s(B)$. We characterize these values as follows:

Lemma 3. *For any* $B \in [0, \bar{B}]$*, there exists a* $\sigma_s(B)$ *such that* $\Phi\left(\frac{\underset{\sim}{s}-\gamma}{\sigma_s}\right) \geq \frac{B}{1+B}$ *for all* $\sigma_s \geq \sigma_s(B)$*, where* $\underset{\sim}{s}$ *is as defined in Definition 2.*

For alternative parameter values, the extended model gives rise to a pooling equilibrium, in

which bad types mirror the actions of the good type in time $t = 1$. In such an equilibrium, neither the public nor the private signal is informative as to the incumbent's type. All types of L adopt the same actions in equilibrium, hence all realizations of the signals y_i and s are equally likely for both types of leader. Voters cannot update their beliefs and are therefore indifferent between the incumbent and any challenger. Nonetheless, voters must continue to vote to remove incumbents if their signals (both public and private) are too low. Only by adopting such a strategy can the voters induce bad types of leaders to pool in the first period of play. We characterize such an equilibrium, in which voters' behavior is unchanged relative to the separating equilibrium (above), in the following proposition:

Proposition 5. *If $\Phi(\frac{\tilde{s}-\gamma}{\sigma_s}) < \frac{B}{1+B}$, then the following strategies and beliefs constitute a (pooling) PBE to the extended model. For the leader $G_1 = 1 \; \forall \; \theta$. $G_2 = 1$ if $\theta = 1$ and $G_2 = 0$ if $\theta = 0$. For the citizens, their voting and mobilization strategies are:*

$$v_i = \begin{cases} 1 \text{ if } y_{i,1} \leq \tilde{y}(s) \\ 0 \text{ otherwise.} \end{cases}$$

$$a_i = \begin{cases} 1 \text{ if } V > V(s;1) \\ 0 \text{ otherwise.} \end{cases}$$

Posterior beliefs (after both the private and public signals but before the vote) are $Pr(\theta = 1|y_{i,1}, s) = p$ and after the vote, but before political action:

$$Pr(\theta = 1|V, s) = \begin{cases} 0 \text{ if } V > V(s,1) \\ p \text{ otherwise.} \end{cases}$$

In this equilibrium, citizens continue to vote against the incumbent when the realization of their public and private signals is sufficiently poor – i.e., when $y_{i,1} < \tilde{y}(s)$. Importantly, however, this is *not* because such signals are indicative of a bad type of leader. Both good and bad types of incumbent provide the public good in the first period, hence signals are uninformative of type. Voters are thus no longer behaving sincerely. Rather, they behave in this manner because of the economic damage a leader *might* cause off the equlibrium path. Voters must continue to vote according to their signals, despite the fact that these signals only reflect noise in equilibrium, because this is their only means of ensuring that leaders of all types have an incentive to behave well.

Analogously, citizens maintain their strategy of resorting to protest should the combination of vote totals and the public signal be sufficiently bad. However, since incumbents of all types set

$G_1 = 1$, this combination is never realized in equlibrium. $V(s, G_t) = V(s, 1)$ for both bad and good incumbents and protest never takes place. The risk of autocratic reversion falls to zero in equilibrium – democracy becomes consolidated.

Proposition 6. *The probability of democratic collapse is weakly falling for all values of transparency (weakly rising in σ_s).*

Lemma 3 establishes that for any given $B < \bar{B}$, the separating equilibrium described in Proposition 4 exists for sufficiently low levels of transparency (high values of σ_s). In this equilibrium, both citizen and incumbent strategies are identical to those in the baseline model, so the conclusions of Proposition 3 continue to hold. For a parameter values where this separating equilibrium exists, the risk of democratic collapse strictly falls in transparency. For values of transparency greater than the threshold described in Lemma 3 (low values of σ_s), the pooling equilibrium described in Proposition 5 exists. In this pooling equilibrium, democracy is consolidated. The risk of democratic collapse is constant and equal to zero for all levels of transparency above this value (all values of $\sigma_s < \sigma_s(B)$). The risk of democratic collapse is therefore weakly falling everywhere in transparency.

Proof of Existence of a Separating Equilibrium

Proof of Proposition 4. When $\theta = 1$, L has a dominant strategy of setting $G_t = 1 \; \forall \; t$. For this to be a separating equilibrium, when $\theta = 0$ L must set $G_t = 0 \; \forall \; t$. When L sets $G_1 = 0$, she is removed from office with certainty – either via elections or following unrest. When L sets $G_1 = 1$ she is removed with probability $\Phi(\frac{s-\gamma}{\sigma_s})$. Hence, types $\theta = 0$ prefer to set $G_1 = 0$ iff:

$$1 + B \geq B + [1 - \Phi(\frac{s-\gamma}{\sigma_s})](1 + B)$$
$$\Phi(\frac{s-\gamma}{\sigma_s}) \geq \frac{B}{1+B}.$$

Given $\Phi(\frac{s-\gamma}{\sigma_s}) \geq \frac{B}{1+B}$, L's strategy of $G_t(\theta) = \theta \; \forall \; t$, and the equilibrium strategies of all other voters, voter i votes against the incumbent if and only if $Pr(\theta = 1|y_{i,1}, s) \leq p$. Hence, $v_i = 1$ iff $y_{i,1} \leq \tilde{y}(s)$, where $\tilde{y}(s)$ is as defined in Definition 1. Given this strategy by each voter i, the number of voters voting to remove L is as given by $V(s; G_1)$, again as defined in Definition 1. As in the baseline model, for any realization of s, a strictly greater number of citizens vote to remove when $G_1 = 0$ than when $G_1 = 1$. Hence, each citizen i's beliefs at the conclusion of the voting

stage will be given by:

$$Pr(\theta = 1|V, s) = \begin{cases} 0 \text{ if } V > V(s;1) \\ 1 \text{ otherwise.} \end{cases}$$

Given these posterior beliefs, is an equilibrium response for all voters to mobilize iff $V > V(s;1)$. □

Proof of Equilibrium Threshold in Transparency and Benefits to Office

Proof of Lemma 3. Recall that $0 < \sigma_s < \sigma_y$, and from Proposition 2, $\Phi\left(\frac{s-\gamma}{\sigma_s}\right)$ is monotonic and increasing in σ_s. Then $\Phi\left(\frac{s-\gamma}{\sigma_s}\right)$ takes a maximum value as $\sigma_s \to \sigma_y$. From Definition 2 we have $\underset{\sim}{s} = \frac{\gamma}{2}\left(1 - \frac{\sigma_s^2}{\sigma_y^2}\right) \Leftrightarrow \frac{\underset{\sim}{s}-\gamma}{\sigma_s} = -\frac{\gamma}{2\sigma_s} - \frac{\gamma\sigma_s}{2\sigma_y^2}$. Then $\lim_{\sigma_s \to \sigma_y} \Phi\left(\frac{\underset{\sim}{s}-\gamma}{\sigma_s}\right) = \Phi\left(-\frac{\gamma}{\sigma_y}\right) \in (0,1)$. Hence, for any $\gamma,\ \sigma_y$, we can define a value of $\bar{B} \in \mathbb{R}_+$ such that $\frac{\bar{B}}{1+\bar{B}} = \Phi\left(-\frac{\gamma}{\sigma_y}\right)$. Now for any $B < \bar{B}$, define $\sigma_s(B)$ such that $\Phi\left(-\frac{\gamma}{2\sigma_s(B)} - \frac{\gamma\sigma_s(B)}{2\sigma_y^2}\right) = \frac{B}{1+B}$. Then by monotonicity of $\Phi(\cdot)$ in σ_s, $\Phi\left(\frac{\underset{\sim}{s}-\gamma}{\sigma_s}\right) \geq \frac{B}{1+B}$ for all $\sigma_s \geq \sigma_s(B)$ and $B < \bar{B}$. □

Proof of Existence of a Pooling Equilibrium

Proof of Proposition 5. When $\theta = 1$, L has a dominant strategy of setting $G_t = 1\ \forall\ t$. When $\theta = 0$, L has a dominant strategy of setting $G_2 = 0$. In a pooling equilibrium, L must prefer to set $G_1 = 1$ when $\theta = 0$, which is possible if and only if the gains in the probability of survival are sufficiently high.

In a pooling equilibrium, all types of L set $G_1 = 1$, hence all realizations of $y_{i,1}$ and s are equally likely regardless of type. $Pr(\theta = 1|y_{i,1}, s) = p\ \forall\ y_{i,1}, s$. Voters are thus indifferent between setting $v_i = 0$ and $v_i = 1$. It thus remains a best response for all i to set $v_i = 1$ iff $y_{i,1} \leq \tilde{y}(s)$, where $\tilde{y}(s)$ is as defined in Definition 1. Given this voting strategy, vote returns will always be given by $V(s;1)$ as defined in Definition 1, and voter posterior beliefs are given by $Pr(\theta = 1|V, s) = p\ \forall\ s$. Posterior beliefs for $V > V(s;1)$ are not defined by Bayes' Rule, and may be set such that $Pr(\theta = 1|V > V(s;1), s) = 0\ \forall\ s$. Given these beliefs, it is a best response for all i to set $a_i = 1$ iff $V > V(s;1)$ and to set $a_i = 0$ otherwise.

Given these equilibrium strategies by all citizens i, L faces certain removal should she deviate and set $G_1 = 0$ and will be retained with probability $\Phi(\frac{\underset{\sim}{s}-\gamma}{\sigma_s})$ if she sets $G_1 = 1$. Hence, types $\theta = 0$ strictly prefer to set $G_1 = 1$ if and only if $1+B < B+[1-\Phi(\frac{\underset{\sim}{s}-\gamma}{\sigma_s})](1+B) \Leftrightarrow \Phi(\frac{\underset{\sim}{s}-\gamma}{\sigma_s}) < \frac{B}{1+B}$.

Thus, if $\Phi(\frac{\tilde{s}-\gamma}{\sigma_s}) < \frac{B}{1+B}$, the above strategies and beliefs constitute a pooling PBE to the game. □

Comparative Statics to the Extended Model

Proof of Proposition 6. The strategies of all players in the separating equilibrium to the extended model are identical to those of the baseline model. Hence, for any $B \leq \bar{B}$ and $\sigma_s \geq \sigma_s(B)$, the conclusion of Proposition 3 still holds. The probability of collapse is strictly falling in transparency (rising in σ_s).

For any $B > \bar{B}$ or $\sigma_s < \sigma_s(B)$ (when $B \leq \bar{B}$), the pooling equilibrium holds. Along the equilibrium path, $V = V(s;1)$ regardless of L's type, hence $a_i = 0 \ \forall \ i$. The probability of collapse is invariant and equal to zero for all values of transparency.

Taken together, these results indicate that the probability of democratic collapse is weakly falling for all values of transparency (weakly rising for all values of σ_s). □

Empirical Appendix

Alternative Definitions of Democracy

Table 6: Transparency and the Hazard of Collapse – Expanded Definition of Democracy

	Cond. Prior Transition		**Cond. Num. Transitions**		**Prior Transition Control**	
Transparency	-0.573***	-0.700***	-0.637**	-0.709***	-0.490**	-0.640***
	[-1.004,-0.141]	[-1.095,-0.305]	[-1.122,-0.152]	[-1.099,-0.318]	[-0.951,-0.029]	[-1.009,-0.271]
Growth	-0.073*	-0.060	-0.067*	-0.054	-0.054	-0.057
	[-0.150,0.004]	[-0.138,0.018]	[-0.144,0.009]	[-0.129,0.021]	[-0.128,0.020]	[-0.132,0.018]
Transparency ×	0.009	0.015	0.009	0.017	0.023	0.022
Growth	[-0.054,0.071]	[-0.048,0.078]	[-0.051,0.069]	[-0.042,0.076]	[-0.028,0.073]	[-0.028,0.073]
GDP *per capita*	-0.117*		-0.097		-0.121	
	[-0.255,0.021]		[-0.235,0.042]		[-0.273,0.031]	
Ec. Opennes	0.002		-0.001		0.000	
	[-0.011,0.015]		[-0.015,0.012]		[-0.012,0.012]	
Parliamentary	1.200***		1.170***			
	[0.380,2.019]		[0.308,2.032]			
Mixed System	-0.076		-0.115		-0.286	
	[-1.375,1.224]		[-1.356,1.126]		[-1.581,1.008]	
Prior Transition					1.199**	1.264***
					[0.277,2.121]	[0.340,2.188]
# of Subjects	123	123	123	123	123	123
# of Failures	26	26	26	26	26	26

Cox proportional hazards regressions of the hazard of democratic collapse. Here we include as democracies observations that fail to pass the 'type 2' criterion (alternation in power) of the DD coding scheme. Relaxing this requirement expands both the number of democratic regime-years and the number of autocratic reversions in our sample. The models depicted in the first two columns, the middle two columns, and the last two columns differ in the manner in which they deal with countries that experience multiple autocratic spells. Those in the first two columns report a conditional gap time model wherein the baseline hazard is separately estimated for regimes that experience a prior transition and for those that did not. Those in the next two columns estimate separate baseline hazards based on the number of prior transitions. Those in the final two columns examine only autocratic spells that did not experience a prior transition. We present estimates of coefficient values, not hazard ratios, with 95 percent confidence intervals are presented in brackets. All standard errors have been clustered by democratic spell.

Alternative Specifications

Table 7: Transparency and the Hazard of Collapse – Omitting Interaction Term

	Cond. Prior Transition		**Cond. Num. Transitions**		**Prior Transition Control**	
Transparency	-0.600**	-0.663***	-0.472*	-0.577***	-0.313	-0.558***
	[-1.185,-0.016]	[-1.115,-0.211]	[-1.022,0.077]	[-1.013,-0.140]	[-0.763,0.137]	[-0.932,-0.183]
Growth	-0.134***	-0.104***	-0.108***	-0.092***	-0.119***	-0.112***
	[-0.202,-0.066]	[-0.156,-0.052]	[-0.179,-0.036]	[-0.148,-0.035]	[-0.176,-0.061]	[-0.168,-0.056]
GDP *per capita*	-0.215*		-0.181		-0.208**	
	[-0.431,0.001]		[-0.436,0.073]		[-0.414,-0.002]	
Ec. Openness	0.001		0.002		-0.001	
	[-0.019,0.020]		[-0.016,0.020]		[-0.020,0.018]	
Parliamentary	2.122***		1.859***		1.221**	
	[0.859,3.384]		[0.728,2.990]		[0.093,2.350]	
Mixed System	0.678		0.467		0.454	
	[-0.627,1.984]		[-0.874,1.808]		[-0.861,1.770]	
Prior Transition					1.461**	1.021**
					[0.326,2.597]	[0.100,1.942]
# of Subjects	88	88	88	88	88	88
# of Failures	19	19	19	19	19	19

Cox proportional hazards regressions of the hazard of democratic collapse. In these models, we omitt the interaction between transparency and economic growth included in our baseline specifications. The models depicted in the first two columns, the middle two columns, and the last two columns differ in the manner in which they deal with countries that experience multiple autocratic spells. Those in the first two columns report a conditional gap time model wherein the baseline hazard is separately estimated for regimes that experience a prior transition and for those that did not. Those in the next two columns estimate separate baseline hazards based on the number of prior transitions. Those in the final two columns examine only autocratic spells that did not experience a prior transition. We present estimates of coefficient values, not hazard ratios, with 95 percent confidence intervals are presented in brackets. All standard errors have been clustered by democratic spell.

Table 8: Transparency and the Hazard of Collapse – Including Quadratic Term

	Cond. Prior Transition		**Cond. Num. Transitions**		**Prior Transition Control**	
Transparency	-0.818*	-0.884***	-0.812**	-0.825***	-0.474	-0.730***
	[-1.639,0.004]	[-1.455,-0.313]	[-1.535,-0.089]	[-1.350,-0.300]	[-1.069,0.121]	[-1.215,-0.245]
Transparency^2	0.065	0.062	0.078**	0.060	0.042	0.046
	[-0.078,0.209]	[-0.043,0.166]	[0.000,0.155]	[-0.035,0.156]	[-0.049,0.134]	[-0.051,0.142]
Growth	-0.139***	-0.109***	-0.123***	-0.102***	-0.122***	-0.116***
	[-0.205,-0.073]	[-0.163,-0.056]	[-0.190,-0.056]	[-0.155,-0.049]	[-0.182,-0.061]	[-0.174,-0.059]
Transparency $\times$	0.027	0.029	0.055**	0.045	0.023	0.026
Growth	[-0.052,0.107]	[-0.062,0.121]	[0.012,0.098]	[-0.011,0.100]	[-0.057,0.103]	[-0.063,0.115]
GDP *per capita*	-0.209*		-0.170		-0.207*	
	[-0.429,0.010]		[-0.417,0.077]		[-0.420,0.007]	
Ec. Openness	-0.001		-0.005		-0.003	
	[-0.021,0.018]		[-0.026,0.016]		[-0.023,0.017]	
Parliamentary	2.037***		2.003***		1.151**	
	[0.821,3.253]		[0.879,3.127]		[0.034,2.269]	
Mixed System	0.588		0.525		0.363	
	[-0.705,1.882]		[-0.791,1.840]		[-1.019,1.745]	
Prior Transition					1.573***	1.164**
					[0.424,2.723]	[0.197,2.131]
# of Subjects	88	88	88	88	88	88
# of Failures	19	19	19	19	19	19

Cox proportional haards regressions of the hazard of democratic collapse. In these models, we include a quadratic term of transparency in our baseline specifications. The models depicted in the first two columns, the middle two columns, and the last two columns differ in the manner in which they deal with countries that experience multiple autocratic spells. Those in the first two columns report a conditional gap time model wherein the baseline hazard is separately estimated for regimes that experience a prior transition and for those that did not. Those in the next two columns estimate separate baseline hazards based on the number of prior transitions. Those in the final two columns examine only autocratic spells that did not experience a prior transition. We present estimates of coefficient values, not hazard ratios, with 95 percent confidence intervals are presented in brackets. All standard errors have been clustered by democratic spell.

Additional Controls

In this section, we assess the robustness of our empirical results – including both models in which autocratic reversions are the outcome of interest and those in which the (regular/irregular) removal of leaders are the outcome of interest – to the inclusion of a bevy of additional controls. The controls include measures of conflict and of natural disasters, shocks which may affect both the stability of the government and its capacity to disclose information. We also examine the robustness of our models to controlling for whether the sitting leader has a past or present affiliation with the military.

Democratic governments in which the military exercises a particularly powerful political role are prone to overthrow (Cheibub, 2007; Crenshaw, 1995; Ross, 2001). Moreover, one may reasonably anticipate that governments in which the military is given such a prominent role exhibit low levels of economic transparency. If this is the case, our results may be biased. To adjust for this possibility, we include an indicator for whether a sitting democratic leader has ties (past or present) to the military in our baseline specifications. We draw this variable from the *DD* dataset (Cheibub, Gandhi and Vreeland, 2010). When we additionally include this indicator, we find that it is substantively and significantly predictive of democratic collapse. However, the coefficient on transparency is unaffected, either in magnitude or level of statistical significance. Our results remain robust.

Analogously, one may be concerned that democratic regimes will tend to reduce their levels of transparency during periods of armed conflict. Moreover, warfare may result in the collapse of the democratic order. To address the resultant risk of bias, we control for two alternative indicators of whether a given country-year was the location of armed conflict, both drawn from the UCDP/PRIO database on armed conflict, version 4-2015 (Gleditsch et al., 2002; Pettersson and Wallensteen, 2015).[14] The first indicator ($War\ Location$) measures whether the country was the location of a war involving 1,000 or more battle deaths. The latter ($Conflict\ Location$) measures whether the country was exposed to a lower level of conflict involving 25 or more battle deaths. The incidence of wars is not robustly associated with democratic collapse, however, lower level conflicts are. Nonetheless, neither the magnitude of the coefficient on the transparency measure, nor its level of precision, are substantively affected by the inclusion of either term.

As with military clashes, we employ two measures of natural disasters, both drawn from Quiroz Flores and Smith (2013) who, in turn, rely on the Emergency Events Database (EM-

[14] A country is coded as the location of a conflict either if its territory was the principal source of the dispute or, in the case of interstate wars, whether it was one of the primary participants in the war.

DAT) created by the Centre for Research on the Epidemiology of Disasters.[15] Like Quiroz Flores and Smith (2013), we examine both the frequency of disaster-events within a given country-year – where a disaster-event involves the deaths of ten or more people, the injury of 100 or more, the declaration of a state of emergency, or calls for international emergency assistance – and the severity of such events, measured as the natural log of the number of deaths caused by disasters. Neither term is robustly associated with the collapse of democratic rule, and the magnitude of the coefficient on transparency is substantively unchanged relative to the baseline in all specifications. Coverage for the natural disaster measures is somewhat less than for other measures, and the resultant loss of degrees of freedom does slightly inflate our standard errors. The coefficient on the transparency covariate remains significant at conventional levels in 15 of 18 specifications.

Autocratic Reversions

Table 9 presents our results including a control for a binary indicator of whether the leader in power has ties to the military. Despite the limited variation in this term in our sample – only around 9 percent of observations have such a leader – it is a powerful predictor of autocratic reversions. The coefficient on this term is both substantively large and highly statistically significant in all specifications. However, including this term does not substantively affect the coefficient on our transparency measure. Neither the coefficient value nor the level of statistical significance of this term is substantively affected relative to baseline specifications.

Tables 10 and 11 present results controlling for an indicator for war and conflict or war, respectively. As noted above, the latter includes more minor conflicts (a threshold of 25 battle deaths) than the former. These results indicate that the presence of minor conflicts are more strongly associated with democratic collapse than major wars – the conflict indicator has a coefficient that is substantively large, positive, and highly significant in all specifications. The war indicator, by contrast, produces a coefficient that is distinguishable from zero in only one (of nine) specifications. Again, however, the coefficient on the transparency term is substantively unaffected relative to the baseline. The coefficient remains large (and of similar magnitude), negative, and significant when either control is included.

Tables 12 and 13 include controls for the frequency of disaster event and for the natural log of the number of deaths from such disasters, respectively. Neither term is strongly correlated with democratic collapse. Moreover, coefficient estimates on the transparency parameter are largely unaffected by the inclusion of these controls. The magnitude of this term does not substantively vary relative to the baseline specifications. In one instance, the inclusion of the disaster deaths

[15] http://www.emdat.be

Table 9: Transparency and the Hazard of Collapse – Controlling for Military Leaders

	Cond. Prior Transition			Cond. Num. Transitions			Prior Transition Control		
Transparency	-0.681**	-0.566***	-0.637***	-0.549*	-0.553***	-0.570***	-0.340	-0.445**	-0.503***
	[-1.315,-0.046]	[-0.959,-0.174]	[-1.011,-0.263]	[-1.108,0.010]	[-0.959,-0.146]	[-0.940,-0.200]	[-0.835,0.154]	[-0.861,-0.028]	[-0.844,-0.162]
Growth	-0.137***	-0.101***		-0.114***	-0.082***		-0.120***	-0.110***	
	[-0.213,-0.061]	[-0.166,-0.036]		[-0.192,-0.037]	[-0.141,-0.023]		[-0.184,-0.057]	[-0.176,-0.045]	
Transparency ×	0.012	0.012		0.052**	0.041		0.015	0.018	
Growth	[-0.071,0.096]	[-0.078,0.101]		[0.010,0.094]	[-0.022,0.104]		[-0.068,0.098]	[-0.069,0.105]	
GDP *per capita*	-0.168*			-0.153			-0.109		
	[-0.342,0.006]			[-0.358,0.052]			[-0.258,0.041]		
Ec. Openness	-0.005			-0.003			-0.006		
	[-0.025,0.014]			[-0.018,0.012]			[-0.026,0.014]		
Parliamentary	2.313***			2.190***			1.153***		
	[1.217,3.410]			[0.974,3.405]			[0.281,2.024]		
Mixed System	1.371***			1.336**			0.632		
	[0.452,2.291]			[0.236,2.436]			[-0.412,1.676]		
Military	2.780***	2.560***	2.618***	2.970***	2.696***	2.866***	2.407***	2.421***	2.471***
	[1.568,3.992]	[1.414,3.706]	[1.532,3.703]	[1.603,4.337]	[1.462,3.930]	[1.656,4.077]	[1.236,3.577]	[1.361,3.482]	[1.423,3.518]
Prior Transition							1.085**	0.817*	0.729
							[0.141,2.029]	[-0.133,1.767]	[-0.251,1.709]
# of Subjects	88	88	88	88	88	88	88	88	88
# of Failures	19	19	19	19	19	19	19	19	19

Table 10: Transparency and the Hazard of Collapse – Controlling for Wars

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	-0.663**	-0.728***	-0.718***	-0.618*	-0.686***	-0.643***	-0.348	-0.619***	-0.624***
	[-1.286,-0.041]	[-1.185,-0.272]	[-1.148,-0.287]	[-1.242,0.007]	[-1.121,-0.251]	[-1.091,-0.195]	[-0.830,0.135]	[-1.027,-0.210]	[-0.999,-0.250]
Growth	-0.135***	-0.103***		-0.115***	-0.094***		-0.119***	-0.111***	
	[-0.203,-0.066]	[-0.155,-0.051]		[-0.182,-0.048]	[-0.149,-0.040]		[-0.181,-0.057]	[-0.168,-0.055]	
Transparency ×	0.034	0.042		0.072***	0.064**		0.031	0.040	
Growth	[-0.044,0.111]	[-0.053,0.137]		[0.018,0.125]	[0.007,0.122]		[-0.045,0.108]	[-0.045,0.124]	
GDP *per capita*	-0.205*			-0.134			-0.202*		
	[-0.444,0.033]			[-0.397,0.129]			[-0.425,0.022]		
Ec. Openness	0.000			-0.004			-0.001		
	[-0.020,0.021]			[-0.025,0.017]			[-0.021,0.019]		
Parliamentary	2.063***			2.039***			1.117**		
	[0.830,3.297]			[0.934,3.143]			[0.019,2.215]		
Mixed System	0.717			0.798			0.511		
	[-0.568,2.001]			[-0.607,2.204]			[-0.792,1.813]		
War Location	0.455	0.722	0.804	1.119	0.946*	0.845	0.536	0.749	0.849
	[-0.676,1.585]	[-0.457,1.900]	[-0.297,1.904]	[-0.407,2.644]	[-0.128,2.021]	[-0.279,1.968]	[-0.600,1.671]	[-0.429,1.926]	[-0.254,1.953]
Prior Transition							1.465**	1.075**	0.878*
							[0.276,2.654]	[0.122,2.027]	[-0.079,1.836]
# of Subjects	88	88	88	88	88	88	88	88	88
# of Failures	19	19	19	19	19	19	19	19	19

Table 11: Transparency and the Hazard of Collapse – Controlling for Conflicts

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	-0.824**	-0.754***	-0.791***	-0.588*	-0.634***	-0.651***	-0.408	-0.603***	-0.655***
	[-1.504,-0.145]	[-1.198,-0.309]	[-1.199,-0.383]	[-1.212,0.036]	[-1.037,-0.231]	[-1.048,-0.254]	[-0.948,0.131]	[-1.059,-0.147]	[-1.043,-0.267]
Growth	-0.116***	-0.085***		-0.105***	-0.083***		-0.110***	-0.098***	
	[-0.180,-0.053]	[-0.132,-0.038]		[-0.170,-0.041]	[-0.143,-0.022]		[-0.165,-0.054]	[-0.148,-0.048]	
Transparency ×	0.017	0.022		0.054*	0.052		0.022	0.028	
Growth	[-0.081,0.115]	[-0.081,0.126]		[-0.010,0.118]	[-0.025,0.130]		[-0.062,0.106]	[-0.063,0.119]	
GDP *per capita*	-0.147			-0.140			-0.145		
	[-0.406,0.112]			[-0.430,0.150]			[-0.411,0.121]		
Ec. Openness	0.008			0.003			0.004		
	[-0.012,0.027]			[-0.018,0.023]			[-0.016,0.023]		
Parliamentary	1.835***			1.700***			0.801		
	[0.580,3.089]			[0.685,2.715]			[-0.295,1.897]		
Mixed System	0.897			0.833			0.806		
	[-0.304,2.098]			[-0.431,2.097]			[-0.478,2.090]		
Conflict Location	1.526**	1.655***	1.829***	1.358***	1.622***	1.814***	1.492**	1.566***	1.774***
	[0.272,2.780]	[0.597,2.712]	[0.849,2.809]	[0.384,2.333]	[0.523,2.721]	[0.695,2.933]	[0.299,2.686]	[0.543,2.589]	[0.716,2.831]
Prior Transition							1.364**	1.021**	0.838*
							[0.245,2.484]	[0.055,1.987]	[-0.116,1.792]
# of Subjects	88	88	88	88	88	88	88	88	88
# of Failures	19	19	19	19	19	19	19	19	19

control leads to a loss of statistical significance on this parameter. However, this is likely due to a loss of degrees of freedom: The natural disasters data has less coverage than other data, and this covariate is not itself correlated with autocratic reversions.

Table 12: Transparency and the Hazard of Collapse – Controlling for Natural Disasters

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	-0.674**	-0.716***	-0.701***	-0.627**	-0.655***	-0.639***	-0.344	-0.596***	-0.604***
	[-1.271,-0.078]	[-1.134,-0.298]	[-1.109,-0.294]	[-1.170,-0.084]	[-1.026,-0.284]	[-1.038,-0.240]	[-0.829,0.142]	[-0.975,-0.218]	[-0.965,-0.244]
Growth	-0.141***	-0.112***		-0.129***	-0.108***		-0.124***	-0.121***	
	[-0.207,-0.075]	[-0.167,-0.057]		[-0.194,-0.064]	[-0.168,-0.048]		[-0.185,-0.062]	[-0.181,-0.060]	
Transparency ×	0.031	0.038		0.061**	0.066*		0.028	0.036	
Growth	[-0.049,0.111]	[-0.067,0.143]		[0.012,0.110]	[-0.006,0.137]		[-0.052,0.108]	[-0.060,0.131]	
GDP *per capita*	-0.200*			-0.128			-0.201*		
	[-0.437,0.038]			[-0.360,0.103]			[-0.439,0.036]		
Ec. Openness	-0.001			-0.003			-0.002		
	[-0.021,0.020]			[-0.023,0.017]			[-0.023,0.019]		
Parliamentary	2.093***			1.918***			1.149**		
	[0.847,3.339]			[0.854,2.982]			[0.061,2.236]		
Mixed System	0.688			0.594			0.446		
	[-0.589,1.966]			[-0.717,1.905]			[-0.882,1.773]		
Natural Disasters	0.014	0.029	0.011	0.037	0.043	0.031	0.006	0.029	0.006
	[-0.053,0.081]	[-0.028,0.086]	[-0.046,0.068]	[-0.019,0.092]	[-0.018,0.105]	[-0.038,0.100]	[-0.057,0.069]	[-0.024,0.082]	[-0.049,0.060]
Prior Transition							1.522***	1.054**	0.887*
							[0.365,2.678]	[0.087,2.022]	[-0.090,1.864]
# of Subjects	87	87	87	87	87	87	87	87	87
# of Failures	19	19	19	19	19	19	19	19	19

Table 13: Transparency and the Hazard of Collapse – Controlling for Natural Disaster Deaths

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	-0.582*	-0.691***	-0.704***	-0.494	-0.624***	-0.640***	-0.290	-0.581***	-0.609***
	[-1.206,0.042]	[-1.120,-0.263]	[-1.116,-0.293]	[-1.122,0.134]	[-1.018,-0.230]	[-1.058,-0.222]	[-0.751,0.171]	[-0.970,-0.192]	[-0.971,-0.246]
Growth	-0.143***	-0.109***		-0.128***	-0.103***		-0.126***	-0.116***	
	[-0.214,-0.072]	[-0.166,-0.052]		[-0.198,-0.059]	[-0.161,-0.045]		[-0.190,-0.062]	[-0.177,-0.055]	
Transparency ×	0.034	0.038		0.064***	0.062*		0.030	0.035	
Growth	[-0.040,0.108]	[-0.066,0.143]		[0.016,0.112]	[-0.005,0.130]		[-0.045,0.106]	[-0.062,0.132]	
GDP *per capita*	-0.236*			-0.177			-0.238*		
	[-0.506,0.035]			[-0.483,0.130]			[-0.509,0.034]		
Ec. Openness	-0.004			-0.007			-0.005		
	[-0.027,0.020]			[-0.030,0.017]			[-0.030,0.019]		
Parliamentary	2.162***			2.018***			1.266**		
	[0.852,3.472]			[0.861,3.175]			[0.160,2.372]		
Mixed System	0.790			0.754			0.552		
	[-0.468,2.049]			[-0.560,2.067]			[-0.749,1.853]		
ln(Disaster Deaths)	-0.081	0.010	0.031	-0.063	0.049	0.078	-0.091	0.019	0.033
	[-0.332,0.170]	[-0.218,0.239]	[-0.180,0.243]	[-0.334,0.207]	[-0.163,0.262]	[-0.123,0.279]	[-0.344,0.161]	[-0.202,0.241]	[-0.180,0.247]
Prior Transition							1.711**	1.071**	0.863*
							[0.357,3.064]	[0.052,2.091]	[-0.159,1.886]
# of Subjects	87	87	87	87	87	87	87	87	87
# of Failures	19	19	19	19	19	19	19	19	19

Irregular Leader Removals

In this section, we examine the robustness of our results on the irregular removal of democratic leaders to the inclusion of the controls described above. Table 14 presents these results including a control for the military connections of the sitting leader. Tables 15 and 16 present results controlling for the presence of wars and conflicts/wars, respectively. Tables 17 and 18 present results with controls for the frequency of natural disasters and deaths from these disasters.

As with our results on democratic collapse, including these controls does not substantively affect our results pertaining to transparency. Coefficient estimates are largely unchanged, relative to the baseline specification. In a few instances, particularly in models with a broad range of controls, the precision of our estimates for the coefficient on this term declines, such that statistical significance is lost. However, coefficient values are largely unchanged, and this occurs most frequently with the natural disaster controls – which offer the least coverage and are not themselves statistically significant determinants of irregular leader removal. We therefore conclude that our estimates are robust to the inclusion of these terms.

Also like the estimates with regard to autocratic reversions, these findings indicate that military leaders are more likely to suffer irregular removal from office – and irregular removal is induced by the presence of low-level conflicts (but not full-scale wars). Natural disasters do not appear to be associated with irregular leader removal.

Table 14: Transparency and Irregular Leader Removal – Controlling for Military Leaders

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	-0.384*	-0.593***	-0.541***	-0.333	-0.556***	-0.531***	-0.363*	-0.583***	-0.545***
	[-0.776,0.008]	[-0.924,-0.262]	[-0.811,-0.271]	[-0.756,0.091]	[-0.920,-0.191]	[-0.817,-0.245]	[-0.743,0.017]	[-0.905,-0.261]	[-0.815,-0.274]
Growth	-0.061**	-0.055*		-0.057*	-0.051		-0.052*	-0.046	
	[-0.114,-0.008]	[-0.112,0.002]		[-0.114,0.001]	[-0.118,0.016]		[-0.108,0.004]	[-0.104,0.012]	
Transparency ×	0.034	0.041		0.036	0.041		0.030	0.036	
Growth	[-0.030,0.099]	[-0.016,0.098]		[-0.035,0.107]	[-0.023,0.105]		[-0.035,0.095]	[-0.023,0.095]	
GDP *per capita*	-0.106*			-0.102*			-0.108*		
	[-0.221,0.009]			[-0.210,0.006]			[-0.219,0.004]		
Ec. Openness	0.005			0.005			0.000		
	[-0.041,0.050]			[-0.038,0.047]			[-0.043,0.043]		
Ec. Openness^2	-0.000			-0.000			-0.000		
	[-0.000,0.000]			[-0.000,0.000]			[-0.000,0.000]		
Parliamentary	1.168**			1.151**			1.130**		
	[0.232,2.105]			[0.233,2.069]			[0.174,2.086]		
Mixed System	0.599			0.803			0.734		
	[-0.346,1.544]			[-0.191,1.798]			[-0.230,1.699]		
Military	1.629***	1.724***	1.785***	1.655***	1.683***	1.730***	1.667***	1.705***	1.793***
	[0.647,2.610]	[0.914,2.535]	[0.963,2.607]	[0.700,2.610]	[0.841,2.526]	[0.904,2.557]	[0.694,2.641]	[0.894,2.516]	[0.968,2.617]
Prior Transition							0.812*	0.718*	0.731*
							[-0.073,1.696]	[-0.066,1.502]	[-0.080,1.542]
# of Subjects	442	442	442	442	442	442	442	442	442
# of Failures	27	27	27	27	27	27	27	27	27

Table 15: Transparency and Irregular Leader Removal – Controlling for Wars

	Cond. Prior Transition			Cond. Num. Transitions			Prior Transition Control		
Transparency	-0.337	-0.608***	-0.558***	-0.312	-0.576***	-0.562***	-0.326	-0.614***	-0.559***
	[-0.751,0.078]	[-0.940,-0.276]	[-0.838,-0.278]	[-0.768,0.143]	[-0.940,-0.211]	[-0.876,-0.249]	[-0.743,0.091]	[-0.955,-0.274]	[-0.844,-0.273]
Growth	-0.080***	-0.070**		-0.079**	-0.068**		-0.077***	-0.071**	
	[-0.134,-0.025]	[-0.125,-0.015]		[-0.140,-0.019]	[-0.132,-0.003]		[-0.135,-0.019]	[-0.128,-0.013]	
Transparency ×	0.046	0.052*		0.040	0.048		0.046	0.052*	
Growth	[-0.015,0.107]	[-0.007,0.111]		[-0.028,0.109]	[-0.020,0.115]		[-0.018,0.109]	[-0.010,0.114]	
GDP *per capita*	-0.132*			-0.114			-0.131*		
	[-0.287,0.023]			[-0.261,0.032]			[-0.288,0.025]		
Ec. Openness	-0.004			-0.006			-0.004		
	[-0.014,0.006]			[-0.018,0.005]			[-0.015,0.007]		
Parliamentary	1.418***			1.330***			1.434***		
	[0.466,2.370]			[0.372,2.289]			[0.439,2.429]		
Mixed System	0.956*			1.122*			1.110*		
	[-0.119,2.030]			[-0.003,2.247]			[-0.008,2.228]		
War Location	0.455	0.629	0.699	0.490	0.717	0.727	0.600	0.693	0.765
	[-0.644,1.554]	[-0.500,1.758]	[-0.257,1.656]	[-0.727,1.707]	[-0.458,1.892]	[-0.309,1.763]	[-0.492,1.692]	[-0.402,1.788]	[-0.194,1.724]
Prior Transition							1.570***	1.138***	1.073***
							[0.641,2.498]	[0.341,1.935]	[0.259,1.888]
# of Subjects	355	355	355	355	355	355	355	355	355
# of Failures	25	25	25	25	25	25	25	25	25

Table 16: Transparency and Irregular Leader Removal – Controlling for Conflicts

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	-0.381*	-0.587***	-0.555***	-0.331	-0.518**	-0.538***	-0.378*	-0.589***	-0.552***
	[-0.798,0.035]	[-0.996,-0.177]	[-0.884,-0.225]	[-0.779,0.117]	[-0.961,-0.075]	[-0.893,-0.183]	[-0.793,0.037]	[-0.996,-0.183]	[-0.885,-0.218]
Growth	-0.077***	-0.062**		-0.079**	-0.063		-0.077***	-0.063**	
	[-0.130,-0.024]	[-0.124,-0.001]		[-0.144,-0.013]	[-0.140,0.014]		[-0.133,-0.022]	[-0.125,-0.000]	
Transparency ×	0.046	0.052		0.034	0.041		0.046	0.051	
Growth	[-0.025,0.116]	[-0.024,0.128]		[-0.049,0.117]	[-0.047,0.129]		[-0.026,0.117]	[-0.025,0.128]	
GDP *per capita*	-0.096			-0.083			-0.096		
	[-0.240,0.047]			[-0.217,0.050]			[-0.236,0.044]		
Ec. Openness	0.003			0.000			0.003		
	[-0.006,0.013]			[-0.010,0.010]			[-0.007,0.012]		
Parliamentary	1.168**			1.074**			1.213**		
	[0.198,2.138]			[0.127,2.021]			[0.202,2.225]		
Mixed System	1.203**			1.310**			1.334**		
	[0.120,2.286]			[0.155,2.466]			[0.222,2.445]		
Conflict Location	1.517***	1.608***	1.649***	1.420***	1.568***	1.631***	1.541***	1.621***	1.649***
	[0.555,2.480]	[0.800,2.417]	[0.843,2.455]	[0.487,2.352]	[0.725,2.411]	[0.808,2.454]	[0.589,2.494]	[0.787,2.456]	[0.839,2.458]
Prior Transition							1.328***	0.843**	0.834*
							[0.387,2.269]	[0.006,1.679]	[-0.002,1.671]
# of Subjects	355	355	355	355	355	355	355	355	355
# of Failures	25	25	25	25	25	25	25	25	25

Table 17: Transparency and Irregular Leader Removal – Controlling for Natural Disasters

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	-0.293	-0.613***	-0.564***	-0.285	-0.598***	-0.574***	-0.292	-0.620***	-0.565***
	[-0.738,0.151]	[-0.943,-0.284]	[-0.844,-0.284]	[-0.768,0.199]	[-0.956,-0.240]	[-0.880,-0.269]	[-0.732,0.147]	[-0.964,-0.276]	[-0.850,-0.279]
Growth	-0.078***	-0.071**		-0.074**	-0.065*		-0.073**	-0.071**	
	[-0.135,-0.020]	[-0.127,-0.015]		[-0.138,-0.011]	[-0.131,0.001]		[-0.135,-0.011]	[-0.132,-0.010]	
Transparency ×	0.048	0.059*		0.044	0.055		0.048	0.058	
Growth	[-0.020,0.115]	[-0.011,0.129]		[-0.030,0.119]	[-0.020,0.130]		[-0.026,0.121]	[-0.017,0.133]	
GDP *per capita*	-0.153*			-0.134			-0.150*		
	[-0.324,0.018]			[-0.296,0.029]			[-0.318,0.018]		
Ec. Openness	-0.007			-0.009			-0.007		
	[-0.017,0.004]			[-0.021,0.003]			[-0.018,0.004]		
Parliamentary	1.423***			1.353***			1.385***		
	[0.476,2.369]			[0.419,2.288]			[0.372,2.398]		
Mixed System	0.800			0.965			0.930		
	[-0.279,1.878]			[-0.223,2.152]			[-0.217,2.077]		
Natural Disasters	-0.029	0.007	-0.003	-0.030	0.004	-0.004	-0.022	0.008	-0.002
	[-0.084,0.026]	[-0.037,0.051]	[-0.049,0.043]	[-0.084,0.025]	[-0.039,0.047]	[-0.047,0.039]	[-0.073,0.029]	[-0.036,0.053]	[-0.049,0.045]
Prior Transition							1.558***	1.233***	1.159***
							[0.624,2.492]	[0.429,2.036]	[0.343,1.974]
# of Subjects	351	351	351	351	351	351	351	351	351
# of Failures	25	25	25	25	25	25	25	25	25

Table 18: Transparency and Irregular Leader Removal – Controlling for Natural Disaster Deaths

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	-0.308	-0.619***	-0.563***	-0.291	-0.596***	-0.571***	-0.309	-0.624***	-0.562***
	[-0.784,0.168]	[-0.960,-0.277]	[-0.847,-0.279]	[-0.799,0.218]	[-0.963,-0.230]	[-0.883,-0.259]	[-0.779,0.161]	[-0.976,-0.271]	[-0.851,-0.273]
Growth	-0.080***	-0.069**		-0.077**	-0.063*		-0.075**	-0.068**	
	[-0.139,-0.020]	[-0.126,-0.012]		[-0.144,-0.010]	[-0.131,0.004]		[-0.138,-0.013]	[-0.130,-0.007]	
Transparency ×	0.048	0.060*		0.045	0.054		0.048	0.059	
Growth	[-0.021,0.118]	[-0.011,0.132]		[-0.032,0.121]	[-0.021,0.130]		[-0.027,0.123]	[-0.017,0.136]	
GDP *per capita*	-0.149			-0.135			-0.144		
	[-0.334,0.037]			[-0.315,0.045]			[-0.323,0.035]		
Ec. Openness	-0.006			-0.010			-0.006		
	[-0.018,0.006]			[-0.024,0.004]			[-0.019,0.006]		
Parliamentary	1.427***			1.406***			1.388***		
	[0.463,2.392]			[0.456,2.355]			[0.384,2.393]		
Mixed System	0.878*			1.064*			0.991*		
	[-0.156,1.913]			[-0.084,2.213]			[-0.101,2.084]		
ln(Disaster Deaths)	-0.047	0.086	0.075	-0.072	0.076	0.074	-0.026	0.095	0.085
	[-0.259,0.164]	[-0.100,0.272]	[-0.102,0.252]	[-0.284,0.140]	[-0.101,0.253]	[-0.095,0.243]	[-0.228,0.175]	[-0.094,0.285]	[-0.094,0.265]
Prior Transition							1.626***	1.102**	1.027**
							[0.652,2.601]	[0.248,1.957]	[0.169,1.885]
# of Subjects	351	351	351	351	351	351	351	351	351
# of Failures	25	25	25	25	25	25	25	25	25

Regular Leader Removals

In the following section, we rerun our models examining the hazard of regular leader removal, employing the same additional controls described above. Table 19 presents results controlling for whether the leader has a military affiliation. Tables 20 and 21 present results controlling for the presence of a war and a conflict/war, respectively. Finally, Tables 22 and 23 control for the frequency of natural disasters and deaths resulting from natural disasters, respectively.

The coefficient on transparency remains positive in all but one of 45 specifications, and the values of this coefficient estimate do not substantively change relative to the baseline in the main text.[16] These estimates are somewhat less precise than in the baseline, the fraction of specifications in which this term is statistically significant is smaller than in the baseline. 19 of 45 estimates are significant at the 90 percent level or above, as opposed to 7 of 9 in the baseline specification. Of course, our theoretical model also produces its weakest theoretical claims with regard to leader removal. The probability of regular removal rises in transparency only because the probability of irregular removal declines and democratic leaders must eventually be replaced through some method. Hence, the decline in the probability of irregular removal must translate into a (possibly quite small) increase in the hazard of regular removal in each year of a leader's term in office.

In keeping with the findings of Quiroz Flores and Smith (2013), deaths from natural disasters is positively and significantly associated with the regular removal of democratic leaders, while frequency of natural disasters appears to be a less consistent predictor of regular leader removal. Wars do not appear to be a significant predictor of regular leader removal, while there is some evidence that lower level conflicts are. Military leaders are less likely to be removed through regular methods, even as they are at increased risk of irregular removal.

[16] There is one notable exception: In one specification – regressing regular removal on only transparency and an indicator for war location, and stratifying the baseline hazard based on the number of previous instances of democratic collapse – the coefficient on transparency changes sign. This, however, takes place only in a very sparse specification (only two controls), and is not replicated in otherwise identical models in which we either stratify the baseline hazard based on a binary indicator for past transitions or in which we add a control for prior transitions to the specification. Nor do we see this change in sign in identical models in which we replace the control for wars with an indicator for both wars and conflicts. This result thus appears an aberrant product of statistical noise, in a very sparse specification. We also note that our theoretical expectations – and baseline results – are weakest with regard to regular leader removal – see page 21.

Table 19: Transparency and Regular Leader Removal – Controlling for Military Leaders

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	0.068*	0.063**	0.039	0.057	0.061*	0.041	0.064	0.063**	0.040
	[-0.009,0.146]	[0.002,0.125]	[-0.015,0.092]	[-0.023,0.137]	[-0.002,0.123]	[-0.014,0.095]	[-0.014,0.142]	[0.001,0.125]	[-0.016,0.096]
Growth	-0.003	-0.002		-0.006	-0.003		-0.004	-0.002	
	[-0.031,0.025]	[-0.030,0.026]		[-0.035,0.022]	[-0.032,0.025]		[-0.033,0.026]	[-0.032,0.028]	
Transparency ×	-0.009	-0.010		-0.006	-0.008		-0.008	-0.009	
Growth	[-0.022,0.004]	[-0.022,0.003]		[-0.019,0.008]	[-0.021,0.006]		[-0.021,0.005]	[-0.022,0.004]	
GDP *per capita*	-0.005			-0.003			-0.003		
	[-0.020,0.011]			[-0.018,0.013]			[-0.019,0.013]		
Ec. Openness	-0.003**			-0.005***			-0.003**		
	[-0.006,-0.000]			[-0.008,-0.001]			[-0.006,-0.000]		
Parliamentary	0.166			0.158			0.153		
	[-0.114,0.447]			[-0.125,0.441]			[-0.117,0.423]		
Mixed System	-0.312			-0.310			-0.325		
	[-0.717,0.094]			[-0.721,0.101]			[-0.738,0.088]		
Military	-0.541*	-0.534*	-0.526*	-0.547*	-0.527*	-0.520*	-0.545*	-0.534*	-0.538*
	[-1.103,0.021]	[-1.096,0.028]	[-1.083,0.031]	[-1.118,0.025]	[-1.094,0.039]	[-1.084,0.044]	[-1.106,0.015]	[-1.097,0.029]	[-1.096,0.020]
Prior Transition							-0.039	0.005	0.027
							[-0.306,0.228]	[-0.213,0.224]	[-0.191,0.244]
# of Subjects	442	442	442	442	442	442	442	442	442
# of Failures	322	322	322	322	322	322	322	322	322

Table 20: Transparency and Regular Leader Removal – Controlling for Wars

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	0.107**	0.052	0.041	0.101**	0.052	-0.562***	0.112**	0.062*	0.046
	[0.019,0.195]	[-0.019,0.123]	[-0.019,0.101]	[0.011,0.191]	[-0.019,0.124]	[-0.876,-0.249]	[0.025,0.199]	[-0.009,0.132]	[-0.017,0.108]
Growth	-0.016	-0.015		-0.018	-0.016		-0.016	-0.013	
	[-0.048,0.017]	[-0.048,0.019]		[-0.050,0.013]	[-0.049,0.017]		[-0.050,0.018]	[-0.048,0.021]	
Transparency ×	-0.003	-0.003		-0.001	-0.002		-0.004	-0.005	
Growth	[-0.018,0.011]	[-0.017,0.012]		[-0.016,0.013]	[-0.016,0.013]		[-0.018,0.009]	[-0.019,0.009]	
GDP *per capita*	-0.025***			-0.024**			-0.024***		
	[-0.044,-0.007]			[-0.043,-0.005]			[-0.043,-0.006]		
Ec. Openness	-0.003*			-0.004**			-0.003		
	[-0.006,0.000]			[-0.008,-0.000]			[-0.006,0.001]		
Parliamentary	0.405**			0.401**			0.417***		
	[0.081,0.729]			[0.072,0.730]			[0.137,0.697]		
Mixed System	-0.168			-0.166			-0.173		
	[-0.604,0.268]			[-0.605,0.273]			[-0.601,0.254]		
War Location	-0.065	0.057	0.108	-0.118	0.004	0.727	-0.046	0.102	0.136
	[-0.613,0.484]	[-0.511,0.626]	[-0.436,0.651]	[-0.716,0.480]	[-0.624,0.632]	[-0.309,1.763]	[-0.546,0.454]	[-0.405,0.610]	[-0.354,0.625]
Prior Transition							0.071	0.109	0.125
							[-0.211,0.353]	[-0.127,0.345]	[-0.112,0.362]
# of Subjects	355	355	355	355	355	355	355	355	355
# of Failures	263	263	263	263	263	25	263	263	263

Table 21: Transparency and Regular Leader Removal – Controlling for Conflicts

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	0.108**	0.060	0.048	0.102**	0.059	0.051	0.113**	0.068*	0.052
	[0.020,0.197]	[-0.012,0.131]	[-0.013,0.109]	[0.012,0.192]	[-0.013,0.132]	[-0.011,0.112]	[0.025,0.200]	[-0.003,0.140]	[-0.011,0.115]
Growth	-0.015	-0.014		-0.018	-0.016		-0.016	-0.013	
	[-0.046,0.016]	[-0.046,0.018]		[-0.049,0.014]	[-0.049,0.016]		[-0.049,0.017]	[-0.047,0.020]	
Transparency ×	-0.003	-0.003		-0.001	-0.002		-0.005	-0.005	
Growth	[-0.018,0.011]	[-0.018,0.012]		[-0.016,0.013]	[-0.016,0.013]		[-0.018,0.009]	[-0.019,0.009]	
GDP *per capita*	-0.024***			-0.023**			-0.024**		
	[-0.043,-0.006]			[-0.042,-0.004]			[-0.042,-0.005]		
Ec. Openness	-0.003			-0.004**			-0.003		
	[-0.006,0.001]			[-0.007,-0.000]			[-0.006,0.001]		
Parliamentary	0.402**			0.406**			0.410***		
	[0.076,0.728]			[0.073,0.739]			[0.126,0.694]		
Mixed System	-0.155			-0.151			-0.166		
	[-0.588,0.279]			[-0.588,0.286]			[-0.592,0.260]		
Conflict Location	0.058	0.246*	0.252*	0.020	0.227	0.223	0.052	0.254*	0.256*
	[-0.231,0.347]	[-0.038,0.530]	[-0.032,0.535]	[-0.276,0.315]	[-0.068,0.521]	[-0.074,0.520]	[-0.242,0.346]	[-0.032,0.540]	[-0.032,0.544]
Prior Transition							0.066	0.079	0.097
							[-0.220,0.352]	[-0.165,0.323]	[-0.148,0.342]
# of Subjects	355	355	355	355	355	355	355	355	355
# of Failures	263	263	263	263	263	263	263	263	263

Table 22: Transparency and Regular Leader Removal – Controlling for Natural Disasters

	Cond. Prior Transition			**Cond. Num. Transitions**			**Prior Transition Control**		
Transparency	0.104**	0.049	0.043	0.098**	0.048	0.044	0.110**	0.059	0.046
	[0.013,0.195]	[-0.025,0.123]	[-0.020,0.106]	[0.005,0.190]	[-0.026,0.123]	[-0.019,0.108]	[0.020,0.200]	[-0.015,0.133]	[-0.019,0.111]
Growth	-0.017	-0.018		-0.018	-0.019		-0.016	-0.016	
	[-0.048,0.015]	[-0.051,0.015]		[-0.050,0.013]	[-0.052,0.015]		[-0.050,0.017]	[-0.050,0.018]	
Transparency ×	-0.002	-0.001		-0.001	0.000		-0.004	-0.004	
Growth	[-0.018,0.014]	[-0.017,0.016]		[-0.016,0.015]	[-0.016,0.016]		[-0.019,0.011]	[-0.020,0.012]	
GDP *per capita*	-0.024**			-0.022**			-0.023**		
	[-0.042,-0.005]			[-0.041,-0.004]			[-0.041,-0.005]		
Ec. Openness	-0.002			-0.003*			-0.002		
	[-0.006,0.001]			[-0.007,0.000]			[-0.006,0.001]		
Parliamentary	0.400**			0.411**			0.409***		
	[0.082,0.718]			[0.085,0.737]			[0.131,0.687]		
Mixed System	-0.144			-0.131			-0.155		
	[-0.585,0.296]			[-0.576,0.313]			[-0.587,0.276]		
Natural Disasters	0.008	0.014*	0.013*	0.006	0.013*	0.012	0.006	0.013*	0.013*
	[-0.009,0.024]	[-0.001,0.028]	[-0.001,0.028]	[-0.011,0.023]	[-0.002,0.028]	[-0.003,0.027]	[-0.010,0.023]	[-0.002,0.028]	[-0.002,0.027]
Prior Transition							0.082	0.119	0.139
							[-0.202,0.366]	[-0.125,0.364]	[-0.104,0.383]
# of Subjects	351	351	351	351	351	351	351	351	351
# of Failures	260	260	260	260	260	260	260	260	260

Table 23: Transparency and Regular Leader Removal – Controlling for Natural Disaster Deaths

	Cond. Prior Transition			Cond. Num. Transitions			Prior Transition Control		
Transparency	0.095**	0.045	0.040	0.090*	0.045	0.042	0.101**	0.055	0.043
	[0.004,0.187]	[-0.029,0.119]	[-0.022,0.103]	[-0.003,0.183]	[-0.029,0.119]	[-0.021,0.104]	[0.010,0.192]	[-0.019,0.129]	[-0.022,0.108]
Growth	-0.016	-0.015		-0.018	-0.017		-0.016	-0.014	
	[-0.047,0.015]	[-0.047,0.017]		[-0.050,0.013]	[-0.049,0.015]		[-0.049,0.017]	[-0.047,0.020]	
Transparency ×	-0.002	-0.000		-0.000	0.000		-0.004	-0.003	
Growth	[-0.017,0.014]	[-0.017,0.016]		[-0.016,0.016]	[-0.016,0.016]		[-0.019,0.012]	[-0.019,0.012]	
GDP *per capita*	-0.021**			-0.020**			-0.020**		
	[-0.040,-0.002]			[-0.039,-0.001]			[-0.039,-0.001]		
Ec. Openness	-0.002			-0.003			-0.002		
	[-0.005,0.002]			[-0.006,0.001]			[-0.005,0.002]		
Parliamentary	0.379**			0.393**			0.391***		
	[0.056,0.702]			[0.064,0.723]			[0.109,0.673]		
Mixed System	-0.156			-0.138			-0.168		
	[-0.597,0.284]			[-0.581,0.305]			[-0.599,0.263]		
ln(Disaster Deaths)	0.046*	0.067***	0.068***	0.041*	0.066***	0.066***	0.042*	0.063***	0.064***
	[-0.002,0.094]	[0.024,0.111]	[0.025,0.112]	[-0.007,0.089]	[0.022,0.110]	[0.022,0.110]	[-0.007,0.091]	[0.018,0.107]	[0.020,0.109]
Prior Transition							0.045	0.047	0.063
							[-0.242,0.331]	[-0.206,0.300]	[-0.190,0.316]
# of Subjects	351	351	351	351	351	351	351	351	351
# of Failures	260	260	260	260	260	260	260	260	260