Supplemental Appendix

Transparency, Protest and Democratic Stability

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April 2017

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* $\Phi(\frac{s-\gamma}{\sigma_s}) \geq \frac{B}{1+B}$*, 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*

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

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

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:*

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

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 $\Phi(\frac{\underset{\sim}{s}-\gamma}{\sigma_s}) < \frac{B}{1+B}$, 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:*

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

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

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:*

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

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, $\Phi\left(\frac{\underset{\sim}{s}-\gamma}{\sigma_s}\right)$ is monotonic and increasing in σ_s. Then $\Phi\left(\frac{\underset{\sim}{s}-\gamma}{\sigma_s}\right)$ 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 $\Phi(\frac{s-\gamma}{\sigma_s})$ if she sets $G_1 = 1$. Hence, types $\theta = 0$ strictly prefer to set $G_1 = 1$ if and only if $1+B < B+[1-\Phi(\frac{s-\gamma}{\sigma_s})](1+B) \Leftrightarrow \Phi(\frac{s-\gamma}{\sigma_s}) < \frac{B}{1+B}$.

Thus, if $\Phi(\frac{s-\gamma}{\sigma_s}) < \frac{B}{1+B}$, 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 1: 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 2: 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 3: 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).[1] The first indicator ($War\ Location$) measures whether the country was the location of a

[1] A country is coded as the location of a conflict either if its territory was the principal source of the dispute or, in

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-DAT) created by the Centre for Research on the Epidemiology of Disasters.[2] 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 4 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

the case of interstate wars, whether it was one of the primary participants in the war.

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

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 5 and 6 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 7 and 8 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 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 4: 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 5: 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 6: 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

Table 7: 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 8: 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 9 presents these results including a control for the military connections of the sitting leader. Tables 10 and 11 present results controlling for the presence of wars and conflicts/wars, respectively. Tables 12 and 13 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 9: 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 10: 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 11: 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 12: 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 13: 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 14 presents results controlling for whether the leader has a military affiliation. Tables 15 and 16 present results controlling for the presence of a war and a conflict/war, respectively. Finally, Tables 17 and 18 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.[3] 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.

[3]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.

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.

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Table 14: 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 15: 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 16: 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 17: 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 18: 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