Supplemental Appendix For

COVID-19, STATE CAPACITY, AND POLITICAL VIOLENCE BY NONSTATE ACTORS

Contents

This appendix includes three parts. In the first part we report summary statistics for our variables, as well as global maps and histograms showing the distribution of our dependent variables. In the second part we report a large set of sensitivity analyses designed to illustrate the robustness of our findings from the main paper. The third part include addition background information on our cases.

Summary Statistics and Figures

Summary statistics

Table A1: Summary Statistics of All Variables, January 1 – June 15, 2020

	Minimum	Median	Mean	Max	SD
Day level data					
Δ *rebel attacks*$_{it}$	-98	0	-0.094	39	2.271
Δ *PGN attacks*$_{it}$	-37	0	-0.087	17	1.759
Covid-19 deaths$_{it-1}$[1]	0	0	0.606	5.396	1.074
NTL (2014)$_i$[1]	0.459	4.167	4.248	9.257	1.839
Population (2011)$_i$[1]	6.668	9.334	9.443	14.032	1.370
GDP PC (2011)$_i$[1]	5.659	8.234	8.227	10.947	1.106
Military expenditure (2019)$_i$[1]	0	1.872	1.906	3.490	0.601
Polity2 (2018)$_i$	-10	6	3.134	10	5.950
Oil rents, % GDP (2017)$_i$	0	0.05	3.075	37.782	7.867
Mountains$_i$	0	10.3	18.848	82.2	22.115
Ethnic fractionalization$_i$	0.005	0.506	0.462	0.925	0.276
Religious fractionalization$_i$	0	0.351	0.365	0.783	0.211
N. rebel groups$_i$	0	0	0.339	15	1.533
N. PGNs$_i$	0	1	4.276	66	9.360
Weekend$_{it}$	0	0	0.287	1	0.453
Weelky level data					
Δ *rebel attacks*$_{it}$	-213	0	-0.643	113	10.111
Δ *PGN attacks*$_{it}$	-93	0	-0.572	44	6.951
Covid-19 deaths$_{it-1}$[1]	0	0	1.093	7.250	1.682

[1] Natural log

Table A2: List of Countries Analyzed

"Afghanistan"	"Albania"	"Algeria"	"Angola"
"Antigua & Barbuda"	"Argentina"	"Armenia"	"Azerbaijan"
"Bahrain"	"Bangladesh"	"Barbados"	"Belarus"
"Belize"	"Benin"	"Bolivia"	"Bosnia-Herzegovina"
"Botswana"	"Brazil"	"Bulgaria"	"Burkina Faso"
"Burundi"	"Côte d'Ivoire"	"Cambodia"	"Cameroon"
"Central African Republic"	"Chad"	"Chile"	"Colombia"
"Dem. Rep. Congo"	"Republic of Congo, "	"Costa Rica"	"Croatia"
"Cuba"	"Cyprus"	"Djibouti"	"Dominica"
"Dominican Rep."	"Ecuador"	"Egypt"	"El Salvador"
"Eritrea"	"Ethiopia"	"Gabon"	"Gambia"
"Georgia"	"Ghana"	"Greece"	"Guatemala"
"Guinea"	"Guinea-Bissau"	"Guyana"	"Haiti"
"Honduras"	"India"	"Indonesia"	"Iran"
"Iraq"	"Israel"	"Jamaica"	"Jordan"
"Kazakhstan"	"Kenya"	"Kosovo"	"Kuwait"
"Kyrgyzstan"	"Laos"	"Lebanon"	"Lesotho"
"Liberia"	"Libya"	"Madagascar"	"Malawi"
"Malaysia"	"Mali"	"Mauritania"	"Mexico"
"Moldova"	"Montenegro"	"Morocco"	"Mozambique"
"Myanmar"	"Namibia"	"Nepal"	"Nicaragua"
"Niger"	"Nigeria"	"North Macedonia"	"Pakistan"
"Panama"	"Paraguay"	"Peru"	"Philippines"
"Romania"	"Russia"	"Rwanda"	"Saudi Arabia"
"Senegal"	"Sierra Leone"	"Somalia"	"South Africa"
"South Sudan"	"Sri Lanka"	"St. Kitts and Nevis"	"St. Lucia"
"St. Vincent and Grenadines"	"Sudan"	"Suriname"	"Swaziland"
"Syria"	"Tajikistan"	"Tanzania"	"Thailand"
"Togo"	"Trinidad & Tobago"	"Tunisia"	"Turkey"
"Turkmenistan"	"Uganda"	"Ukraine"	"Uruguay"
"Uzbekistan"	"Venezuela"	"Viet Nam"	"Yemen"
"Yugoslavia"	"Zambia"	"Zimbabwe"	

Histograms and maps

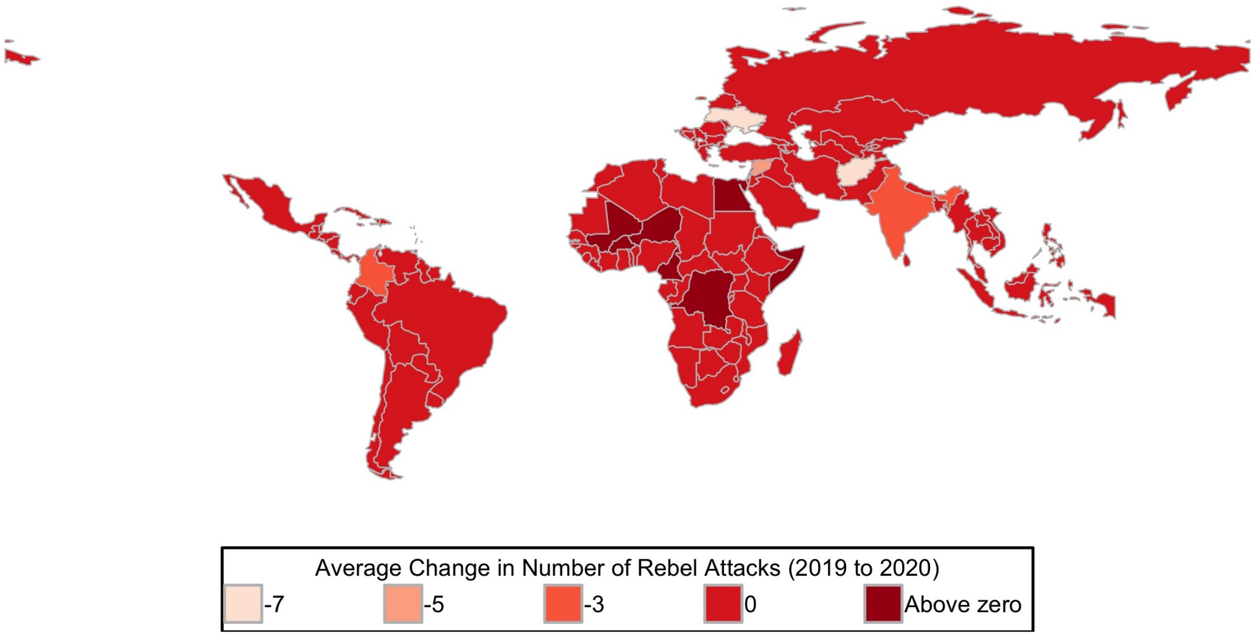

Figure A1: A map of changes in rebel attacks, 2019-2020, for all countries in the dataset

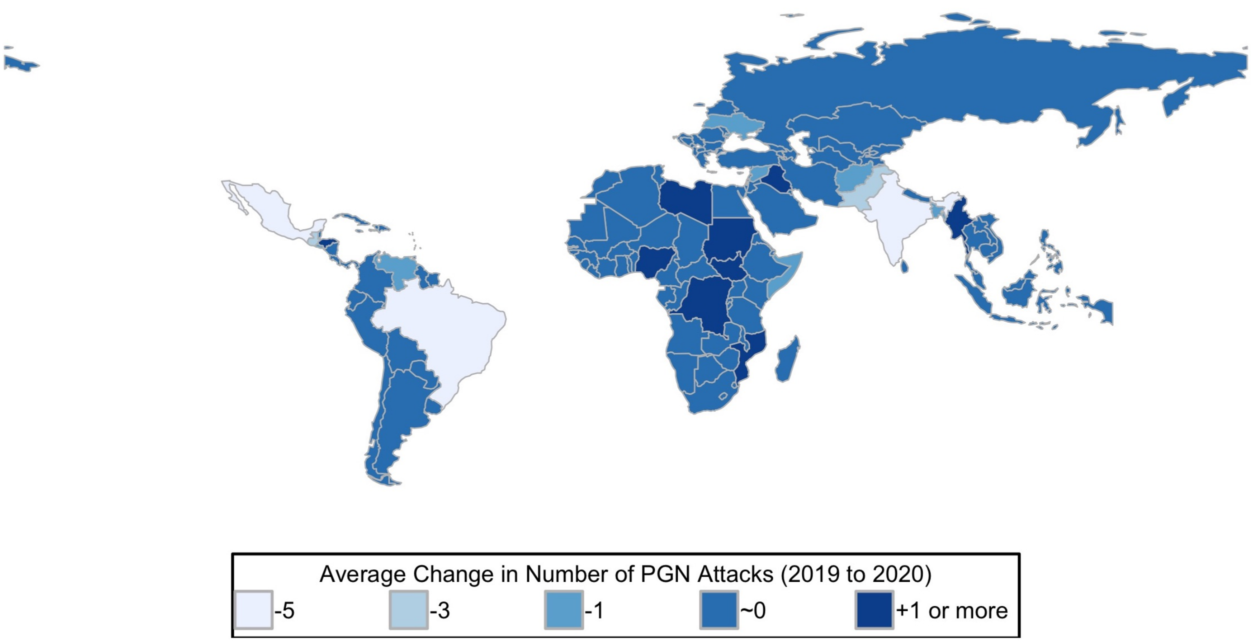

Figure A2: A map of changes in PGN attacks, 2019-2020, for all countries in the dataset

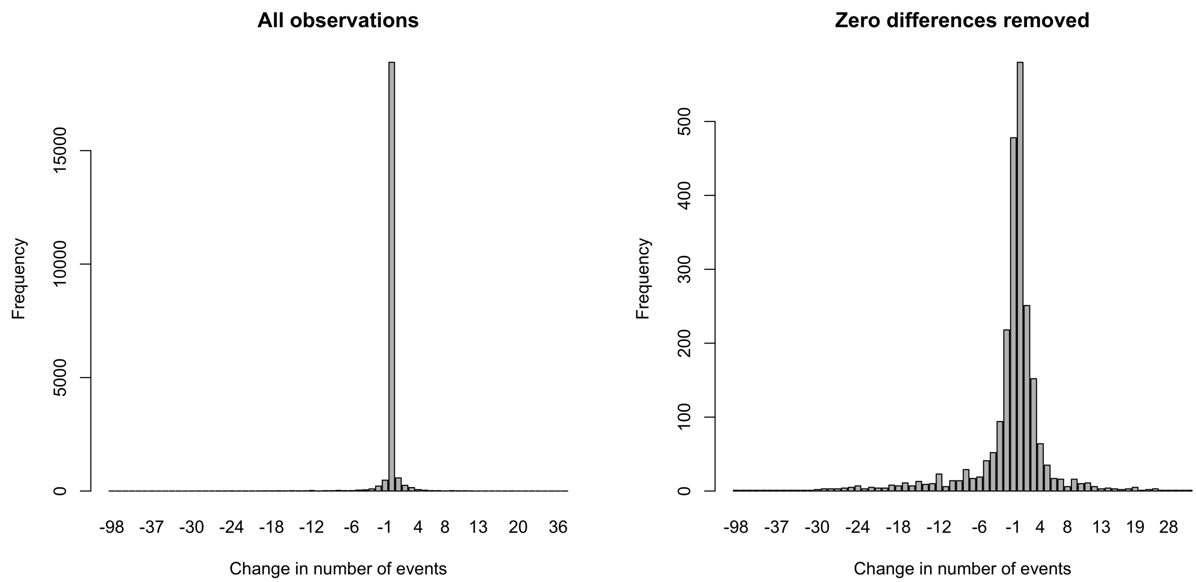

Figure A3: Histogram of change in rebel attacks, 2019 to 2020

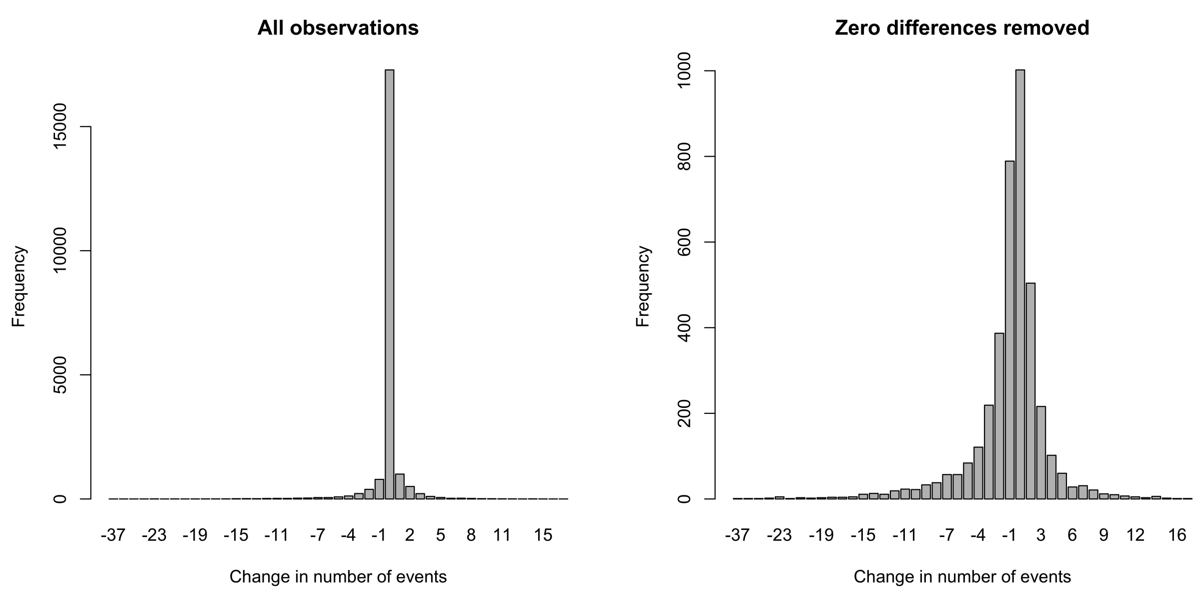

Figure A4: Histogram of change in PGN attacks, 2019 to 2020

Sensitivity Analyses

In this section we report a large number of sensitivity analysis designed to illustrate our findings' robustness to a variety of empirical and theoretical concerns. First, we account for the possibility that our results are due to the inclusion of month fixed effects and the time trend, which – considering that we already difference our dependent variable temporally – might cause us to 'over-season' our conflict data. To this end, Table A3 first reports a set of models corresponding to each respective dependent variable (and its lag) where month fixed effects were removed. This is followed by a similar set of models that additionally omits the time trend. As Table A3 illustrates, our results are not affected by these addition of these temporal controls.

Next, note that conflict by nonstate actors may exhibit both serial correlations over time and endogeneity with covid-19, considering that most unplanned disasters are the result of socioeconomic and political failures of preparedness (e.g., Jokman & Kelman, 2005). To address this relevant concern, we employ a series of robust system generalized method of moments (GMM) *dynamic* models corresponding to each dependent variable. By first-differencing lagged values of the instrumented – i.e., the dependent – variable, such GMM models create necessary instruments 'internally.' Specifically, these models are specified as a system of (per period) equations, where the instruments applicable to each equation differ because additional lagged values of the instruments exist in later time periods (for details, see, e.g., Arellano & Bond, 1991). Building on past econometric research and to avoid the risk of over-specification (e.g., Roodman, 2009), for these instruments, we include three-to-17 day lags of each respective DV, capturing variations in these variables at time t based on changes from past periods (for this reason, the time trend and month fixed effects are omitted from these models, as their inclusions means the models fail to converse). With first-differencing exploiting over-time variations in each DV to, in effect, 'exogenize' the dependent variable, unit fixed effects are flushed out, leaving an effective, unit-of-analysis specific sets of information.

The results from these GMM models are reported in Table A4. As the estimates show, the results of the main analysis hold. In fact, these models suggest that – once endogeneity is taken into account – covid-19 deaths have had a positive influence on rebel attacks in addition to PGN attacks, again compared with 2019 levels. Additionally, Sargan test results are statistically insignificant across both models, suggesting neither model is over-specified, thus providing additional confirmation of these results.

Next, recall that our main models relied on country fixed effects. One potential concern is that in doing so, we failed to account for potential important confounders that might explain the results. Here, we must emphasize that because our data in effect analyzed only 2020, and the fact that most countries are measured at the annual level, including relevant controls was infeasible, as relevant 2020 socioeconomic and political data are still unavailable, making them a 'fixed-effect' in practice as they do not vary by the day (and in any case, these data are likely autocorrelated to some extent with the spread of covid-19). Moreover, especially in conflict-afflicted states, such data from main datasets, such as the World Bank's World Development Indicators (WDI), suffer from very high level of missingness, which would result with a large number of cases being omitted from analysis not-at-random (that is, because they experience conflict). Research also shows that such 'controls' likely bias estimates, and do not have a straightforward interpretation, in causal models (Keele et al., 2020).

Nevertheless, to illustrate that our findings are reasonably robust to this concern, we collected a large number of confounders from datasets for the latest period for which these data were available (again, not accounting for missingness due to issues such as ongoing conflicts). To this end, Table A5 first reports the same models from Table 1 in the main paper, with the addition of the following controls: (i) (logged) nighttime emission by country (from the PRIO-Grid dataset, aggregated to the country level, latest year available in these data is 2014; see Tollefsen et al. 2012); (ii) (logged) population and (iii) real GDP per capita levels (both obtained from Gleditsch, 2002 and expanded to 2011, the last year available in the data, which is used here);[1] (iv) military expenditure by country (obtained from the Stockholm International Peace Research Institute, or SIPRI; last year available in the data is 2019); (v) Polity2 data from the Polity IV data series (Marshall & Jaggers, 2002; last year available in the data was 2018); (vi) oil rents as percent of GDP (from the WDI; last year available in the data was 2017); and finally indicators accounting for (vii) percent country area that is mountainous, (viii) ethnic and (ix) religious fractionalization (from Fearon & Laitin, 2003). To account for other country specific issues, we replaced our country fixed effect with random effects by country, which allow one to model time-invariant covariates while still accounting for unit-specific features.

Next, there is the possibility that differences in violence are affected by the number of rebel groups and PGNs operating in a given country. To this end, the next set of models in Table A5 add indicators for the number of rebel groups and PGNs to the same specifications from Table 1, main paper, but for the random effects by country models. The last two models in Table A5 then add to these indicators the same controls used in the first two models in the same tables (and discussed above). Crucially, the results of these random effect control-inclusive models in Table A4 clearly show that adding these indicators does not impact the sign, statistical significance, and magnitude of the effects observed in Table 1 in the main text.

The next set of tests, in Table A6, account for longer dependencies of violence over time, adding deeper DV lags to the data. When then illustrate that the results are also robust to our decision to lag and log our key explanatory variable.

Another potential concern is our decision to rely on the country-day as our unit of analysis. This decision could constitute an over-disaggregation of our data, although we believe the the large number of events at this level suggests this is not the case. Nevertheless, to ensure that our results the first set of models in Table A7 re-estimate Table 1 from the main paper where data where aggregated to the *weekly* level, and where the unit of

[1] We prefer these data to the WDI because they suffer from far less missingness across countries and years.

analysis is – accordingly – the country-weeks (accordingly, the time trend is in this model is changed to a weekly indicator of all weeks in 2020 in our data). We then illustrated that our results are robust to endogeneity concerns and serial correlation even at this higher level of disaggregation by running GMM models corresponding to those reported in Table A4, only this time where temporal variations are exploited at the country-week level. The robustness of the results at these higher level of temporal disaggregation lead additional confirmation that by deciding to rely on the country-day to exploit the maximal level of variability in the data, we are not biasing our results in terms of sign or statistical significance.

In Table A8 we turn to evaluate whether our results are sensitive to different facets of our sample, which can induce possible bias (although more likely than not toward rather than away from zero). One potential concern is that the results are driven by the weakest states in our sample, where PGN and rebel activity are both more likely (Fearon & Laitin, 2003). To this end, the first set of models in Table A8 re-estimate Table 1 from the main paper using only countries with relatively high state capacity, that is countries whose nighttime emission levels (in 2014) where above the global median. Another possibility is that, as Figures A3-A4 above illustrate, most of the country-days in our sample experienced zero violence events both in 2019 and 2020. Accordingly, in the next two models we remove all countries where no attacks by rebels and PGNs, respectively, were reported in 2020, to focus only on states that experienced violence in 2020. Finally, recall that violence trends at the daily level might experience cycles related to holidays and periods where people enjoy more free times. Accordingly, the last two models in Table A8 add an indicator accounting for whether a given day was a weekend day (Sundays and Saturdays) or not.

Next, although one of the reason we choose to rely on deaths from covid-19 rather than cases (in addition to the massive variations in the latter across states) is because doing so incorporates some of the time it might take the disease to impact conflict patterns, there is a possibility that some of the effects of covid-19 on nonstate activity might unfold over periods longer than the one-day lag we included in the model. To this end, Table A9 reports three sets of models, where the main explanatory variables, (logged) covid-19 deaths (per million), was lagged by (i) two, (ii) seven, and (iii) ten day period to account for such lags. Again, the sign, statistical significance, and magnitude on the coefficients of our variables of interest hold across these three sets of models, illustrating our conclusions are robust to these lagging concerns as well.

Finally, as we mentioned above when discussing the models in Table A7, the daily attack data may be too fine-grained as to introduce potential infernetial problems (e.g., with respect to religious holidays).Accordingly, in Table A10, we report a set of models where the dependent variables are operationalized as the daily attacks figures subtracted from the monthly averages in each month in 2020. This indicator, which is linked to monthly averages may capture some trends and patterns better, although zero inflation in our data is more likely to bias estimates toward zero rather than the other way around. Indeed, the estimates reported in Table A10 suggest that when this more aggregated dependent variable is used, the coefficient estimates for $\textit{Covid-19 deaths}_{it-1}$ are positive and statistically significant not only with respect to changes in PGN attacks, but also with respect to rebel attacks. Overall, then, Tables A3–A10 subject our main findings to a host of analysis and show that the sign, statistical significance, and magnitude on the coefficients of our variables of interest hold in every case. Indeed, in some cases (Tables A4 and A10), we find that the results confirm a positive relationship between covid-19 deaths and rebel violence. These robustness analyses hence suggest that our conclusions from the main paper cannot be immediately dismissed as random.

Table A3: Determinants of Nonstate Actor Attacks – Temporal Sensitivity

	No Month FEs		No Month FEs + No Time Trend	
	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$
Covid-19 deaths$_{it-1}$[1]	0.010	0.048***	−0.0003	0.028**
	(0.019)	(0.016)	(0.014)	(0.012)
DV_{it-1}	0.450***	0.189***	0.450***	0.189***
	(0.006)	(0.007)	(0.006)	(0.007)
τ_t	−0.0003	−0.001*	–	–
	(0.0004)	(0.0003)		
Constant	0.017	0.015	0.0002	−0.017
	(0.148)	(0.125)	(0.147)	(0.124)
Observations	21,209		21,209	
R^2	0.313	0.187	0.313	0.187
Adjusted R^2	0.309	0.182	0.309	0.182

*p<0.1; **p<0.05; ***p<0.01. Variable coefficients are reported with standard errors clustered by country in parentheses. Fixed effects by country are included in each model although none is reported here.

[1] Natural log

Table A4: Determinants of Nonstate Actor Attacks – Serial Correlation and Endogeneity

	GMMs	
	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$
Covid-19 deaths$_{it-1}$[1]	0.510***	0.943***
	(0.163)	(0.297)
DV_{it-1}	0.431***	0.119***
	(0.025)	(0.035)
Observations	21,209	
Sargan test	48.505	89.604

*p<0.1; **p<0.05; ***p<0.01. Variable coefficients are reported with standard errors clustered by country in parentheses for the control models. Fixed effects by country and month are included in both control models although none is reported here.

[1] Natural log

Table A5: Determinants of Nonstate Actor Attacks – RE with Confounders

	Controls		N. Groups		Controls+N. Groups	
	Δ *rebel attacks*$_{it}$	Δ *PGN attacks*$_{it}$	Δ *rebel attacks*$_{it}$	Δ *PGN attacks*$_{it}$	Δ *rebel attacks*$_{it}$	Δ *PGN attacks*$_{it}$
Covid-19 deaths$_{it-1}$[1]	0.016	0.056***	0.009	0.045***	0.016	0.055***
	(0.022)	(0.020)	(0.020)	(0.017)	(0.022)	(0.020)
DV_{it-1}	0.433***	0.193***	0.458***	0.196***	0.432***	0.193***
	(0.007)	(0.008)	(0.006)	(0.007)	(0.007)	(0.008)
NTL (2014)$_i$[1]	−0.149	−0.071	–	–	−0.141	−0.057
	(0.091)	(0.093)			(0.092)	(0.094)
Population (2011)$_i$[1]	0.105	−0.136	–	–	0.088	−0.121
	(0.091)	(0.094)			(0.097)	(0.099)
GDP PC (2011)$_i$[1]	0.124	−0.026	–	–	0.120	−0.042
	(0.102)	(0.105)			(0.104)	(0.106)
Military expenditure (2019)$_i$[1]	0.054	−0.030	–	–	0.068	0.021
	(0.108)	(0.111)			(0.114)	(0.116)
Polity2 (2018)$_i$	0.011	0.002	–	–	0.013	0.008
	(0.013)	(0.013)			(0.014)	(0.014)
Oil rents, % GDP (2017)$_i$	0.009	0.014	–	–	0.009	0.015*
	(0.009)	(0.009)			(0.009)	(0.009)
Mountains$_i$	−0.004	0.001	–	–	−0.004	0.001
	(0.003)	(0.003)			(0.003)	(0.003)
Ethnic fractionalization$_i$	−0.037	0.170	–	–	−0.040	0.189
	(0.242)	(0.249)			(0.244)	(0.249)
Religious fractionalization$_i$	−0.238	−0.091	–	–	−0.287	−0.096
	(0.307)	(0.316)			(0.316)	(0.323)
N. rebel groups$_i$	–	–	−0.076***	−0.065*	−0.035	−0.118
			(0.028)	(0.034)	(0.079)	(0.080)
N. PGNs$_i$	–	–	0.003	−0.013**	0.006	0.002
			(0.005)	(0.005)	(0.008)	(0.008)
τ_t	−0.001	−0.001	0.001	−0.001	−0.001	−0.001
	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)
Constant	−1.300	1.391	−0.025	−0.144	−1.199	1.185
	(1.235)	(1.270)	(0.093)	(0.107)	(1.272)	(1.297)
Observations	16,199		21,209		16,199	
Log Likelihood	−32,097.050	−30,898.310	−43,783.240	−40,189.910	−32,102.220	−30,902.730
Akaike Inf. Crit.	64,236.100	61,838.620	87,594.480	80,407.820	64,250.430	61,851.460
Bayesian Inf. Crit.	64,397.640	62,000.170	87,705.960	80,519.290	64,427.360	62,028.390

*p<0.1; **p<0.05; ***p<0.01. Variable coefficients are reported with standard errors clustered by country in parentheses for the control models. Fixed effects by country and month are included in both control models although none is reported here.

[1] Natural log

Table A6: Determinants of Nonstate Actor Attacks – Main Variable operationalization

	Deeper DV Lags		Nonlagged EV		Nonlogged EV	
	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$
Covid-19 deaths$_{it-1}$[1]	0.012	0.044**	0.012	0.053***	3.934e-06	0.002**
	(0.021)	(0.017)	(0.021)	(0.018)	(0.001)	(0.001)
DV_{it-1}	0.380***	0.160***	0.450***	0.189***	0.450***	0.189***
	(0.007)	(0.007)	(0.006)	(0.007)	(0.006)	(0.007)
DV_{it-2}	0.048***	0.123***	–	–	–	–
	(0.007)	(0.007)				
DV_{it-3}	0.158***	0.016**				
	(0.007)	(0.007)				
τ_t	0.001	−0.001	0.001	−0.001	0.001	−0.001
	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)
Constant	−0.016	0.017	−0.022	0.006	−0.022	0.013
	(0.149)	(0.127)	(0.151)	(0.127)	(0.151)	(0.127)
Observations	20,955		21,209		21,209	
R^2	0.342	0.200	0.313	0.187	0.313	0.187
Adjusted R^2	0.338	0.195	0.309	0.182	0.309	0.182

*p<0.1; **p<0.05; ***p<0.01. Variable coefficients are reported with standard errors clustered by country in parentheses. Fixed effects by country and month are included in each model although none is reported here.

[1] Natural log (excluding the nonlogged models)

Table A7: Determinants of Nonstate Actor Attacks – Week-Level Models

	OLS		GMM	
	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$
Covid-19 deaths$_{it-1}$[1]	0.187	0.202*	0.504	1.102***
	(0.150)	(0.106)	(0.640)	(0.417)
DV_{it-1}	0.393***	0.283***	0.342***	0.240***
	(0.016)	(0.018)	(0.090)	(0.092)
Week ind.$_t$	0.089	−0.099		
	(0.161)	(0.114)		
Constant	−0.050	−0.108		
	(1.613)	(1.142)		
Observations	2,921		2,921	
R^2	0.452	0.468		
Adjusted R^2	0.425	0.441		
Sargan test			85.140	100.365

*p<0.1; **p<0.05; ***p<0.01. Variable coefficients are reported with standard errors in parentheses and country-clustered SEs in the OLS models. Fixed effects by country and month are included in the OLS models although none is reported here.

[1] Natural log

Table A8: Determinants of Nonstate Actor Attacks – State Capacity, Zero Inflation, Weekends

	High SC		No Zeros		Weekends	
	Δ *rebel attacks*$_{it}$	Δ *PGN attacks*$_{it}$	Δ *rebel attacks*$_{it}$	Δ *PGN attacks*$_{it}$	Δ *rebel attacks*$_{it}$	Δ *PGN attacks*$_{it}$
Covid-19 deaths$_{it-1}$[1]	0.032	0.098***	0.046	0.077***	0.012	0.054***
	(0.040)	(0.033)	(0.085)	(0.024)	(0.021)	(0.018)
DV_{it-1}	0.466***	0.191***	0.448***	0.188***	0.450***	0.189***
	(0.009)	(0.010)	(0.012)	(0.008)	(0.006)	(0.007)
Weekend$_{it}$	–	–	–	–	0.005	−0.024
					(0.029)	(0.024)
τ_t	0.002	−0.002	0.003	−0.002	0.001	−0.001
	(0.003)	(0.002)	(0.006)	(0.002)	(0.002)	(0.001)
Constant −0.049	0.053	−0.237	0.006	−0.023	0.012	
	(0.215)	(0.174)	(0.311)	(0.148)	(0.151)	(0.127)
Observations	10,521	10,521	5,845	16,032	21,209	21,209
R^2	0.326	0.194	0.311	0.187	0.313	0.187
Adjusted R^2	0.321	0.189	0.306	0.181	0.309	0.182

*p<0.1; **p<0.05; ***p<0.01. Variable coefficients are reported with standard errors clustered by country in parentheses. Fixed effects by country and month are included in each model although none is reported here.

[1] Natural log

Table A9: Determinants of Nonstate Actor Attacks – Deeper EV Lags

	Two Days		Seven Days		Ten Days	
	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$
Covid-19 deaths$_{it-2}$[1]	0.013 (0.021)	0.052*** (0.018)	–	–	–	–
Covid-19 deaths$_{it-7}$[1]	–	–	0.023 (0.021)	0.039** (0.018)	–	–
Covid-19 deaths$_{it-10}$[1]	–	–	–	–	0.035* (0.021)	0.037* (0.019)
DV_{it-1}	0.452*** (0.006)	0.188*** (0.007)	0.423*** (0.006)	0.190*** (0.007)	0.381*** (0.006)	0.194*** (0.007)
τ_t	0.001 (0.002)	−0.001 (0.001)	−0.0005 (0.002)	−0.001 (0.001)	−0.001 (0.002)	−0.001 (0.001)
Constant	−0.018 (0.152)	0.002 (0.128)	0.023 (0.152)	−0.006 (0.130)	0.073 (0.146)	−0.018 (0.132)
Observations	21,082		20,447		20,066	
R^2	0.316	0.188	0.299	0.188	0.303	0.188
Adjusted R^2	0.311	0.183	0.295	0.182	0.298	0.183

*p<0.1; **p<0.05; ***p<0.01. Variable coefficients are reported with standard errors clustered by country in parentheses. Fixed effects by country and month are included in each model although none is reported here.

[1] Natural log

Table A10: Determinants of Nonstate Actor Attacks – Monthly Level Averages

	Δ ***rebel attacks***$_{it}$	Δ ***PGN attacks***$_{it}$
Covid-19 deaths$_{it-1}$[1]	0.038***	0.051***
	(0.006)	(0.004)
DV_{it-1}	0.625***	0.738***
	(0.004)	(0.003)
Constant	−0.036	−0.051
	(0.067)	(0.043)
Observations	17,272	
R^2	0.625	0.737
Adjusted R^2	0.622	0.735

*p<0.1; **p<0.05; ***p<0.01. Variable coefficients are reported with standard errors clustered by country in parentheses for the control models. Fixed effects by country and month are included in both control models although none is reported here.

[1] Natural log

Case Studies: Additional Information

Case selection discussion

Afghanistan and Nigeria present an interesting comparison because while they do exhibit differences, there are also key similarities between them. Although Afghanistan (a Muslim majority country) is less religiously diverse than Nigeria (with a Muslim-majority North and Christian-majority South), both countries are ethnically and linguistically diverse and have faced similar ethnolinguistic challenges in forming a unified national identity, in addition to addressing issues of diverse ethnolinguistic representation in their parliaments (CIA, 2021a;2021b; Dupree, 2021; Folami, 2017; Hamilton Millard Kirk-Greene, 2021; Ikpe, 2009; Sinno, 2015). In both Afghanistan and Nigeria, failures to create an effective ethnic coalition have induced the government to resort to violence at various points in order to maintain control over these varied groups.

While some may consider Nigeria more democratic than Afghanistan today, this is a recent development, as the country's most recent constitution has been written in 1999 after decades of dictatorship and military rule since independence in 1960 (Hamilton Millard Kirk-Greene, 2021; Ikpe, 2009; CIA, 2021b). Afghanistan, which has been ruled by a king for most of the 20th century, prior to spells of democratic, communist and Islamic regimes, has signed its newest democratic constitution into law in 2004 (CIA, 2021a; Dupree, 2021; George & Tassal, 2020). Although both Afghanistan and Nigeria are currently presidential democracies with rotating leaders who are electorally elected, both states have had to deal with local and regional power structures that have been incompatible with their central governments. And although Nigeria has a stronger military force than Afghanistan, both states have been enmeshed in decades-long conflict with a primary opposition group – the Taliban in Afghanistan, since it was removed from power in 2001, and Boko Haram in Nigeria since 2002 – in addition to other, less significant opposition and insurgent groups (CIA 2021a; 2021b; Dorff et al., 2020; Dupree, 2021; George & Tassal, 2020; Hamilton Millard Kirk-Greene, 2021).

In addition to facing multiple anti-state actors, each country's government also have similar dealings with pro-government nonstate actors (PGNs), especially in locations and during times when the state was facing challenging in keeping opposition groups at check (CIA, 2021a; 2021b; Ahram, 2011; Ambrozik, 2019; Carey & Mitchell, 2017; Raleigh & Kishi, 2020). Finally, both states are also heavily primary commodity dependent, and both rely on their oil reserves as a primary source of economic prosperity. As a result, both governments have experienced different stints and cases of major corruption, both related and unrelated to these reserves (Dupree, 2021; Hamilton Millard Kirk-Greene, 2021).

Maps of Taliban control

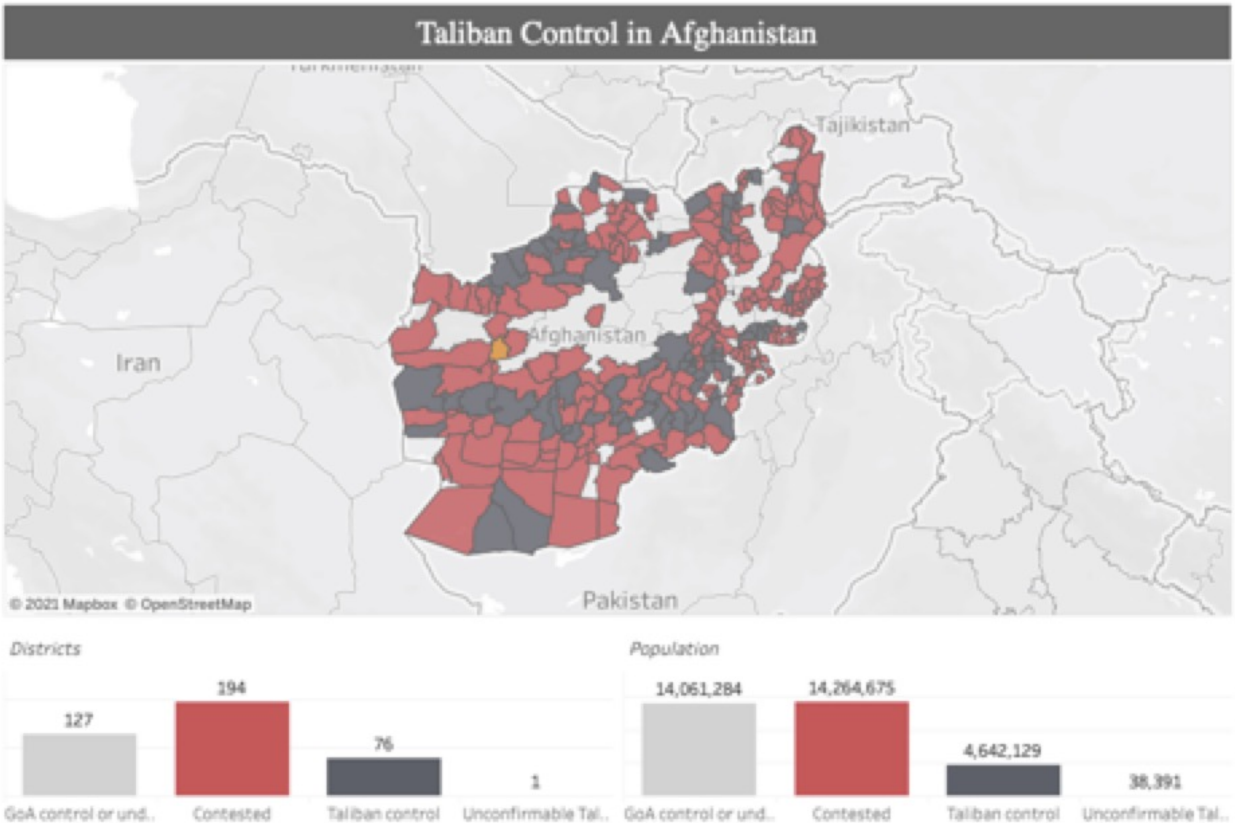

Figure A5: Source: Roggio & Gutowski, 2021

Roggio & Gutowski (2021) have been tracking Taliban control for nearly two decades using their own data gathering technique and the reports of the US government (see Figure A5). Sometimes these assessments align, but for many of the regions, such as Qala Ka, Farah, Roggio and Gutowski's assessment of who has control differs from that of the US government. There are strictly government-controlled areas (light grey), strictly Taliban controlled areas (dark grey), and contested areas (red). The map above shows Roggio and Gutowski's breakdown of these three types of regions as of early 2021, but most of these regions have been in similar circumstances since 2015. About 59 districts are under Taliban control, while 229 districts are under government control, and 119 are contested (Chughtai, 2019; George

& Tassal, 2020). Most of the areas the Taliban controlled in 2020, it had been in control of for the last five or more years. Many of the contested areas have also remained consistent over the last five to six years. The one major change, which happened in Farsi, Harat (in orange on the map above), was the Taliban invading in October of 2019 and the government leaving in July of 2020 after a significant amount of casualties (Roggio & Gutowski, 2021). This was the most territory the Taliban has gained since 2016 and was a major loss for the Afghanistan government (CFR, 2021).

U.S.-Taliban 2020 agreement

The US government has been working closely with the Islamic Republic of Afghanistan (Afghanistan) for nearly 20 years, but relationships between the US and the Islamic Emirate of Afghanistan (the Taliban) have been disjointed and tense during the same timeframe (Joint Declaration, 2020). After years of fighting, the Taliban, Afghanistan, and the US were spurred to make a peace agreement, known as the Agreement for Bringing Peace to Afghanistan in late February of 2020 (Allen, 2020).

The peace agreement primarily focused on four main components: protection of the US from Afghanistan attacks; a timeline for withdrawal of foreign forces from Afghanistan; the beginning of intra-Afghan negotiations between Afghanistan and the Taliban after the withdrawal of all foreign forces; talks for a permanent ceasefire between Afghanistan and the Taliban (Agreement for Bringing Peace to Afghanistan, 2020). This agreement only became feasible after nine rounds of talks. One key points of contention, from the point of the US and the UN, was that women's rights were not directly being addressed (Maizland, 2020). The protection of women's rights were ultimately not addressed in the agreement and because of the weakness of the Afghani government, many are skeptical of the agreement and the Taliban's ability to uphold the agreement.

Throughout most of 2020, the Taliban has not upheld most of the agreed-upon points of the ceasefire and peace agreement, at least partly because covid-19 enabled it to operate more freely in different regions (Marty, 2021). Although initially remaining peaceful and working hard to ensure covid-19 relief measures were in place, the details of the peace agreement and negotiations for moving forward did not start until September of 2020 and the rules finalized in December of 2020 (Marty, 2021).

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