Online Appendix for Repression Hurts: Coercive Government Responses and the Demise of Terrorist Campaigns

The first model in table A1 recodes splinter groups as ongoing. Arguably, coding these groups as terminated could be problematic since they may continue to use terrorism. We find that our results do not change when such groups are coded as ongoing. The interaction between the repression and polity variables is negative and significant (z=-2.58). The second model in table A1 examines whether findings for group duration are similar if we limit the analysis to groups that carried out one or more attacks in their homeland. The RAND-MIPT data include domestic terrorist incidents only for the post-1998 period, but as mentioned earlier, define events as international if terrorists cross borders and if attacks are carried out against international targets in the terrorists' "natural" territory. Arguably, the inclusion of the first category might be problematic since repression may not be aimed at groups that target other states. We consulted the RAND-MIPT database of terrorist incidents to determine whether groups had carried out at least one attack in their homeland and re-specified our models by including only those groups.[1] Findings confirm the conditional relationship between democracy and repression for this subset of the data as exhibited in the negative and significant interaction term (z=-1.97).

The third model in table A1 presents results using Cingranelli and Richards' measure on physical integrity rights and an interaction between this measure and democracy as an alternative measure of repression.[2] The variable includes four physical integrity rights: disappearances, extrajudicial killings, holding political prisoners, and torture and the index ranges from least respectful to most respectful. Results for this model show that the interaction between physical integrity and polity is positive and significant (z=2.20). While the hazard ratio of the interaction

[1] Only 76 out of 539 groups in our sample did not carry out any attacks in their natural territory.

[2] Cingranelli and Richards, 'The Cingranelli-Richards (CIRI) Human Rights Dataset'. Data available at http://ciri.binghamton.edu/.

term is in the opposite direction of previous models, it is a function of the inverse coding of the physical integrity measure. The fourth model in table A1 excludes terrorist groups that have turned into insurgent movements. While insurgent groups may continue to use terrorism, one could argue that such groups should be excluded from analyses of terrorist group duration because they may not appropriately reflect the power asymmetries usually associated with terrorist organizations. We use the Uppsala Conflict Data Program (UCDP) Actor Dataset to identify insurgent groups included in our sample of terrorist organizations and re-analyze our results without these groups.[3] As model 4 in table A1 shows, the coefficient for the interaction is again negative and significant (z=-1.91).

Model 5 disaggregates the regime type variable by taking into account possible differences among authoritarian regimes. Data collected by Geddes, Wright, and Frantz distinguish between personalist, military, single-party, and monarchical regimes.[4] These regimes likely differ in the degree of legitimacy they enjoy and thus the extent to which they are insulated from backlash effects. While the effect of different types of authoritarian regimes on civil war has been studied systematically, the dynamics of terrorist activity in authoritarian regimes remain poorly understood.[5] We lack the space to fully develop theoretical expectations for different authoritarian regimes but expect that consistent with our theoretical argument, authoritarian regimes' with lower levels of legitimacy should be less likely to experience backlash effects. We believe that regimes that rely on small support groups and lack institutional mechanisms to constrain the dictator's authority, such as personalist regimes, should have lower legitimacy and

[3] UCDP Actor Dataset version 2.1. 67 groups included in Jones and Libicki were listed as nonstate actors involved in armed conflict in the UCDP data . Jones and Libicki, *How Terrorist Groups End.*

[4] Barbara Geddes, Joseph Wright, and Erika Frantz., 'Authoritarian Regimes: A New Dataset', (Pennsylvania State University. Typescript, 2012).

[5] For a study of authoritarian regimes and civil war, see Mehmet Gurses and T. David Mason, 'Weak States, Regime Types, and Civil War', *Civil Wars* 12 (2010), 140-155. An exception to the neglect of terrorism in authoritarian regimes is Deniz Aksoy, David B. Carter, and Joseph Wright, 'Terrorism in Dicatatorships', (Pennsylvania State University. Typescript, 2011).

be less dependent on popular support than regimes with more developed institutional structures, such as single-party regimes, military dictatorships, or monarchies. Consequently, personalist regimes should be less susceptible to backlash effects. To evaluate this expectation, we include variables for all four types of authoritarian regimes and interactions between these variables and the repression measure in model 5. The positive and significant hazard ratio for the interaction term (z=1.88) confirms that the use of repression in personalist regimes increases the likelihood of group termination compared to democracies (the excluded category). Hazard ratios for military regimes, single-party regimes, and monarchies are not statistically significant. Since we only present a preliminary analysis of dynamics in different authoritarian regimes, more research on the dynamics of terrorism in non-democracies is clearly necessary.

Models 6-8 in table A1 evaluate terrorist group duration based on two alternative samples of terrorist groups. In model 6, we compare Jones and Libicki's list of terrorist organizations to groups included in Asal and Rethemeyer.[6] The authors' data also come from the RAND-MIPT dataset but a group of coders independently verified the existence of each group. Results in model 8 are limited to the 275 groups in our data that are also included in Asal and Rethemeyer.[7] Findings support our primary hypothesis on group duration as seen in the negative and (weakly) significant interaction (z=-1.72). For models 7-8, we create an additional dataset using data on terrorist groups from the Global Terrorism Database (GTD).[8] The GTD contains data on terrorist incidents from 1970-2009. Since the GTD data include information on attacks, we create a sample of terrorist groups based on actual attacks by coding the first attack as the start date of a

[6] Victor Asal and R. Karl Rethemeyer, 'The Nature of the Beast: Organizational Structures and the Lethality of Terrorist Attacks', *Journal of Politics*, 70 (2008), 437-449.
[7] Asal and Rethemeyer, 'The Nature of the Beast'.
[8] Gary LaFree and Laura Dugan, 'Introducing the Global Terrorism Database', *Terrorism and Political Violence*, 19 (2007), 181-204. Data are available at http://www.start.umd.edu/gtd/.

terrorist organization and the last attack as the end date.[9] For the 1976-2006 time frame, this procedure results in 2,414 groups.[10] One apparent difference between this sample of terrorist organizations and the list presented in Jones and Libicki is the much larger number of groups.[11] The GTD data contain a large number of groups with obscure names and the majority of groups committed only one attack, which raises some questions as to whether all of them should be included in an analysis of terrorist group duration.[12] We add variables for repression, democracy, economic development and population size to this model, thus including the same state characteristics as in earlier models (group characteristics are not available in the GTD data). Results presented in models 7 and 8 show some support for our hypotheses. Model 7 contains the interaction between the repression and polity variables. While the product term is negative, it does not attain statistical significance. Results are more supportive for the model using the physical integrity index to measure repression. The interaction term is positive and significant at the 90 per cent confidence level (z=1.72), which is in line with our main hypothesis.

The last model in table A1 uses terrorist attacks rather than the duration of groups as the dependent variable. Arguably, our expectations have implications not only with regard to group duration but also the frequency of terrorist attacks. While we believe that a focus on group duration is preferable because focusing on the short-term effects of repression on terrorist activity cannot tell us whether groups actually desist from using terrorism in the long-term, we

[9] This approach is not without drawbacks. First, terrorist groups may exist long before or after they carry out an attack. Second, many attacks are attributed to unknown perpetrators and must thus be dropped from the analysis.

[10] We drop attacks by unknown perpetrators and exclude events committed by individuals since our interest is in the dynamics of groups. We also exclude events where the group names are so vague or unclear and thus cannot reasonably be attributed to a particular group. We drop groups labeled as bandits, extremists, gangs, guerillas, gunmen, mobs, opposition groups, political activists, rebels, rioters, secessionists, separatists, students, terrorists, villagers, and youth. Yet even this process likely retains a large number of attacks in which it is unclear whether violence resulted from an organized campaign or spontaneous violence, such as attacks committed by "Colombian guerillas", "Communists Italy", or "Corsican separatists". For this reason, we believe that Jones and Libicki's list is a more valid sample of terrorist groups. Jones and Libicki, *How Terrorist Groups End.*

[11] Jones and Libicki, *How Terrorist Groups End.*

[12] Only 26 per cent of groups in our data carried out more than one attack.

nevertheless evaluate whether the effect of repression on terrorist activity is similarly conditional on regime type. Because the GTD data provide information on the number of attacks, we use groups identified in these data for model 9. The dependent variable in this model is a count of terrorist events committed by each group per year and all independent variables are lagged by one year. We also include a lag of the dependent variable on the right-hand side to account for temporal correlation. The coefficient for the repression and democracy interaction is positive and significant (z=2.43), thus indicating that repression in democracies increases the expected number of terrorist events. Taken together, our findings on terrorist activity and group duration show that the use of repressive measures in democracies increases both the number of attacks and the lifespan of terrorist organizations.

Table A1: Robustness Tests

Variables	**Without Splinters**	**Domestic Groups**	**Physical Integrity**	**Without Insurgents**	**Geddes Regimes**	**Asal and Rethemeyer Groups**	**GTD Repression**	**GTD Physical Integrity**	**DV=GTD Terrorist Attacks**
	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Coefficient (S.E.)
Repression	1.064 (0.127)	1.054 (0.090)	-	1.092 (0.089)	0.885 (0.057)	1.313† (0.207)	1.018 (0.032)	-	-0.103* (0.080)
Polity	1.097† (0.053)	1.055 (0.037)	0.942** (0.018)	1.049 (0.037)	-	1.091 (0.080)	1.008 (0.014)	0.995 (0.005)	-0.082 (0.036)
Repression x Polity	0.970* (0.011)	0.981* (0.010)	-	0.982† (0.009)	-	0.969† (0.018)	0.999 (0.003)	-	0.021* (0.009)
Physical Integrity	-	-	0.974 (0.039)	-	-	-	-	0.995 (0.016)	-
Physical Integrity x Polity	-	-	1.010* (0.005)	-	-	-	-	1.003† (0.002)	-
Military	-	-	-	-	0.640 (0.744)	-	-	-	-
Personalist	-	-	-	-	0.182† (0.186)	-	-	-	-
Single-Party	-	-	-	-	0.561 (0.411)	-	-	-	-
Monarchy	-	-	-	-	0.372 (0.852)	-	-	-	-
Repression x Military	-	-	-	-	1.250 (0.362)	-	-	-	-
Repression x Personalist	-	-	-	-	1.597† (0.420)	-	-	-	-
Repression x Single-Party	-	-	-	-	1.343 (0.264)	-	-	-	-
Repression x Monarchy	-	-	-	-	1.557 (1.339)	-	-	-	-
GDP per capita (log)	0.923 (0.084)	0.929 (0.076)	0.999 (0.086)	1.005 (0.081)	0.970 (0.077)	1.095 (0.145)	1.066* (0.028)	1.037 (0.028)	-0.002 (0.060)
Population (log)	0.873** (0.035)	0.870** (0.030)	0.899** (0.029)	0.899** (0.025)	0.898** (0.025)	0.934 (0.049)	0.988 (0.009)	0.988 (0.010)	-0.096** (0.022)
Size	0.329** (0.056)	0.302** (0.045)	0.340** (0.049)	0.280** (0.047)	0.292** (0.041)	0.316** (0.074)	-	-	-
Leftist	0.649* (0.128)	0.715† (0.138)	0.843 (0.175)	0.803 (0.136)	0.789 (0.139)	0.829 (0.350)	-	-	-

Religious	0.244** (0.079)	0.935 (0.268)	0.492* (0.142)	0.500** (0.122)	0.663 (0.179)	0.443 (0.230)	-	-	-
Nationalist	0.480** (0.104)	0.928 (0.187)	0.786 (0.168)	0.814 (0.142)	0.721† (0.136)	0.793 (0.343)	-	-	-
Goal breadth	0.834** (0.046)	0.946 (0.038)	0.933† (0.038)	0.942 (0.035)	0.922* (0.035)	0.935 (0.058)	-	-	-
Foreign presence	0.788 (0.213)	0.681† (0.144)	1.128 (0.186)	0.985 (0.149)	1.038 (0.148)	1.046 (0.316)	-	-	-
Lag of Attacks	-	-	-	-	-	-	-	-	0.024** (0.002)
Constant	-	-	-	-	-	-	-	-	4.167 (0.807)
N	5,010	4,271	3,755	3,830	5,100	3,035	3883	3077	1,565
Wald χ^2	144.99	155.36	119.55	123.35	182.81	56.21	22.04	39.72	259.13

Note: Reported are hazard ratios with robust standard errors in parentheses.

** $p<0.01$ * $p<0.05$ † $p<0.1$ (two-tailed tests).