Supplemental Appendix

Locking Down Violence:
The COVID-19 Pandemic's Impact on Non-state Actor Violence

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1 Descriptive Statistics

Descriptive Statistics Summary

The figure depicts the frequency of ISIS-initiated violent events and violent events initiated by anti-ISIS forces in these three states in the 78-week period between 31 December 2018 and 28 June 2020. The bars represent the number of events reported to have been initiated by ISIS or likely to have been initiated by ISIS each week. The color of the bars indicates the percentage of events in a given week that resulted in at least one fatality. Darker colors indicate that a higher percentage of events resulted in fatalities. The red line depicts the number of violent events perpetrated against ISIS in the previous week.

As is apparent from the graphs, the frequency of ISIS-initiated violent events is highest in Iraq followed by Syria and Egypt. The differences in the frequency of ISIS-initiated violent events prior to and after the first reported COVID-19 death in these countries is most apparent in Iraq. In Iraq, immediately after the first reported death from COVID-19, there was a decrease in the frequency of ISIS-initiated violent events, followed by a sharp increase to levels higher than any previous week in the analysis period. These events are noticeably less deadly. In Syria, there was an increase in the number of ISIS-initiated violent events, as well as the deadliness of these events, after the first death from COVID-19 compared to a lull in violence immediately prior to the first COVID-19 death in Syria, but not compared to the period outside this lull. In Egypt, there was no discernible pattern.

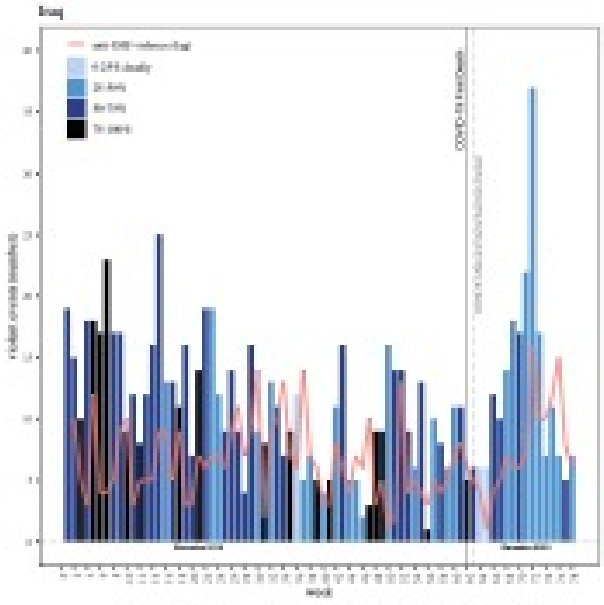
The pattern in deaths from COVID-19 in each country are notably different than the pattern in ISIS-initiated violent events. Iraq has the highest level of ISIS-initiated violence and the highest number of reported deaths from COVID-19, followed by Egypt and Syria. However, the cumulative number of reported deaths from COVID-19 increased monotonically in this period in all three countries, while the number of ISIS-initiated violent events did not. The number of reported new deaths (not shown) also increased monotonically in Iraq and Egypt in this period, while in Syria it remained rather flat.

In Iraq and Egypt, the frequency of ISIS-initiated violent events following the first death from COVID-19 appears to be related to the frequency of anti-ISIS violent events. In Iraq and Egypt, increases in ISIS-initiated violent events after the first COVID-19 death coincided with increases in anti-ISIS initiated violence, while

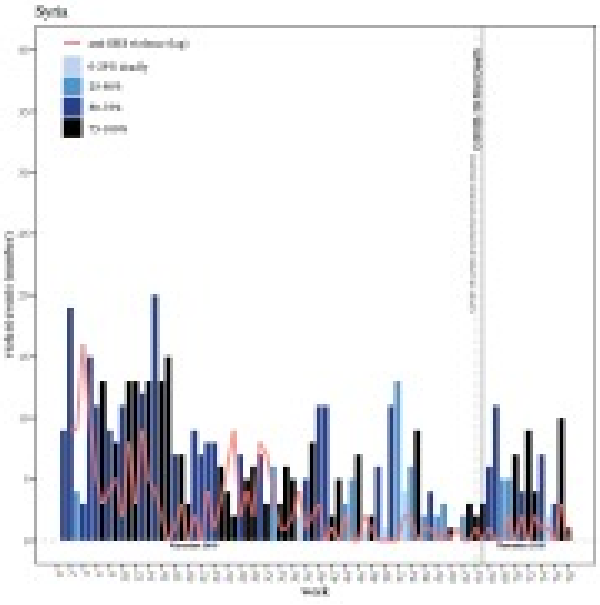
declines in ISIS-initiated violence coincided with declines in anti-ISIS initiated violence. In Syria, the level of anti-ISIS initiated violence does not appear to fluctuate in any obvious ways related to the level of ISIS-initiated violence. In all three states, however, prior to the first death from COVID-19, short-term changes in ISIS-initiated violence do not appear strongly related to short-term changes in anti-ISIS initiated violent events.

Figure A1: Frequency of ISIS Violent Events

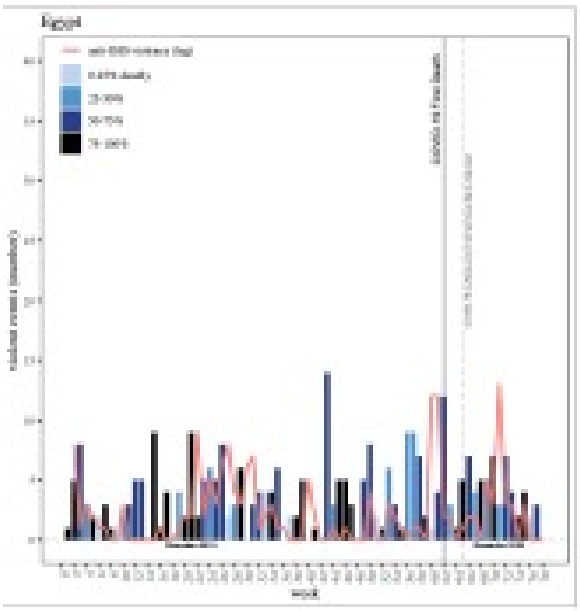
(a) Iraq



(b) Syria



(c) Egypt



(d) All States

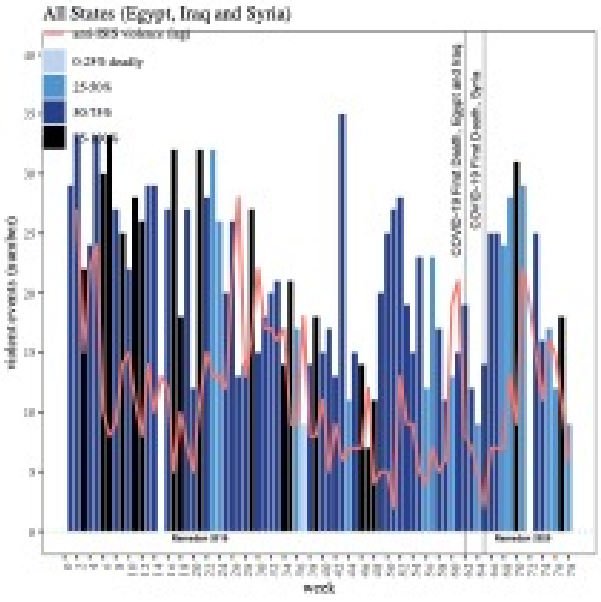


Table A1: Lockdown Measures by Country, Governorate Year and Week

country	**governorate**	**year**	**week**	**ISIS Travel Ban**	**non-ISIS Travel Ban**	**ISIS curfew**	**non-ISIS curfew**
Egypt	Northern Sinai	2019	1-78	yes	no	yes	no
Egypt	Alexandria, Assuit, Aswan, Behera, Beni Suef, Cairo, Dakahlia, Damietta, Fayoum, Gharbia, Giza, Ismailia, Kafr El-Shikh, Kalyoubia, Luxor, Matrouh, Menia, Menoufia, New Valley, Port Said, Qena, Red Sea, Sharkia, South Sinai, Suez, Suhag	2020	65-78	no	yes	no	yes
Iraq	Baghdad, Maysan, and Thi Qar	2019	40	no	no	no	yes
Iraq	Babil, Baghdad, Diyala, Kerbala, Thi Qar	2019	44	no	no	no	yes
Iraq	Babil, al-Basrah, Diyala, al-Muthanna, al-Qadissiya, Thi Qar, Wassit	2019	43	no	no	no	yes
Iraq	Baghdad	2019	45	no	no	no	yes
Iraq	Thi Qar	2019	46-47	no	no	no	yes
Iraq	al-Najaf	2019	48	no	no	no	yes
Iraq	al-Anbar, Babil, Baghdad, al-Basrah, Diyala, Duhok, Erbil, Kerbala, Kirkuk, Maysan, al-Muthanna, al-Najaf, Ninewa, al-Qadissiya, Salah al-Din, al-Sulaymaniyah, Thi Qar, and Wassit	2020	63-78	no	yes	no	yes
Syria	Ar-Raqqa	2019	4, 6, 42	no	yes	yes	no
Syria	Damascus, Dara'a, Hama, Homs, Quneitra, Rural Damascus, As-Sweida, and Tartous	2020	64-73	no	yes	no	yes
Syria	Aleppo, Idlib, Lattakia,	2020	64-74	no	yes	no	yes
Syria	Deir Ez-Zor, al-Hasakeh	2020	64-78	no	yes	no	yes
Syria	Ar-Raqqa	2020	63-78	no	yes	no	yes
Syria	Damascus, Dara'a, Hama, Homs, Quneitra, Rural Damascus, As-Sweida and Tartous,	2020	74	no	no	no	yes

2 National Level

Table A2: Article Table 1: Marginal Effects

	Margin	SE
Model 1		
Ramadan = 0	1.822**	0.208
Ramadan = 1	2.195**	0.234
Oil Price=25, Iraq=1	2.553**	0.283
Oil Price=50, Iraq=1	2.368**	0.2132
Model 3		
COVID-19 Pandemic=0, Iraq=1	2.346**	0.216
COVID-19 Pandemic=1, Iraq=1	2.375**	0.293
Model 4		
COVID-19 Cumulative Deaths=0, Iraq=1	2.338**	0.210
COVID-19 Cumulative Deaths=500, Iraq=1	2.258**	0.301
Model 5		
COVID-19 Pandemic=0, Iraq=1	2.325**	0.273
COVID-19 Pandemic=1, Iraq=1	1.848**	0.360

Table A3: National-level Country Interactions for Syria and Egypt on ISIS Violent Events

	Model 1	Model 2
	all events	all events
COVID-19 Pandemic	0.01	-0.06
	(0.24)	(0.24)
COVID-19 Pandemic*Syria	-0.30	
	(0.21)	
COVID-19 Pandemic*Egypt		0.04
		(0.21)
Anti-ISIS Violence	0.02	0.02
	(0.01)	(0.01)
Oil Price	-0.00	-0.00
	(0.01)	(0.01)
Ramadan	0.38**	0.37**
	(0.14)	(0.14)
Iraq	1.01**	0.49**
	(0.11)	(0.09)
Syria	0.57**	
	(0.11)	
Egypt		-0.52**
		(0.11)
Constant	1.38**	1.87**
	(0.44)	(0.44)
Observations	231	231
Months/State	18	18
Log Likelihood	-616.2	-617.3
Wald χ^2 (Pandemic, Syria)	27.59	
$p>\chi^2$	0.00	
Wald χ^2 (Pandemic, Egypt)		24.78
$p>\chi^2$		0.00

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Table A3b: National-level Country Interactions-Syria and Iraq: Marginal Effects

Model 1		
	Margin	SE
COVID-19 Pandemic=0, Syria=1	1.917**	0.217
COVID-19 Pandemic=1, Syria=1	1.627**	0.323

Model 2		
	Margin	SE
COVID-19 Pandemic=0, Egypt=1	1.34**	0.22
COVID-19 Pandemic=1, Egypt=1	1.31**	0.31

Note: ** p≤0.01, * p≤0.05.

Summary: Pandemic associated with decrease in violent events in Syria and Egypt.

Table A4: COVID-19 Pandemic Longevity Measure on ISIS Violent Events

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID-19 Weeks	-0.01	-0.03	-0.01	-0.01
	(0.02)	(0.02)	(0.02)	(0.02)
COVID-19 Weeks*Iraq		0.02		
		(0.02)		
COVID-19 Weeks*Egypt			-0.00	
			(0.02)	
COVID-19 Weeks*Syria				-0.04
				(0.03)
Anti-ISIS Violence	0.02*	0.02	0.02*	0.02
	(0.01)	(0.01)	(0.01)	(0.01)
Oil Price	-0.00	-0.00	-0.00	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Ramadan	0.36**	0.37**	0.36**	0.38**
	(0.14)	(0.14)	(0.14)	(0.14)
Iraq	0.49**	0.46**	0.49**	1.01**
	(0.09)	(0.09)	(0.09)	(0.11)
Egypt	-0.50**	-0.49**	-0.50**	
	(0.10)	(0.10)	(0.11)	
Syria				0.56**
				(0.11)
Constant	1.92**	2.01**	1.92**	1.50**
	(0.36)	(0.37)	(0.36)	(0.37)
Observations	231	231	231	231
Months/State	18	18	18	18
Log Likelihood	-617.1	-616.2	-617.1	-615.9
Wald χ^2 (Pandemic, Iraq)		29.41		
p>χ^2		0.00		
Wald χ^2 (Pandemic, Egypt)			25.17	
p>χ^2			0.00	
Wald χ^2 (Pandemic, Syria)				28.18
p>χ^2				0.00

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Table A4b: COVID-19 Pandemic Longevity Measure: Marginal Effects

Model 2		
	Margin	SE
COVID-19 Weeks=0, Iraq=1	2.363**	0.213
COVID-19 Weeks=10, Iraq=1	2.294**	0.267
Model 3		
	Margin	SE
COVID-19 Weeks=0, Egypt=1	1.362**	0.217
COVID-19 Weeks=10, Egypt=1	1.206**	0.287
Model 4		
	Margin	SE
COVID-19 Weeks=0, Syria=1	1.926**	0.215
COVID-19 Weeks=10, Syria=1	1.436**	0.344

Note: ** p≤0.01, * p≤0.05.

Summary: Subsequent weeks of the pandemic are associated with a greater decrease in ISIS violent events than earlier weeks in Iraq, Egypt, and Syria.

Table A5: Anti-ISIS Violent Events (Alternative Lags) on ISIS Violent Events

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID-19 Pandemic	-0.08	-0.08	-0.12	-0.20
	(0.24)	(0.24)	(0.24)	(0.24)
Anti-ISIS Violence	0.02			
	(0.01)			
Anti-ISIS Violence (2wk avg)		0.03*		
		(0.01)		
Anti-ISIS Violence (3wk avg)			0.04*	
			(0.02)	
Anti-ISIS Violence (4wk avg)				0.07**
				(0.02)
Oil Price	0.00	0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Oil Price*Iraq	-0.01	-0.01	-0.01	-0.01
	(0.00)	(0.00)	(0.00)	(0.00)
Ramadan	0.37**	0.38**	0.39**	0.41**
	(0.14)	(0.14)	(0.14)	(0.14)
Iraq	0.90**	0.87**	0.83**	0.70*
	(0.26)	(0.27)	(0.27)	(0.27)
Egypt	-0.51**	-0.50**	-0.51**	-0.51**
	(0.10)	(0.10)	(0.10)	(0.10)
Constant	1.73**	1.68**	1.74**	1.86**
	(0.45)	(0.46)	(0.46)	(0.46)
Observations	231	228	225	222
Months/Year	18	18	18	18
Log Likelihood	-615.9	-605.3	-596.7	-585.6

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Summary: Higher number of anti-ISIS violent events (i.e., attacks on ISIS) is associated with a higher number of ISIS violent events. This result may be due to ISIS doubling down in response to attacks on it, or due to anti-ISIS forces increasing their attacks in response to a prior increase in ISIS violence.

Table A6: US COVID-19 Indicators on ISIS Violent Events

	Model 1	Model 2	Model 3
	all events	all events	all events
COVID-19 Pandemic	0.33	0.14	-0.08
	(0.45)	(0.29)	(0.36)
US COVID-19 Pandemic	-0.54		
	(0.48)		
US COVID-19 Cumulative Deaths		-0.00	-0.00
		(0.00)	(0.00)
COVID-19 Pandemic*Iraq			-0.19
			(0.21)
Anti-ISIS Violence	0.02	0.02*	0.01
	(0.01)	(0.01)	(0.01)
Oil Price	-0.00	0.00	-0.01
	(0.01)	(0.01)	(0.01)
Oil Price*Iraq	-0.01	-0.01	
	(0.00)	(0.00)	
Ramadan	0.36**	0.39**	0.32
	(0.14)	(0.14)	(0.16)
Iraq	0.85**	0.83**	0.36**
	(0.26)	(0.26)	(0.11)
Egypt	-0.52**	-0.52**	-0.60**
	(0.10)	(0.10)	(0.12)
Constant	1.98**	1.72**	2.20**
	(0.50)	(0.45)	(0.55)
Observations	231	231	231
Months/Year	18	18	18
Log Likelihood	-615.2	-615.1	-545.2

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Summary: The pandemic in the US and the cumulative number of deaths in the US from COVID-19 are not significantly associated with the number of ISIS violent events. The US measures are proxies for the capacity of the US to combat ISIS in the region.

Table A7: Alternative Outcome - Potential ISIS Violent Events, Unclear (includes ISIS, ISIS-likely and Initiator Unclear)

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID-19 Pandemic	-0.07		-0.14	
	(0.24)		(0.25)	
COVID-19 Cumulative Deaths		-0.00		-0.00
		(0.00)		(0.00)
COVID-19 Pandemic*Iraq			0.17	
			(0.17)	
COVID-19 Cumulative Deaths*Iraq				-0.00
				(0.00)
Anti-ISIS Violence	0.03**	0.03**	0.03**	0.03**
	(0.01)	(0.01)	(0.01)	(0.01)
Oil Price	0.00	0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.00)
Oil Price*Iraq	-0.01	-0.01		
	(0.00)	(0.00)		
Ramadan	0.36**	0.35**	0.36**	0.35*
	(0.14)	(0.14)	(0.14)	(0.14)
Iraq	0.72**	0.71**	0.31**	0.34**
	(0.25)	(0.25)	(0.09)	(0.09)
Egypt	-0.56**	-0.54**	-0.55**	-0.54**
	(0.10)	(0.10)	(0.10)	(0.10)
Constant	1.82**	1.76**	1.99**	1.90**
	(0.44)	(0.34)	(0.43)	(0.32)
Observations	231	231	231	231
Months/Year	18	18	18	18
Log Likelihood	-633.5	-633.4	-634.3	-634.6
Wald χ^2 (COVID-19 Pandemic, Iraq)			15.43	
p>χ^2			0.00	
Wald χ^2 (COVID-19 Cumulative Deaths, Iraq)				14.73
p>χ^2				0.00

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Table A7b: Alternative Outcome: Marginal Effects

Model 3

	Margin	SE
COVID-19 Pandemic=0, Iraq=1	2.34**	0.210
COVID-19 Pandemic=1, Iraq=1	2.37**	0.288

Model 4

	Margin	SE
COVID-19 Cumulative Deaths=0, Iraq=1	2.33**	0.203
COVID-19 Cumulative Deaths=100, Iraq=1	2.31**	0.207

Note: ** p≤0.01, * p≤0.05.

Summary: The COVID-19 pandemic and the cumulative number of deaths from COVID-19 are negative but not significantly associated with a decrease in the potential number of ISIS-initiated violent events. In Iraq, as in the analysis of known and likely ISIS-initiated violent events, there is a slightly higher number of violent events associated with the dichotomous measure of the pandemic, but a slightly lower number of violent events associated with a higher number of cumulative deaths from the pandemic.

Table A8: Alternative Outcome - Potential ISIS Violent Events, Unknown (includes ISIS, ISIS-likely, Initiator Unknown)

	Model 1	Model 2	Model 3	Model 4
COVID-19 Pandemic	0.03		0.04	
	(0.16)		(0.17)	
COVID-19 Cumulative Deaths		-0.00		-0.00
		(0.00)		(0.00)
COVID-19 Pandemic*Iraq			-0.05	
			(0.12)	
COVID-19 Cumulative Deaths*Iraq				0.00
				(0.00)
Anti-ISIS Violence	0.01	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Oil Price	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Oil Price*Iraq	0.00	0.00		
	(0.00)	(0.00)		
Ramadan	0.15	0.14	0.15	0.14
	(0.10)	(0.10)	(0.10)	(0.10)
Iraq	-0.36	-0.31	-0.28**	-0.27**
	(0.19)	(0.19)	(0.06)	(0.06)
Egypt	-1.70**	-1.65**	-1.70**	-1.65**
	(0.08)	(0.09)	(0.08)	(0.09)
Constant	3.24**	3.34**	3.21**	3.32**
	(0.33)	(0.26)	(0.33)	(0.26)
Observations	231	231	231	231
Months/Year	18	18	18	18
Log Likelihood	-688.7	-686.8	-688.7	-686.7
Wald χ^2 (COVID-19 Pandemic,Iraq)			21.18	
p>χ^2			0.00	
Wald χ^2 (COVID-19 Cumulative Deaths,Iraq)				24.59
p>χ^2				0.00

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Table A8b: Alternative Outcome: Marginal Effects

Model 3		
	Margin	SE
COVID-19 Pandemic=0, Iraq=1	2.913**	0.211
COVID-19 Pandemic=1, Iraq=1	2.908**	0.248

Model 4		
	Margin	SE
COVID-19 Pandemic=0,Iraq=1	2.962**	0.213
COVID-19 Cumulative Deaths=100,Iraq=1	2.930**	0.214

Note: ** p≤0.01, * p≤0.05.

Summary: The pandemic and the cumulative number of deaths from the pandemic are associated with a lower number of violent events in Iraq.

Table A9: National-level Analysis of Lockdowns on ISIS Violent Events

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID-19 Pandemic	0.15	0.04	-0.02	-0.15
	(0.25)	(0.27)	(0.27)	(0.29)
COVID-19 Pandemic*Iraq		0.19		0.31
		(0.17)		(0.21)
Non-ISIS Travel Bans			-0.07	-0.20
			(0.27)	(0.29)
ISIS Travel Bans			-0.01	-0.21
			(0.23)	(0.27)
Anti-ISIS Violence	0.02	0.02	0.02*	0.02
	(0.01)	(0.01)	(0.01)	(0.01)
Oil Price	-0.01	-0.01	-0.00	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Non-ISIS Curfews	-0.41*	-0.41*		
	(0.20)	(0.20)		
ISIS Curfews	-0.05	-0.04		
	(0.24)	(0.24)		
Ramadan	0.36**	0.36**	0.36**	0.38**
	(0.14)	(0.14)	(0.14)	(0.14)
Iraq	0.51**	0.48**	0.49**	0.44**
	(0.09)	(0.10)	(0.09)	(0.10)
Egypt	-0.47	-0.47	-0.51*	-0.33
	(0.25)	(0.25)	(0.21)	(0.25)
Constant	2.16**	2.22**	1.91**	2.07**
	(0.45)	(0.45)	(0.47)	(0.48)
Observations	231	231	231	231
Months/Year	18	18	18	18
Log Likelihood	-615.1	-614.5	-617.3	-616.2
Wald χ^2 (Non-ISIS Curfews, ISIS Curfews)	4.13			
$p>\chi^2$	0.12			
Wald χ^2 (COVID-19 Pandemic,Iraq)		32.08		
$p>\chi^2$		0.00		
Wald χ^2 (Non-ISIS Travel Bans, ISIS Travel Bans)				29.64
$p>\chi^2$				0.00

Note: Standard errors in parentheses** $p\leq0.01$, * $p\leq0.05$.

Summary: Non-ISIS curfews and non-ISIS travel bans are associated with a significantly lower number of violent events than no curfews and no travel bans, respectively. The coefficient on non-ISIS curfews is individually significant, and jointly significant with ISIS curfews. Non-ISIS travel bans are jointly significant with ISIS travel bans

3 Governorate Level

Table A10: Article Table 2: Marginal Effects

	Margin	SE
Model 6 (with pandemic in model)		
Non-ISIS Curfews=0, ISIS Curfews=0	0.230	0.255
Non-ISIS Curfews=1, ISIS Curfews=0	0.015	0.298
Non-ISIS Curfews=1, ISIS Curfews=1	1.879**	0.270
Model 6 (without pandemic in model)		
Non-ISIS Curfews=0, ISIS Curfews=0	0.228	0.255
Non-ISIS Curfews=1, ISIS Curfews=0	-0.007	0.285
Non-ISIS Curfews=1, ISIS Curfews=1	1.880**	0.270
Model 7 (with pandemic in model)		
Non-ISIS Curfews=0, ISIS Curfews=0, Population=1500000	-1.546**	0.441
Non-ISIS Curfews=0, ISIS Curfews=0, Population=8500000	-3.721**	0.650
Non-ISIS Curfews=1, ISIS Curfews=0, Population=1500000	-1.627**	0.4609
Non-ISIS Curfews=1, ISIS Curfews=0, Population=8500000	-5.425**	0.868
Model 7 (without pandemic in model)		
Non-ISIS Curfews=0, ISIS Curfews=0, Population=1500000	-1.537**	0.441
Non-ISIS Curfews=0, ISIS Curfews=0, Population=8500000	-3.705**	0.650
Non-ISIS Curfews=1, ISIS Curfews=0, Population=1500000	-1.661**	0.457
Non-ISIS Curfews=1, ISIS Curfews=0, Population=8500000	-5.454**	0.867
Model 8 (with pandemic in model)		
Non-ISIS Travel Bans=0, ISIS Travel Bans=0	-1.76**	0.424
Non-ISIS Travel Bans=1, ISIS Travel Bans=0	-1.67**	0.448
Non-ISIS Travel Bans=0, ISIS Travel Bans=1	4.38**	0.572
Model 8 (without pandemic in model)		
Non-ISIS Travel Bans=0, ISIS Travel Bans=0	-1.741**	0.424
Non-ISIS Travel Bans=1, ISIS Travel Bans=0	-1.757**	0.442
Non-ISIS Travel Bans=0, ISIS Travel Bans=1	4.357**	0.5684
Model 9 (with pandemic in model)		
Non-ISIS Travel Bans=0, Base=0	-2.160**	0.418
Non-ISIS Travel Bans=0, Base=1	-0.908	0.483
Non-ISIS Travel Bans=1, Base=0	-2.133**	0.439
Non-ISIS Travel Bans=1, Base=1	-0.637	0.510
Model 9 (without pandemic in model)		
Non-ISIS Travel Bans=0, Base=0	-2.13**	0.417
Non-ISIS Travel Bans=0, Base=1	-0.891*	0.484
Non-ISIS Travel Bans=1, Base=0	-2.217**	0.434
Non-ISIS Travel Bans=1, Base=1	-0.736	0.50

Table A11: COVID-19 Only Lockdowns on ISIS Violent Events

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID19 Curfews	-0.15	-0.27		
	(0.18)	(0.24)		
Non-COVID19 Curfews	-0.03	-0.92		
	(0.31)	(0.77)		
COVID19 Curfews*Population		-0.00*		
		(0.00)		
Population		-0.00**		
		(0.00)		
COVID19 Travel Bans			-0.06	-0.20
			(0.18)	(0.20)
Non-COVID19 Travel Bans			0.28	
			(0.29)	
Non-COVID19 Travel Bans				0.29
				(0.29)
COVID19 Travel Bans*Base				0.29
				(0.16)
Base				1.61**
				(0.39)
Anti-ISIS Violence	0.02	-0.00	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Oil Price	-0.00	-0.01*	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.00)
Ramadan	0.38**	0.36**	0.38**	0.39**
	(0.09)	(0.09)	(0.09)	(0.09)
Iraq	0.19	-2.62**	0.24	1.56**
	(0.47)	(0.50)	(0.35)	(0.50)
Syria	0.13	-3.24**	0.17	0.87
	(0.51)	(0.43)	(0.40)	(0.47)
Constant	1.00	5.22	0.84	-0.84
	(0.60)	(0.00)	(0.44)	(0.59)
Observations	4543	4543	4543	4543
Governorates	59	59	59	59
Log Likelihood	-1749	-1774	-1748	-1735
Wald χ^2 (COVID19 Curfews, non-COVID19 Curfews)	0.70			
p>χ^2	0.704			
Wald χ^2 (COVID19 Curfews, population)		27.17		
p>χ^2		0.00		
Wald χ^2 (COVID19 Travel Bans, Non-COVID19 Travel Bans)			1.25	
p>χ^2			0.5352	
Wald χ^2 (COVID19 Travel Bans, Base)				21.18
p>χ^2				0.00

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Summary: COVID-19 curfews and COVID-19 travel bans are associated with a lower number of violent events than no curfews and no travel bans respectively, but the results are not individually or jointly significant. However, the interaction between COVID-19 curfews and population is significant, with COVID-19 curfews

Table A11b: COVID-19 Only Lockdowns: Marginal Effects

Model 2		
	Margin	SE
COVID-19 Curfews=1, Population= 100000	2.937**	0.213
COVID-19 Curfews=1, Population= 1000000	2.507**	0.205

Note: ** p≤0.01, * p≤0.05.

associated with lower number of violent events the more populated the governorate. The interaction between COVID-19 travel bans and base areas is significant, with travel bans in base areas significantly associated with a higher number of violent events, as expected.

Table A12: Zero-Inflation Negative Binomial Models of ISIS Violent Events

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID-19 Pandemic	-0.22	-0.16	0.03	-0.39
	(0.32)	(0.32)	(0.28)	(0.25)
Non-ISIS Curfews	0.21	0.39		
	(0.31)	(0.32)		
Non-ISIS Curfews*Population		-0.00		
		(0.00)		
ISIS Curfews	7.13**	7.30**		
	(0.63)	(0.64)		
Population		0.00**		
		(0.00)		
Non-ISIS Travel Bans			-0.33	0.32*
			(0.17)	(0.15)
ISIS Travel Bans			7.39**	5.45**
			(0.74)	(0.74)
Non-ISIS Travel Bans*Base				0.37
				(0.31)
Base				2.36**
				(0.14)
Anti-ISIS Violence	0.65**	0.67**	0.61**	0.34**
	(0.06)	(0.06)	(0.05)	(0.04)
Oil Price	0.00	0.00	-0.00	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Ramadan	0.36*	0.36*	0.38**	0.36**
	(0.14)	(0.14)	(0.14)	(0.12)
Iraq	0.17	0.12	-0.03	0.63**
	(0.10)	(0.10)	(0.11)	(0.10)
Egypt	-5.42**	-5.50**	-5.92**	-5.17**
	(0.60)	(0.60)	(0.71)	(0.71)
Constant	-1.35**	-1.50**	-0.77	-2.03**
	(0.47)	(0.48)	(0.46)	(0.41)
Observations	4543	4543	4543	4543
Log Likelihood	-2384	-2380	-2358	-2191
Wald χ^2 (Non-ISIS Curfews, ISIS Curfews)	127.06			
p>χ^2	0.0000			
Wald χ^2 (Non-ISIS Curfews, Population)		7.81		
p>χ^2		0.0989		
Wald χ^2 (Non-ISIS Travel Bans, ISIS Travel Bans)			104.00	
p>χ^2			0.0000	
Wald χ^2 (Non-ISIS Travel Bans, Base)				366.85
p>χ^2				0.00
Wald χ^2				

Note: Standard errors in parentheses** p≤0.01, * p≤0.05. In all models, Population is used as the inflation factor.

Summary: The results for curfews are not robust: Model 1 indicates that non-ISIS curfews increase violent events over no curfews, but the model fit is not as good as in the negative binomial models (presented in the paper), where curfews are associated with a decrease in violent events, as expected. In Model 2, the interaction

Table A12b: Zero-Inflation Negative Binomial Models: Marginal Effects

Model 2		
	Margin	SE
Non-ISIS Curfew=1, Population=100000	9.932	6.944
Non-ISIS Curfew=1, Population=1000000	9.623	6.706

Note: ** p≤0.01, * p≤0.05.

between curfews and population is only significant at the 0.10 level. However, curfews, according to it, are associated with a lower number of events in more populated governorates, as expected. In Model 3, non-ISIS travel bans and ISIS travel bans are jointly significant, with non-ISIS travel bans associated with a lower number of violent events. In Model 4, the interaction effect between ISIS travel bans and non-ISIS travel bans is significant, with non-ISIS travel bans associated with a high number of violent events in ISIS's base areas, as expected.

Table A13: Lockdowns without Pandemic Measure on ISIS Violent Events

	Model 1	Model 2
	all events	all events
Anti-ISIS Violence	0.02	0.02
	(0.02)	(0.02)
Oil Price	-0.00	0.00
	(0.00)	(0.00)
ISIS Curfews	1.65**	
	(0.41)	
Non-ISIS Curfews	-0.24	
	(0.15)	
Ramadan	0.39**	0.38**
	(0.09)	(0.09)
Iraq	0.05	0.07
	(0.33)	(0.32)
Egypt	-1.94**	-5.97**
	(0.56)	(0.90)
ISIS Travel Bans		6.10**
		(0.93)
Non-ISIS ISIS Travel Bans		-0.02
		(0.15)
Constant	1.23**	0.86**
	(0.34)	(0.33)
Observations	4543	4543
Governorates	59	59
Log Likelihood	-1743	-1734
Wald χ^2 (ISIS Curfews, non-ISIS Curfews)	19.34	
$p>\chi^2$	0.0001	
Wald χ^2 (ISIS Travel Bans, non-ISIS Travel Bans)		42.98
$p>\chi^2$		0.00

Note: Standard errors in parentheses** $p\leq0.01$, * $p\leq0.05$.

Summary: Non-ISIS curfews and non-ISIS travel bans are associated with a lower number of violent events than no curfews and no travel bans, while ISIS curfews and ISIS travel bans are associated with a higher number of violent events. Non-ISIS curfews are jointly significant with ISIS curfews. Non-ISIS travel bans are jointly significant with ISIS travel bans.

Table A14: Iraq-Pandemic Interaction on ISIS Violent Events at Governorate Level

	Model 1	Model 2
	all events	all events
COVID-19 Pandemic	-0.27	-0.14
	(0.20)	(0.21)
COVID-19 Pandemic*Iraq	0.14	0.22
	(0.16)	(0.18)
Anti-ISIS Violence	0.02	0.02
	(0.02)	(0.02)
Oil Price	-0.00	-0.01
	(0.01)	(0.01)
ISIS Curfews		1.62**
		(0.41)
Non-ISIS Curfews		-0.30
		(0.19)
Ramadan	0.39**	0.40**
	(0.09)	(0.09)
Iraq	0.05	0.02
	(0.34)	(0.34)
Egypt	-0.16	-1.90**
	(0.40)	(0.57)
Constant	1.19**	1.36**
	(0.37)	(0.38)
Observations	4543	4543
Governorates	59	59
Log Likelihood	-1748	-1742
Wald χ^2 (COVID-19 Pandemic,Iraq)	1.87	
p>χ^2	0.601	
Wald χ^2 (COVID-19 Pandemic, Iraq)		1.71
p>χ^2		0.6351

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Table A14b: Iraq Interaction: Marginal Effects

Model 1		
	Margin	SE
COVID-19 Pandemic=0, Iraq=1	1.131**	0.21
COVID-19 Pandemic=1, Iraq=1	1.006**	0.25
Model 2		
	Margin	SE
COVID-19 Pandemic=0, Iraq=1	1.138**	0.21
COVID-19 Pandemic=1, Iraq=1	1.221**	0.27

Note: ** p≤0.01, * p≤0.05.

Summary: The interaction effect for Iraq and the pandemic is not significant. At the national level, the same interaction was associated with a significant increase, but

the increased effect of the pandemic was not robust under alternative measures.

Table A15: Pandemic-Subsetted by Country on ISIS Violent Events

	Model 1	Model 2
	all events (Iraq)	all events (Syria)
COVID-19 Pandemic	-0.33	0.54
	(0.34)	(0.41)
Anti-ISIS Violence	0.01	0.05*
	(0.03)	(0.03)
Oil Price	-0.01	0.02
	(0.01)	(0.01)
Non-ISIS Curfews	-0.16	-0.18
	(0.32)	(0.45)
Ramadan	0.56**	0.06
	(0.11)	(0.18)
ISIS Curfews		0.99
		(0.53)
Constant	1.76**	0.19
	(0.46)	(0.64)
Observations	1386	1078
Governorates	18	14
Log Likelihood	-922.7	-597.0

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Summary: Consistent with all other results, the pandemic does not have a significant effect effect on ISIS violent events in Iraq or in Syria.

Table A16: Curfews-Country Interactions on ISIS Violence (All Events) at Governorate Level

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID-19 Pandemic	-0.09	-0.07	-0.07	-0.11
	(0.20)	(0.20)	(0.20)	(0.20)
ISIS Curfews		1.60**	1.61**	6.10**
		(0.41)	(0.41)	(0.93)
Non-ISIS Curfews	-0.46*	-0.44*	-0.12	-0.10
	(0.22)	(0.22)	(0.18)	(0.18)
Non-ISIS Curfews*Iraq	0.35	0.32		
	(0.19)	(0.19)		
Non-ISIS Curfews*Syria			-0.29	-0.31
			(0.19)	(0.19)
ISIS Curfews*Syria				-5.17**
				(1.08)
Anti-ISIS Violence	0.01	0.02	0.02	0.01
	(0.02)	(0.02)	(0.02)	(0.02)
Oil Price	-0.01	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Ramadan	0.39**	0.40**	0.40**	0.39**
	(0.09)	(0.09)	(0.09)	(0.09)
Iraq	0.26	1.92**	1.92**	6.05**
	(0.36)	(0.55)	(0.55)	(0.89)
Syria	0.27	1.92**	1.92**	6.03**
	(0.40)	(0.57)	(0.57)	(0.90)
Constant	1.13**	-0.55	-0.55	-4.70**
	(0.43)	(0.61)	(0.61)	(0.93)
Observations	4543	4543	4543	4543
Governorates	59	59	59	59
Log Likelihood	-1746	-1741	-1741	-1730
Wald χ^2 (Non-ISIS Curfews,Iraq)	5.16			
p>χ^2	0.161			
Wald χ^2 (Non-ISIS Curfews,Iraq)		21.13		
p>χ^2		0.0003		
Wald χ^2 (Non-ISIS Curfews,Syria)			14.70	
p>χ^2			0.0021	
Wald χ^2 (ISIS Curfews, Non-ISIS Curfews, Syria)				50.60
p>χ^2				0.000

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Summary: Non-ISIS curfews are associated with a lower number of anti-ISIS violent events in Iraq and in Syria.

Table A16b: Curfews-Country Interactions: Marginal Effects

Model 1		
	Margin	SE
Non-ISIS Curfews=0, Iraq=1	1.142**	0.212
Non-ISIS Curfews=1, Iraq=1	1.029**	0.255
Model 2		
	Margin	SE
Non-ISIS Curfews=0, Iraq=1	1.148**	0.212
Non-ISIS Curfews=1, Iraq=1	1.036**	0.256
Model 3		
	Margin	SE
Non-ISIS Curfews=1, Syria=1	1.177**	0.272
Non-ISIS Curfews=1, Syria=1	0.761*	0.320
Model 4		
	Margin	SE
Non-ISIS Curfews=1, Syria=1	1.070	0.260
Non-ISIS Curfews=1, Syria=1	0.659*	0.309

Note: ** $p \leq 0.01$, * $p \leq 0.05$.

Table A17: Travel Bans-Country Interactions on ISIS Violent Events at Governorate Level

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID-19 Pandemic	-0.25	-0.26	-0.25	-0.26
	(0.20)	(0.20)	(0.20)	(0.20)
ISIS Travel Bans		6.12**		6.15**
		(0.93)		(0.93)
Non-ISIS Travel Bans	-0.06	-0.06	0.15	0.15
	(0.23)	(0.23)	(0.19)	(0.19)
Non-ISIS Travel Bans*Iraq	0.22	0.22		
	(0.20)	(0.21)		
Non-ISIS Travel Bans*Syria			-0.19	-0.20
			(0.20)	(0.21)
Anti-ISIS Violence	0.02	0.02	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Oil Price	-0.00	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Ramadan	0.39**	0.38**	0.39**	0.38**
	(0.09)	(0.09)	(0.09)	(0.09)
Iraq	0.03	0.06	0.21	6.06**
	(0.34)	(0.32)	(0.36)	(0.89)
Egypt	-0.18	-5.95**		
	(0.40)	(0.90)		
Syria			0.18	5.99**
			(0.40)	(0.90)
Constant	1.20**	1.15**	1.02*	-4.85**
	(0.38)	(0.37)	(0.44)	(0.93)
Observations	4543	4543	4543	4543
Governorates	59	59	59	59
Log Likelihood	-1748	-1732	-1748	-1732
Wald χ^2 (Non-ISIS Travel Ban,Iraq)	1.52			
p>χ^2	0.678			
Wald χ^2 (Non-ISIS Travel Ban,Iraq)		1.48		
p>χ^2		0.6859		
Wald χ^2 (Non-ISIS Travel Ban,Syria)			1.29	
p>χ^2			0.7320	
Wald χ^2 (Non-ISIS Travel Ban,Syria)				44.71
p>χ^2				0.00

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Summary: The interaction effects for Iraq and Syria are not signifiant (except in Model 4).

Table A17b: Travel Bans-Country Interaction: Marginal Effects

Model 2		
	Margin	SE
Non-ISIS Travel Bans=0, Iraq=1	1.035**	0.202
Non-ISIS Travel Bans=1, Iraq=1	1.191**	0.254
Model 4		
	Margin	SE
Non-ISIS Travel Bans=0, Syria=1	0.969**	0.259
Non-ISIS Travel Bans=1, Syria=1	0.918**	0.305

Note: ** p≤0.01, * p≤0.05.

Table A18: Lockdown Interactions on ISIS Violent Events, Subsetted by Country

	Model 1	Model 2	Model 3	Model 4
	all events (Iraq)	all events (Syria)	all events (Iraq)	all events (Syria)
COVID-19 Pandemic	0.06	0.48	-0.60	0.21
	(0.38)	(0.41)	(0.46)	(0.34)
Non-ISIS Curfews	-0.06	0.12		
	(0.33)	(0.53)		
Non-ISIS Curfews*Population	-0.00*	-0.00		
	(0.00)	(0.00)		
Population	-0.00**	-0.00**		
	(0.00)	(0.00)		
ISIS Curfews*Population		0.00		
		(0.00)		
Non-ISIS Travel Bans			-0.02	0.62
			(0.50)	(0.39)
Non-ISIS Travel Bans*Base			0.55**	-0.26
			(0.19)	(0.35)
Base			2.23*	1.29*
			(0.92)	(0.51)
Anti-ISIS Violence	-0.00	0.05	0.01	0.05*
	(0.03)	(0.02)	(0.03)	(0.02)
Oil Price	-0.01	0.02	-0.01	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)
Ramadan	0.57**	0.07	0.56**	0.03
	(0.11)	(0.18)	(0.11)	(0.17)
Constant	2.47**	1.19	1.33**	-1.07
	(0.52)	(0.73)	(0.43)	(0.64)
Observations	1386	1078	1386	1078
Governorates	18	14	18	14
Log Likelihood	-913.3	-593.8	-910.9	-594.7
Wald χ^2 (Non-ISIS Curfews, Population)	20.29			
$p>\chi^2$	0.0001			
Wald χ^2 (ISIS and Non-ISIS Curfews, Population)		15.49		
$p>\chi^2$		0.0038		
Wald χ^2 (Non-ISIS Travel Bans, Base)			14.32	
$p>\chi^2$			0.0025	
Wald χ^2 (Non-ISIS Travel Bans, Base)				8.23
$p>\chi^2$				0.0416

Note: Standard errors in parentheses** $p\leq0.01$, * $p\leq0.05$.

Table A18b: Lockdown Interactions Subsetted by Country: Marginal Effects

Model 1		
	Margin	SE
Non-ISIS Curfews=1, Population=100000	2.347**	0.456
Non-ISIS Curfews=1, Population=1000000	1.803**	0.382
Model 2		
	Margin	SE
Non-ISIS Curfews=1, Population=100000	2.072**	0.613
Non-ISIS Curfews=1, Population=1000000	1.281**	0.484
Model 3		
Non-ISIS Travel Bans=1, Base=0	0.602	0.452
Non-ISIS Travel Bans=1, Base=1	3.380*	0.987
Model 4		
Non-ISIS Travel Bans=1,Base=0	0.734	0.452
Non-ISIS Travel Bans=1,Base=1	1.766**	0.454

Note: ** p≤0.01, * p≤0.05.

Summary: Non-ISIS curfews are significantly associated with a lower number of violent events than no curfews in Iraq and Syria, and non-ISIS base areas are significantly associated with a higher number of violent events in Iraq and Syria, as expected.

Table A19: Lockdowns on ISIS Violent Events, Dropping All Governorates without Attacks

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID-19 Pandemic	-0.08	-0.10	-0.23	-0.25
	(0.19)	(0.19)	(0.20)	(0.19)
Non-ISIS Curfews	-0.19	0.28		
	(0.17)	(0.23)		
Non-ISIS Curfews*Population		-0.00*		
		(0.00)		
ISIS Curfews*Population		-0.00**		
		(0.00)		
ISIS Curfews	1.19*	4.85*		
	(0.46)	(2.42)		
Population		-0.00**		
		(0.00)		
Non-ISIS Travel Bans			0.09	0.03
			(0.18)	(0.19)
ISIS Travel Bans			6.14**	5.05**
			(0.93)	(0.96)
ISIS Travel Bans*Base				-
Non-ISIS Travel Bans*Base				0.24
				(0.17)
Base				1.25**
				(0.32)
Anti-ISIS Violence	0.02	0.01	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Oil Price	-0.01	-0.01	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.00)
Ramadan	0.38**	0.39**	0.38**	0.39**
	(0.09)	(0.09)	(0.09)	(0.09)
Iraq	0.19	0.67*	0.23	0.67*
	(0.30)	(0.32)	(0.30)	(0.27)
Egypt	-1.06	-2.88*	-2.56*	-1.95
Constant	1.17**	1.49**	1.02**	0.20
	(0.36)	(0.37)	(0.36)	(0.36)
Observations	1604	16043	1604	1604
Governorates	24	24	24	24
Log Likelihood	-1743	-1720	-1733	-1723
Wald χ^2 (Non-ISIS Curfews, ISIS Curfews)	8.06			
$p>\chi^2$	0.018			
Wald χ^2 (Non-ISIS and ISIS Curfews, population)		36.00		
$p>\chi^2$		0.0000		
Wald χ^2 (Non-ISIS Travel Bans, ISIS Travel Bans)			6.23	
$p>\chi^2$			0.045	
Wald χ^2 (Non-ISIS Travel Bans, Base)				22.33
$p>\chi^2$				0.0001

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Table A19b: Marginal Effects

Model 1		
	Margin	SE
Non-ISIS Curfews=0,ISIS Curfews=0	0.964	0.159
Non-ISIS Curfews=1,ISIS Curfews=0	0.773	0.209
Model 3		
Non-ISIS Travel Ban=0, ISIS Travel Ban=0	0.761**	0.182
Non-ISIS Travel Ban=1, ISIS Travel Ban=0	0.837**	0.229
Model 4		
Non-ISIS Travel Ban, Base=0	0.298	0.214
Non-ISIS Travel Ban, Base=1	1.856**	0.298

Note: ** p≤0.01, * p≤0.05.

Summary: Non-ISIS curfews are associated with a lower number of violent events compared to no curfews. Non-ISIS travel bans are significantly associated with a higher number of violent events in base areas compared to no travel bans.

4 GIS Maps

[1]

Table A20: Spatial Autocorrelation
Join Analysis of Event Locations in Iraq

rook join		
	Stdev	p-value
No Lockdowns	17.32	0.00**
Lockdown	15.18	0.00**
queen join		
	Stdev	p-value
No Lockdowns	23.35	0.00**
Lockdown	22.02	0.00**
rook join: doubling cell size		
	Stdev	p-value
No Lockdowns	8.98	0.00**
Lockdown	7.95	0.00**

Note: ** p≤0.01, * p≤0.05.

Summary: Standard deviation and p-values associated with join-count measures of spatial autocorrelation for violent event locations in Iraq in 2019 (11 March to 30 June), when lockdown measures were not in place in any governorate, with a comparable period during lockdowns in 2020 (9 March to 28 June). The first specification uses rook joins and the second uses queen joins. The third set of measures shows the

[1]Geo-referencing of events used in this paper is ACLED's georeferencing, which is provided at multiple levels including the region, province, county, district, and latitude and longitude coordinates. In addition, each georeference is assigned a 3-point precision level in the ACLED data. Importantly, while the validity of the ACLED georeferences used in this paper is high, their reliability should not be interpreted literally. Specifically, coordinates reference not a point but a town where such information is available (precision level 1), or a town in a region if the activity took place in a small part of a region (precision level 2). For more uncertain areas (precision level 3), the coordinates of "the closest natural location noted in reporting ... is chosen", according to the 2019 codebook (p.28). Out of 894 events used in our analysis of Iraq for this paper, 861 are assigned ACLED precision level of 1 or 2 and 33 events a precision level of 3. Consequently, we have substantial faith in the validity of the geocodes, especially for the maps where we aggregate the count to the governorate, but emphasize that the reliability of point coordinates should not be interpreted literally.

same numbers with rook joins but varies the raster cell sizes. Three principal observations emerge from the table. First, the spatial auto-correlation of violent events both before lockdowns and during is highly statistically significant. Second, the variance of event locations is consistently lower during lockdowns when compared to no lockdowns, and third these two observations are robust to join type and changes in cell size.

Figure A2: The Relationship Between Lockdowns and Event Count in Syria

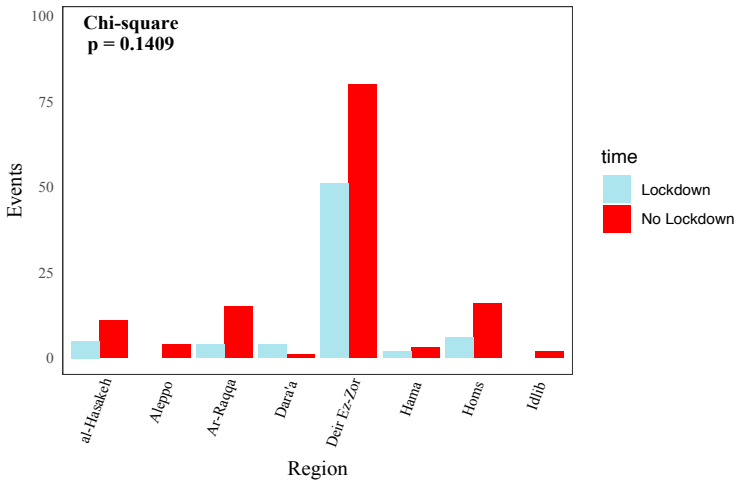
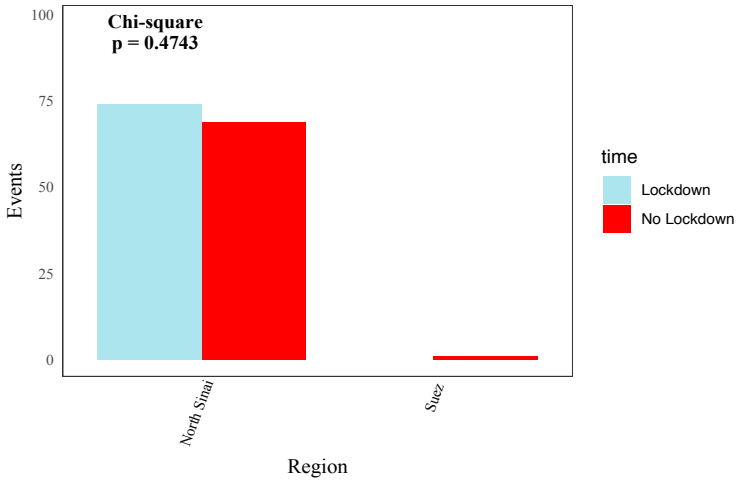


Figure A3: The Relationship Between Lockdowns and Event Count in Egypt



Summary: Lockdowns are associated with a decreased number of violent events in nearly all governorates in Syria compared to no lockdowns. Nearly all violent attacks in Egypt occurred in the ISIS's base in the Northern Sinai.

5 Other Countries

Table A21: COVID-19 Pandemic on ISIS Violent Events Other Countries, Set A

	Model 1	Model 2	Model 3	Model 4	Model 5
	all events	all events	all events	all events	all events
COVID-19 Pandemic	0.24	0.18	0.19	0.16	0.23
	(0.26)	(0.26)	(0.26)	(0.26)	(0.26)
Anti-ISIS Violence	0.05	0.07	0.07	0.07	0.07*
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Oil Price	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Ramadan	0.06	0.06	0.06	0.06	0.06
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)
Afghanistan	-0.31	-0.44*	-0.44*	-0.44*	-0.44*
	(0.25)	(0.22)	(0.22)	(0.22)	(0.22)
Algeria	-3.48**	-3.90**	-3.46**	-3.46**	-3.46**
	(0.72)	(1.01)	(0.72)	(0.72)	(0.72)
Bangladesh	-4.17**	-4.15**	-3.91**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Cameroon	-3.04**	-3.02**	-3.02**	-3.93**	-3.02**
	(0.59)	(0.59)	(0.59)	(1.01)	(0.59)
Chad	-1.70**	-1.69**	-1.69**	-1.69**	-1.55**
	(0.33)	(0.33)	(0.33)	(0.33)	(0.33)
DRC	-4.14**	-4.12**	-4.12**	-4.12**	-4.12**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
India	-3.48**	-3.46**	-3.46**	-3.46**	-3.46**
	(0.72)	(0.72)	(0.72)	(0.72)	(0.72)
Indonesia	-4.17**	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Israel	-4.17**	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Lebanon	-4.17**	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Libya	-1.51**	-1.50**	-1.50**	-1.50**	-1.50**
	(0.31)	(0.31)	(0.31)	(0.31)	(0.31)
Mali	-0.45*	-0.44*	-0.44*	-0.44*	-0.44*
	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)
Morocco	-4.17**	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Niger	0.58**	0.60**	0.60**	0.60**	0.59**
	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)
Nigeria	-2.18**	-2.16**	-2.16**	-2.16**	-2.16**
	(0.40)	(0.40)	(0.40)	(0.40)	(0.40)
Pakistan	-3.05**	-3.03**	-3.03**	-3.03**	-3.04**
	(0.59)	(0.59)	(0.59)	(0.59)	(0.59)
Philippines	-4.18**	-4.16**	-4.16**	-4.16**	-4.16**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Russia	-2.35**	-2.33**	-2.33**	-2.33**	-2.33**
	(0.43)	(0.43)	(0.43)	(0.43)	(0.43)
Somalia	-1.51**	-1.50**	-1.50**	-1.50**	-1.50**
	(0.30)	(0.30)	(0.30)	(0.30)	(0.30)
Tajikistan	-4.15**	-4.13**	-4.13**	-4.13**	-4.13**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Burkina Faso	0.10	0.11	0.11	0.11	0.11
	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)
COVID-19 Pandemic*Afghanistan	-0.57				

	(0.52)				
COVID-19 Pandemic*Algeria		1.25			
		(1.42)			
COVID-19 Pandemic*Bangladesh			-16.34		
			(6827.38)		
COVID-19 Pandemic*Cameroon				2.24	
				(1.23)	
COVID-19 Pandemic*Chad					-17.57
					(5120.42)
Constant	0.45	0.43	0.43	0.43	0.40
	(0.44)	(0.44)	(0.44)	(0.44)	(0.44)
Observations	1694	1694	1694	1694	1694
Months/Year	18	18	18	18	18
Log Likelihood	-848.9	-849.2	-849.3	-847.8	-848.0
Wald χ^2 (COVID-19 Pandemic,Afghanistan)	5.13				
p>χ^2	0.1629				
Wald χ^2 (COVID-19 Pandemic,Algeria)		21.54			
p>χ^2		0.0001			
Wald χ^2 (COVID-19 Pandemic,Bangladesh)			15.51		
p>χ^2			0.0014		
Wald χ^2 (COVID-19 Pandemic,Cameroon)				20.42	
p>χ^2				0.0001	
Wald χ^2 (COVID-19 Pandemic,Chad)					23.01
p>χ^2					0.0000

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Table A22: COVID-19 Pandemic on ISIS Violent Events Other Countries, Set B

	Model 1	Model 2	Model 3	Model 4	Model 5
	all events	all events	all events	all events	all events
COVID-19 Pandemic	0.16	0.17	0.19	0.19	0.17
	(0.26)	(0.26)	(0.26)	(0.26)	(0.26)
Anti-ISIS Violence	0.07	0.07	0.07	0.07	0.07
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Oil Price	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Ramadan	0.06	0.06	0.06	0.06	0.06
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)
Afghanistan	-0.44*	-0.44*	-0.44*	-0.44*	-0.44*
	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)
Algeria	-3.46**	-3.46**	-3.46**	-3.46**	-3.46**
	(0.72)	(0.72)	(0.72)	(0.72)	(0.72)
Bangladesh	-4.14**	-4.14**	-4.15**	-4.15**	-4.14**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Cameroon	-3.02**	-3.02**	-3.02**	-3.02**	-3.02**
	(0.59)	(0.59)	(0.59)	(0.59)	(0.59)
Chad	-1.69**	-1.69**	-1.69**	-1.69**	-1.69**
	(0.33)	(0.33)	(0.33)	(0.33)	(0.33)
DRC	-4.12**	-4.12**	-4.12**	-4.12**	-4.12**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
India	-21.14	-3.46**	-3.46**	-3.46**	-3.46**
	(5498.03)	(0.72)	(0.72)	(0.72)	(0.72)
Indonesia	-4.15**	-19.88	-4.15**	-4.15**	-4.15**
	(1.01)	(2958.42)	(1.01)	(1.01)	(1.01)
Israel	-4.15**	-4.15**	-3.91**	-4.15**	-4.15**
	(1.01)	(1.43)	(0.43)	(0.43)	(0.43)
Somalia	-1.50**	-1.50**	-1.50**	-1.50**	-1.50**
	(0.30)	(0.30)	(0.30)	(0.30)	(0.30)
Tajikistan	-4.13**	-4.13**	-4.13**	-4.13**	-4.13**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Burkina Faso	0.11	0.11	0.11	0.11	0.11
	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)
Lebanon	-4.15**	-4.15**	-4.15**	-3.91**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Libya	-1.50**	-1.50**	-1.50**	-1.50**	-1.59**
	(0.31)	(0.31)	(0.31)	(0.31)	(0.34)
Mali	-0.44*	-0.44*	-0.44*	-0.44*	-0.44*
	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)
Morocco	-4.15**	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Niger	0.60**	0.60**	0.60**	0.60**	0.60**
	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)
Nigeria	-2.16**	-2.16**	-2.16**	-2.16**	-2.16**
	(0.40)	(0.40)	(0.40)	(0.40)	(0.40)
Pakistan	-3.03**	-3.03**	-3.03**	-3.03**	-3.03**
	(0.59)	(0.59)	(0.59)	(0.59)	(0.59)
Philippines	-4.15**	-4.16**	-4.16**	-4.16**	-4.16**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Russia	-2.33**	-2.33**	-2.33**	-2.33**	-2.33**
	(0.43)	(0.00)			-16.33
COVID-19 Pandemic*India	19.27				
	(5498.03)				
COVID-19 Pandemic*Indonesia		17.24			

		(2958.42)			
COVID-19 Pandemic*Israel				-16.33	
				(6811.07)	
COVID-19 Pandemic*Lebanon				-16.33	
				(6811.07)	
COVID-19 Pandemic*Libya					0.45
					(0.66)
Constant	0.42	0.43	0.43	0.43	0.43
	(0.44)	(0.44)	(0.44)	(0.44)	(0.44)
Observations	1694	1694	1694	1694	1694
Months/Year	18	18	18	18	18
Log Likelihood	-846.4	-848.0	-849.3	-849.3	-849.3
Wald χ^2 (COVID-19 Pandemic,India)	6.69				
p>χ^2	0.0823				
Wald χ^2 (COVID-19 Pandemic,Indonesia)		6.97			
p>χ^2		0.0729			
Wald χ^2 (COVID-19 Pandemic,Israel)			15.53		
p>χ^2			0.0014		
Wald χ^2 (COVID-19 Pandemic,Lebanon)				15.53	
p>χ^2				0.0014	
Wald χ^2 (COVID-19 Pandemic,Libya)					23.89
p>χ^2					0.0000

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Table A23: COVID-19 Pandemic on ISIS Violent Events Other Countries, Set C

	Model 1	Model 2	Model 3	Model 4
	all events	all events	all events	all events
COVID-19 Pandemic	0.21	0.17	0.15	0.22
	(0.26)	(0.26)	(0.27)	(0.26)
Anti-ISIS Violence	0.07*	0.07	0.07	0.07*
	(0.04)	(0.04)	(0.04)	(0.04)
Oil Price	-0.00	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Ramadan	0.06	0.06	0.06	0.06
	(0.18)	(0.18)	(0.18)	(0.18)
Afghanistan	-0.45*	-0.44*	-0.44	-0.44*
	(0.22)	(0.22)	(0.22)	(0.22)
Algeria	-3.46**	-3.46**	-3.46**	-3.46**
	(0.72)	(0.72)	(0.72)	(0.72)
Bangladesh	-4.15**	-4.14**	-4.14**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)
Cameroon	-3.02**	-3.02**	-3.02**	-3.02**
	(0.59)	(0.59)	(0.59)	(0.59)
Chad	-1.68**	-1.69**	-1.69**	-1.68**
	(0.33)	(0.33)	(0.33)	(0.33)
DRC	-4.12**	-4.12**	-4.12**	-4.12**
	(1.01)	(1.01)	(1.01)	(1.01)
India	-3.46**	-3.46**	-3.46**	-3.46**
	(0.72)	(0.72)	(0.72)	(0.72)
Indonesia	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)
Israel	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)
Lebanon	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)
Libya	-1.50**	-1.50**	-1.50**	-1.50**
	(0.31)	(0.31)	(0.31)	(0.31)
Mali	-0.40	-0.44*	-0.44*	-0.44*
	(0.23)	(0.21)	(0.21)	(0.21)
Morocco	-4.15**	-19.89	-4.15**	-4.15**
	(1.01)	(2942.19)	(1.01)	(1.01)
Niger	0.60**	0.60**	0.57**	0.59**
	(0.17)	(0.17)	(0.18)	(0.17)
Nigeria	-2.16**	-2.16**	-2.16**	-1.93**
	(0.40)	(0.40)	(0.40)	(0.40)
Pakistan	-3.03**	-3.03**	-3.03**	-3.04**
	(0.59)	(0.59)	(0.59)	(0.59)
Philippines	-4.16**	-4.16**	-4.15**	-4.16**
	(1.01)	(1.01)	(1.01)	(1.01)
Russia	-2.33**	-2.33**	-2.33**	-2.33**
	(0.43)	(0.43)	(0.43)	(0.43)
Somalia	-1.50**	-1.50**	-1.50**	-1.50**
	(0.30)	(0.30)	(0.30)	(0.30)
Tajikistan	-4.13**	-4.13**	-4.13**	-4.13**
	(1.01)	(1.01)	(1.01)	(1.01)
Burkina Faso	0.11	0.11	0.11	0.11
	(0.19)	(0.19)	(0.19)	(0.19)
COVID-19 Pandemic*Mali	-0.23			
	(0.47)			
COVID-19 Pandemic*Morocco		17.31		
		(2942)		

COVID-19 Pandemic*Niger			0.16	
			(0.30)	
COVID-19 Pandemic*Nigeria				-18.19
				(6583)
Constant	0.42	0.42	0.43	0.43
	(0.44)	(0.44)	(0.44)	(0.44)
Observations	1694	1694	1694	1694
Months/Year	18	18	18	18
Log Likelihood	-849.4	-848.0	-849.4	-847.9
Wald χ^2 (COVID-19 Pandemic,Mali)	4.78			
p>χ^2	0.1883			
Wald χ^2 (COVID-19 Pandemic,Morocco)		6.65		
p>χ^2		0.0839		
Wald χ^2 (COVID-19 Pandemic,Niger)			13.54	
p>χ^2			0.0036	
Wald χ^2 (COVID-19 Pandemic,Nigeria)				23.73
p>χ^2				0.0000

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.

Table A24: COVID-19 Pandemic on ISIS Violent Events Other Countries, Set D

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	all events	all events	all events	all events	all events	all events
COVID-19 Pandemic	0.20	0.20	0.21	0.18	0.19	0.06
	(0.26)	(0.26)	(0.26)	(0.26)	(0.26)	(0.27)
Anti-ISIS Violence	0.07	0.07	0.07*	0.07	0.07	0.05
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Oil Price	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Ramadan	0.06	0.06	0.06	0.06	0.06	0.06
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)
covid_Pakistan	-17.47					
	(6819)					
Afghanistan	-0.44*	-0.44*	-0.44*	-0.44*	-0.44*	-0.39
	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)
Algeria	-3.46**	-3.46**	-3.46**	-3.46**	-3.46**	-3.46**
	(0.72)	(0.72)	(0.72)	(0.72)	(0.72)	(0.72)
Bangladesh	-4.15**	-4.15**	-4.15**	-4.14**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Cameroon	-3.02**	-3.02**	-3.02**	-3.02**	-3.02**	-3.03**
	(0.59)	(0.59)	(0.59)	(0.59)	(0.59)	(0.59)
Chad	-1.69**	-1.69**	-1.68**	-1.69**	-1.69**	-1.70**
	(0.33)	(0.33)	(0.33)	(0.33)	(0.33)	(0.33)
DRC	-4.12**	-4.12**	-4.12**	-4.12**	-4.12**	-4.13**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
India	-3.46**	-3.46**	-3.46**	-3.46**	-3.46**	-3.46**
	(0.72)	(0.72)	(0.72)	(0.72)	(0.72)	(0.72)
Indonesia	-4.15**	-4.15**	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Israel	-4.15**	-4.15**	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Lebanon	-4.15**	-4.15**	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Libya	-1.50**	-1.50**	-1.50**	-1.50**	-1.50**	-1.51**
	(0.31)	(0.31)	(0.31)	(0.31)	(0.31)	(0.31)
Mali	-0.44*	-0.44*	-0.44*	-0.44*	-0.44*	-0.44*
	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)
Morocco	-4.15**	-4.15**	-4.15**	-4.15**	-4.15**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Niger	0.60**	0.60**	0.59**	0.60**	0.60**	0.59**
	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)
Nigeria	-2.16**	-2.16**	-2.16**	-2.16**	-2.16**	-2.17**
	(0.40)	(0.40)	(0.40)	(0.40)	(0.40)	(0.40)
Pakistan	-2.79**	-3.03**	-3.04**	-3.03**	-3.03**	-3.04**
	(0.59)	(0.59)	(0.59)	(0.59)	(0.59)	(0.59)
Philippines	-4.16**	-3.85**	-4.16**	-4.16**	-4.16**	-4.16**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Russia	-2.33**	-2.33**	-2.11**	-2.33**	-2.33**	-2.34**
	(0.43)	(0.43)	(0.43)	(0.43)	(0.43)	(0.43)
Somalia	-1.50**	-1.50**	-1.50**	-1.56**	-1.50**	-1.51**
	(0.30)	(0.30)	(0.30)	(0.33)	(0.30)	(0.30)
Tajikistan	-4.13**	-4.13**	-4.13**	-4.13**	-4.00**	-4.15**
	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)	(1.01)
Burkina Faso	0.11	0.11	0.11	0.11	0.11	-0.05
	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.21)
COVID-19 Pandemic*Philippines		-16.19				
		(5426.04)				

COVID-19 Pandemic*Russia			-18.02			
			(6605.90)			
COVID-19 Pandemic*Somalia				0.30		
				(0.67)		
COVID-19 Pandemic*Tajikistan					-15.09	
					(5123.60)	
COVID-19 Pandemic*Burkina Faso						0.63
						(0.33)
Constant	0.43	0.42	0.43	0.43	0.42	0.43
	(0.44)	(0.44)	(0.44)	(0.44)	(0.44)	(0.44)
Observations	1694	1694	1694	1694	1694	1694
Months/Year	18	18	18	18	18	18
Log Likelihood	-848.8	-849.2	-848.2	-849.4	-849.4	-847.8
Wald χ^2 (COVID-19 Pandemic,Pakistan)	22.66					
p>χ^2	0.0000					
Wald χ^2 (COVID-19 Pandemic,Philippines)		15.04				
p>χ^2		0.0018				
Wald χ^2 (COVID-19 Pandemic,Russia)			24.43			
p>χ^2			0.0000			
Wald χ^2 (COVID-19 Pandemic,Somalia)				25.05		
p>χ^2				0.0000		
Wald χ^2 (COVID-19 Pandemic,Tajikistan)					16.35	
p>χ^2					0.0010	
Wald χ^2 (COVID-19 Pandemic,Burkina Faso)						4.97
p>χ^2						0.1737

Note: Standard errors in parentheses** p≤0.01, * p≤0.05.