Online appendix

This online appendix explores three main issues that arose in the *Accommodation as Ratification* article. They include alternative means to account for time dynamics in the primary results; explorations of individual treaties; and a further exploration of the assumption that there is a lessening reliance on repression as movements grow in size, using NAVCO's repression variable. First, additional descriptive statistics are given for the data used in the primary analysis.

Appendix 1. Additional descriptive statistics

Tables I and II in the main article give basic descriptive statistics of the data used in this study. Table I indicates the number of countries that have ratified each treaty as of 2015, as well as the number of countries that have only signed each treaty as of 2015. Table II gives standard descriptive statistics of the variables used in the analysis.

Figures 1-4, below, give a better sense of the distribution of the total number of treaties that have been signed and ratified during the time-period covered in the study. Figure 1 shows the distribution of the number of treaties each country has signed in the year 2007. Treaty signature is not required by international law and is only required by domestic law in some countries. There is an interesting distribution of treaty signature shown in Figure 1, as it is almost a uniform distribution. About 12% of countries have signed no treaties, and about 15% of countries have signed six treaties. There is a fairly even distribution for how many treaties countries have signed in the remaining categories; some sign nearly all treaties and others sign very few.
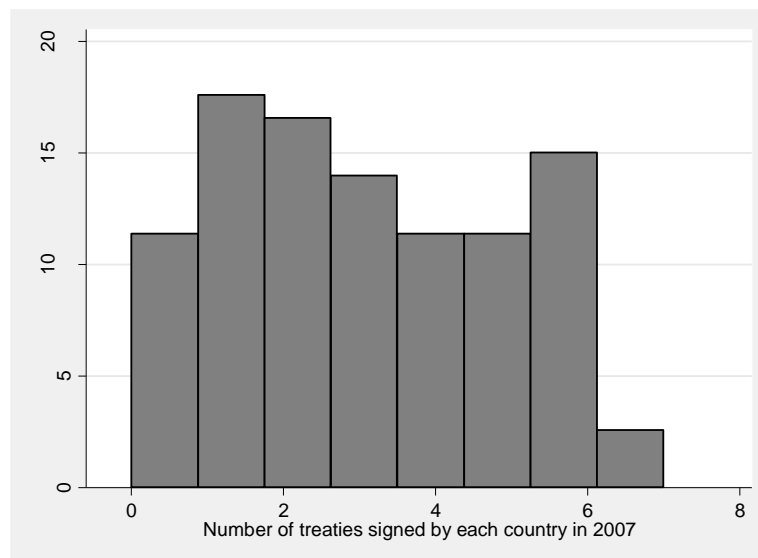

Figure 1. Number of treaties each country has signed in 2007

Figure 2 shows the distribution of the variable used in the study; the histogram shows the number of country-years that report each category of treaty signature. In other words, over 30% of country-years

have a value of zero for the number of treaties signed. Given the construction of the variable – which counts up each time a country signs an additional treaty – this distribution makes sense.
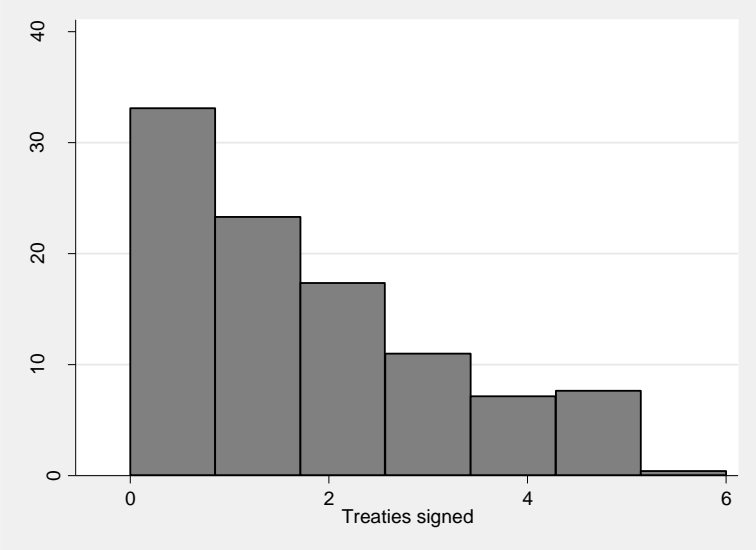

Figure 2. Number of treaties signed by country-year, 1965-2007

Figures 3 and 4 show the same distributions, but for treaty ratifications. Figure 3 shows the total number of treaties that have been ratified by counties in 2007. Unlike treaty signatures, this approximates a normal distribution, skewed towards a higher number of treaties. Figure 4 shows a similar patter as treaty signature by country-years. For all histograms, the last category with 7 or more treaties signed/ratified appears to be low, which is likely a result of two treaties being released in 2006.
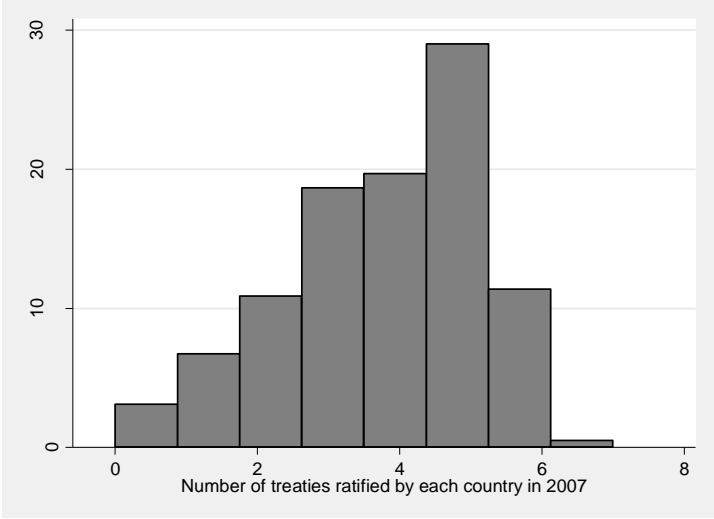

Figure 3. Number of treaties each country has ratified in 2007
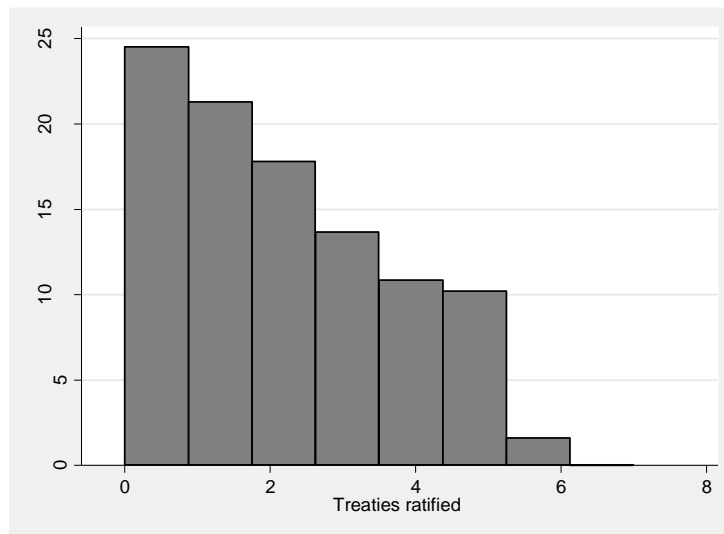
Figure 4. Number treaties ratified by country-year, 1965-2007

Table 1 shows the breakdown of the nonviolent campaign size variable. Between the four different categories, there is a roughly even distribution of cases. Of the years where there was an active nonviolent campaign, roughly 25% of cases are in each of the four campaign size categories. The major exceptions are the two mid-size categories, as the tens of thousands group includes about 20% of the cases and the hundreds of thousands group includes about 30% of cases.

Table 1. Breakdown of nonviolent campaign size

Nonviolent Campaign Size	N
No campaign	6,701
1-9,999 participants	37
10,000-99,999	29
100,000-999,9999	46
1,000,000 +	32
Total	1,701

Appendix 2. Alternative methods to account for time dynamics

The main text presents the models a time counter that resets each year a new treaty is opened for signature. Another way to approach the time dependency is to use cubic splines. These results are presented in Table 1.

The cubic splines were calculated using the timing of when treaties are released, and results that include the cubic splines are largely consistent with the main findings presented in the paper. Nonviolent campaigns continue to increase the chances of signing and ratifying human rights treaties. In Model 3, the nonviolent campaign size indicator falls outside of the conventional 0.05 level of significance with a p-value of 0.056.

Model 3 is the only model of results shown in the main paper and appendix in which a violent campaign comes close to significantly increasing the chances of treaty commitments, although it is not within conventional levels of significance at 0.079.

Table 1. Accounting for time dynamics with cubic splines

	1: Sign	2: Sign	3: Ratify	3: Ratify
NV Campaign	0.726***	–	0.529*	–
	(0.001)		(0.016)	
NV Campaign Size	–	0.213*	–	0.166
		(0.043)		(0.057)
Violent Campaign	-0.387	–	0.131	–
	(0.059)		(0.453)	
Violent Campaign Size	–	-0.301*		-0.007
		(0.032)		(0.948)
Human Rights Record	-0.031	-0.022	0.017	0.015
	(0.492)	(0.638)	(0.692)	(0.740)
Common Law	-0.470***	-0.440***	-0.281**	-0.263*
	(0.001)	(0.001)	(0.009)	(0.014)
Regime Type	0.049***	0.047***	0.019*	0.019*
	(0.000)	(0.000)	(0.018)	(0.026)
New Democracy	-0.258	-0.186	-0.073	-0.078
	(0.176)	(0.318)	(0.622)	(0.605)
Number Signed	-0.011	-0.004	-0.312***	-0.316***
	(0.828)	(0.939)	(0.000)	(0.000)
Constant	128.186***	129.123***	32.647***	30.572***
	(0.000)	(0.000)	(0.000)	(0.000)
Spline 1	-141.102***	-142.182***	-47.900***	-45.123***
Spline 2	-123.350***	-124.174***	-32.843***	-30.915***
Spline 3	-136.707***	-137.779***	-36.360***	-34.167***
Spline 4	-120.052***	-120.907***	-29.982***	-28.110***
Spline 5	-159.540***	-160.771***	-42.442***	-39.795***
N	5,961	5,878	5,961	5,878
χ^2	979.90***	943.49***	155.94***	145.49***
Log Likelihood	-1307.46	-1271.36	-1941.45	-1903.37

*p<0.05, ** p<0.01, *** p<0.001; p-values in parentheses

Appendix 3. Cox models for individual treaties

In addition to presenting coefficient plots, this Appendix presents the full results for the signature and ratification of individual treaties.

Each of these models are Cox proportional hazard models. The first year of data is the first year a treaty was opened for signature. For example: for the ICCPR the data start in 1966 since the treaty was opened for signature in 1966. There are two sets of models. The first is for treaty signature, and the second is for treaty ratification. Countries drop out of both models once they have ratified a treaty. This is the case for both the signature and ratification models, as a country can no longer sign a treaty that they have ratified. For the signature model only, states drop out of the model when they have signed the treaty.

The majority of variables in these models are the same as in the main results. The only differences is the regional ratification percentage. Research has shown that the regional ratification rate has a significant impact on a state's likelihood of ratifying (Simmons 2009). This variable captures the percentage of states in a given country's region that have ratified a treaty. For the ICCPR in Angola, this captures the percentage of states in Africa that have ratified the ICCPR in a given year. (Regions are coded using the COW designations.)

Results for treaty signature are in Table 3, and results for treaty ratification are in Table 4.

Table 3. Effect of Nonviolent Campaigns on the Signature of Individual UN Human Rights Treaties

	CERD	CERD	ICESCR	ICESCR	ICCPR	ICCPR	CEDAW	CEDAW
NV Campaign	3.838	–	7.553***	–	6.293**	–	1.385	–
	(0.239)		(0.000)		(0.003)		(0.424)	
NV Size	–	1.696	–	2.184***	–	1.939***	–	1.146
		(0.099)		(0.000)		(0.000)		(0.355)
Violent Campaign	0.702	–	0.536	–	0.553	–	0.947	–
	(0.380)		(0.391)		(0.413)		(0.855)	
Violent Size	–	0.572	–	0.585	–	0.588	–	0.752
		(0.077)		(0.264)		(0.260)		(0.294)
Regional Ratification %	2.763	2.359	2.364	3.122	0.138***	0.147***	132.006***	82.225***
	(0.533)	(0.605)	(0.444)	(0.304)	(0.000)	(0.000)	(0.000)	(0.000)
Human Rights Record	1.054	1.058	1.099	1.105	1.116	1.108	0.989	0.976
	(0.598)	(0.577)	(0.398)	(0.389)	(0.342)	(0.391)	(0.910)	(0.801)
Common Law System	0.743	0.748	0.372***	0.348***	0.344***	0.331***	0.878	0.872
	(0.190)	(0.204)	(0.000)	(0.000)	(0.000)	(0.000)	(0.497)	(0.469)
Regime Type	1.049**	1.047**	1.088***	1.087***	1.084***	1.085***	1.011	1.015
	(0.004)	(0.007)	(0.000)	(0.000)	(0.000)	(0.000)	(0.537)	(0.404)
New Democracy	0.226*	0.222*	0.374	0.345	0.629	0.618	0.968	0.960
	(0.020)	(0.014)	(0.100)	(0.064)	(0.407)	(0.380)	(0.918)	(0.899)
N	1,432	1,423	2,416	2,390	2,685	2,652	998	993
$N_{(subjects)}$ $N_{(failed)}$	160 (72)	159 (71)	162 (58)	162 (58)	166 (59)	166 (59)	160 (86)	157 (83)
χ^2	29.78***	34.04***	66.43***	72.79***	72.78***	80.24***	40.76***	40.16***
Log pseudolikelihood	-323.514	-317.226	-247.803	-246.412	-255.398	-253.697	-403.885	-388.886

Results of individual Cox models. Hazard ratios are shown, with p-values in parentheses; *p<0.05, ** p<0.01, *** p<0.001

Table 3 Continued

	CAT	CAT	CRC	CRC	MWC	MWC
NV Campaign	3.469**	–	1.260*	–	4.754*	–
	(0.002)		(0.040)		(0.035)	
NV Size	–	1.455**	–	1.112**	–	1.289
		(0.007)		(0.004)		(0.479)
Violent Campaign	0.533	–	0.894	–	0.545	–
	(0.223)		(0.589)		(0.580)	
Violent Size	–	0.737	–	0.872	–	0.549
		(0.352)		(0.337)		(0.374)
Regional Ratification %	0.287	0.283	2.017*	1.966*	4540.964***	4725.822***
	(0.144)	(0.145)	(0.040)	(0.045)	(0.000)	(0.000)
Human Rights Record	0.985	0.976	0.969	0.961	0.764	0.768
	(0.868)	(0.789)	(0.553)	(0.458)	(0.094)	(0.104)
Common Law System	0.540**	0.539**	0.928	0.908	0.752	0.827
	(0.021)	(0.024)	(0.549)	(0.458)	(0.524)	(0.667)
Regime Type	1.123***	1.123***	1.019*	1.019*	1.036	1.035
	(0.000)	(0.000)	(0.023)	(0.026)	(0.287)	(0.292)
New Democracy	0.572	0.587	0.767	0.765	2.157	2.214
	(0.181)	(0.216)	(0.085)	(0.081)	(0.097)	(0.083)
N	1,479	1,452	448	438	2,421	2,402
$N_{(subjects)}$ $N_{(failed)}$	164 (65)	162 (63)	162 (118)	159 (115)	166 (26)	165 (25)
χ^2	56.82***	53.57***	16.23**	20.05*	34.34***	30.38***
Log pseudolikelihood	-288.674	-277.972	-571.539	-554.054	-118.341	-114.359

Results of individual Cox models. Hazard ratios are shown, with p-values in parentheses; *p<0.05, ** p<0.01, *** p<0.001

The results from Table 3 show a fairly consistent effect of nonviolent movements on the signature of human rights treaties. For all treaties there is a positive relationship, indicating that the presence and size of nonviolent movements increases the likelihood of signature. For all but CEDAW and CERD this relationship is significant. This finding echoes the main results, where all treaties were grouped and treated as interchangeable options for concessions that the government could offer nonviolent groups.

There are also interesting differences within treaties. Some display strong regional effects, like CEDAW and especially the CRC; more democratic countries are more likely to sign for almost all treaties, with the exception of CEDAW and the MWC. New democracies are, if anything, less likely to sign treaties, notably the CAT and ICESCR. Respect for human rights and violent movements do not reach significance in any of the models.

The results from Table 4, however, show quite a different pattern. While most of the models show a positive relationship between nonviolent movements and treaty ratification, this is not the case with all treaties. For CERD and CEDAW the direction of the relationship is negative. Additionally, almost none of the nonviolent protest coefficients are significant. This is both opposite of the individual treaty results for signature (Table 2) as well as the main results for the grouped treaty data.

Ultimately these results suggest that there are some interesting differences between the signature and ratification of human rights treaties. Many studies have focused on why states ratify (e.g., Simmons 2009; Cole 2005; Goodliffe and Hawkins 2006; Moravcsik 2000) and some have examined why states add reservations (Neumayer 2007), but this question of signature vs. ratification is something that could be further explored in light of these results.

Table 4. Effect of Nonviolent Campaigns on the Ratification of Individual UN Human Rights Treaties

	CERD	CERD	ICESCR	ICESCR	ICCPR	ICCPR	CEDAW	CEDAW
NV Campaign	0.693	–	1.573	–	1.595	–	0.482	–
	(0.695)		(0.261)		(0.220)		(0.166)	
NV Size	–	0.000***	–	1.209	–	1.207	–	0.961
		(0.000)		(0.184)		(0.187)		(0.861)
Violent Campaign	1.014	–	1.347	–	1.077	–	0.910	–
	(0.967)		(0.299)		(0.798)		(0.692)	
Violent Size	–	0.899	–	1.287		1.172		0.902
		(0.656)		(0.160)		(0.355)		(0.497)
Regional Ratification %	15.062***	14.816***	20.997***	24.315***	4.849***	5.053***	17.775***	16.954***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)
Human Rights Record	1.234*	1.244**	1.002	1.013	0.921	0.933	0.960	0.961
	(0.014)	(0.013)	(0.984)	(0.896)	(0.373)	(0.458)	(0.622)	(0.628)
Common Law System	0.822	0.838	0.528**	0.531**	0.642*	0.635*	0.650*	0.653*
	(0.285)	(0.333)	(0.002)	(0.002)	(0.022)	(0.018)	(0.021)	(0.028)
Regime Type	0.982	0.983	1.045**	1.040*	1.051***	1.048***	1.007	1.007
	(0.206)	(0.219)	(0.006)	(0.013)	(0.001)	(0.001)	(0.654)	(0.676)
New Democracy	1.607	1.636	1.497	1.163	0.852	0.814	1.484	1.404
	(0.098)	(0.087)	(0.574)	(0.653)	(0.580)	(0.491)	(0.214)	(0.288)
N	1,895	1,876	2,854	2,822	3,142	3,103	1,370	1,352
N(subjects) N(failed)	160 (147)	160 (144)	162 (139)	162 (136)	166 (134)	166 (132)	162 (152)	161 (150)
χ^2	43.25***	1857.51***	70.24***	67.59***	44.36***	43.29***	67.59***	59.98***
Log pseudolikelihood	-608.035	-594.958	-568.402	-555.051	-557.467	-547.102	-627.662	-618.323

Results of individual Cox models. Hazard ratios are shown, with p-values in parentheses; *p<0.05, ** p<0.01, *** p<0.001

Table 4 Continued

	CAT	CAT	CRC	CRC	MWC	MWC
NV Campaign	1.396	–	1.233	–	6.397*	–
	(0.419)		(0.529)		(0.011)	
NV Size	–	1.176	–	0.987	–	1.769
		(0.200)		(0.927)		(0.113)
Violent Campaign	1.319	–	0.906	–	2.814	–
	(0.422)		(0.726)		(0.063)	
Violent Size	–	1.232	–	0.963	–	1.374
		(0.273)		(0.830)		(0.268)
Regional Ratification %	5.126**	4.700**	59.256***	59.466***	6879.499***	5333.686***
	(0.002)	(0.003)	(0.000)	(0.000)	(0.000)	(0.000)
Human Rights Record	0.988	0.989	0.925	0.927	0.965	0.921
	(0.891)	(0.903)	(0.358)	(0.383)	(0.826)	(0.607)
Common Law System	0.664	0.650*	0.753	0.785	0.347*	0.354
	(0.054)	(0.046)	(0.130)	(0.204)	(0.050)	(0.053)
Regime Type	1.048**	1.050**	1.009	1.008	1.028	1.022
	(0.002)	(0.002)	(0.454)	(0.518)	(0.402)	(0.491)
New Democracy	0.441*	0.445*	1.056	1.076	0.351	0.356
	(0.026)	(0.027)	(0.787)	(0.722)	(0.138)	(0.142)
N	1,814	1,785	3,646	3,590	5,703	5,624
N(subjects) N(failed)	164 (119)	163 (118)	165 (153)	165 (149)	170 (30)	170 (29)
χ^2	42.11**	43.83***	122.69***	117.99***	41.20***	35.11***
Log pseudolikelihood	-520.723	-513.936	-614.744	-594.537	-126.000	-123.407

Results of individual Cox models. Hazard ratios are shown, with p-values in parentheses; *p<0.05, ** p<0.01, *** p<0.001

Appendix 4. Exploring NAVCO's repression variable

This section offers a more in depth exploration of the relationship between government repression and the size of nonviolent campaigns.

In the paper, an assumption is made that as nonviolent campaigns grow, governments will be more likely to seek alternatives to repression. That was tested in the paper itself, with results showing that repression becomes less likely as the size of a nonviolent movement increases.

Table 4 first gives the distribution of the NAVCO's repression variable during nonviolent campaigns, as it is reported in the NAVCO data. It is skewed towards high levels of repression, with almost half of campaign-years experiencing an extreme level of repression.

Table 5. Distribution of NAVCO's repression variable

Repression	N	%
None	85	25.3
Mild	24	7.1
Moderate	64	19.1
Extreme	163	48.5
Total	1,701	100

Figure 1 shows a scatter plots of the level of repression and campaign size, both taken directly from the NAVCO data, with a Lowess smoothing function overlaid on the graph to show the trend of the relationship. There appears to be a quadratic relationship, such that repression increases as movements grow larger, but only to a point. After campaigns reach the 100,000 mark, the likelihood of repression decreases (campaign size = 2).
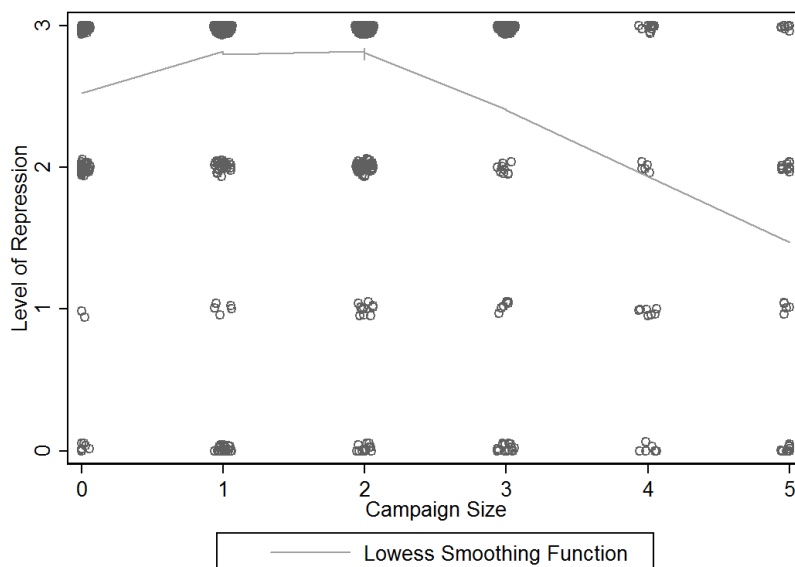

Figure 5. Repression (NAVCO) and campaign size, with Lowess smoothing function

To test this relationship in a multivariate setting, an ordinal logit model is appropriate given the nature of the repression variable. Results of this model are presented in Table 5. Statistical significance is noted at the 10% level given the relatively few observations of nonviolent-protest years. Both an approximate likelihood ratio (LR) test (using Stata's **omodel** command) and a Brant test, however, show that this model violates the parallel regression assumption. The Brant test shows that the campaign size variables are the largest violators. As a result, a stereotype logit model was done.

Table 6. Testing the effect of campaign size on the use of repression

	1: Ordered Logit	2: Stereotype Logit	3: Ordered Logit, Collapsed DV
Campaign Size	0.788*	1.353*	-0.255†
	(0.038)	(0.014)	(0.082)
Campaign Size^2	-0.173*	-0.263*	–
	(0.011)	(0.013)	
Radical Flank	1.659***	2.405***	1.012*
	(0.000)	(0.000)	(0.039)
Regime Change Goal	-0.010	-0.004	0.118
	(0.971)	(0.992)	(0.725)
Regime Support	0.942*	1.324*	0.937*
	(0.011)	(0.011)	(0.035)
INGO Campaign Support	0.899*	1.134*	0.768†
	(0.017)	(0.048)	(0.070)
Cut 1	0.129		-1.155
Cut 2	0.609		-0.692
Cut 3	1.838		
ϕ_1		1	
ϕ_2		0.360	
ϕ_3		0.712	
ϕ_4		0	
θ_1		1.886	
θ_2		-0.638	
θ_3		1.428	
θ_4		0	
N	250	250	250
χ^2	31.72***	28.98***	15.60**
Log pseudoliklihood	-269.622	-266.761	-174.41

p-values in parentheses; †p<0.10$, * p<0.05, ** p<0.01, *** p<0.001

The results of the stereotype logit model suggest that the repression variable categories are not ordered as assumed. Tests were done to examine whether the different categories are distinguishable. Using an LR test, it was determined that categories 3 and 4 are indistinguishable and can be collapsed. With the collapsed variable, a scatter plot with a smoothing function overlaid on the graph was created (Figure 2). The relationship appears to change from being quadratic to being negative.

Figure 6. Repression (collapsed) and campaign size, with Lowess smoothing function
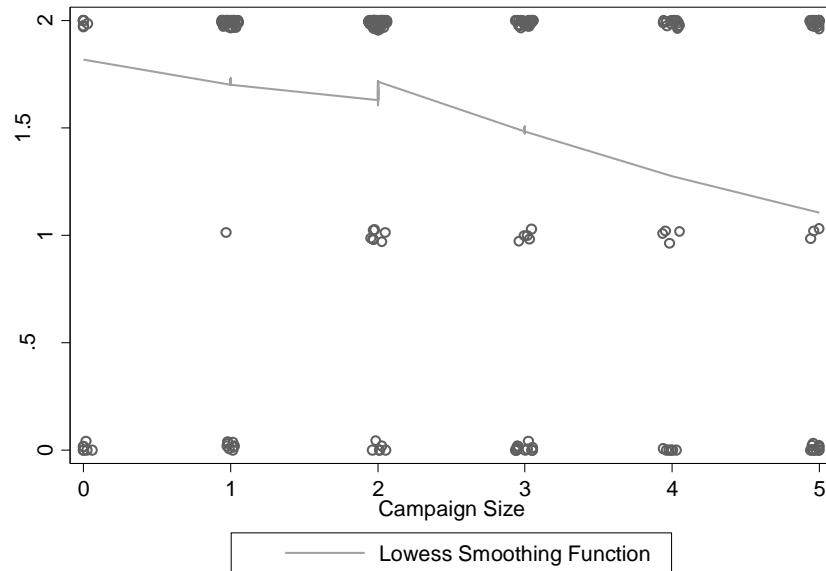
With the collapsed variable, an ordered logit was first used to see if this configuration of the dependent variable would lead to better results in terms of the parallel regression assumption. The squared term was also removed, as the relationship is negative rather than quadratic. With this specification the parallel regression assumption is not violated according to either test. As ordered logit is a more parsimonious model, it was chosen over stereotype logit. In the main paper, Model 3 is expanded upon to include more difficult tests of the relationship. First, all indicators are lagged to better establish temporal sequencing. Second, a lagged repression variable is included to account for time dependencies in the data. Both models show a negative and significant relationship between repression and campaign size.

In all models, the relationships found in the scatter plots are replicated in the multivariate setting. The first two models suggest that repression increases to a point, after which it becomes less likely as movement continue to grow. Model 3 and models in the main document report a significant, negative relationship. This lends empirical support to the assumption that governments seek alternatives to repression, especially as movements grow. A conservative interpretation, taking all models into account, is that after a movement is significantly large, around 100,000 participants, governments become less likely to repress.

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