Games Rivals Play: Terrorism in International Rivalries*

Supporting Information Appendix

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In this document, we detail the results of additional statistical analyses conducted for "Games Rivals Play: The Strategy of Terrorism in International Rivalries," but not included in the paper due to space constraints. The additional analyses offer support to the results in the paper and further demonstrate that rivalries have a strong positive effect on transnational terrorism. Following the additional analyses, we also include the coding rules for the variables used in the statistical analyses in the paper and the appendix.

Rasler and Thompson Rivalry Measure

The results in Tables A1 and A2 report the results of the Rasler/Thompson measure. Table A1 reports results using the same strategies as Table 1 from the paper. The only difference is that we substitute the Rasler and Thompson (2006) measure of rivalry for the Klein, Goertz, and Diehl (2006) measure. As in Table 1, the results for Table A1 all employ the negative binomial estimator. The results are mostly consistent with the previous results; rivalry is always positive and generally statistically significant whether using a full or small specification, and regardless of how we operationalize the dyads. Rivalry is only insignificant in Model A3. In the three models where rivalry is significant, the presence of a rivalry as defined by Rasler and Thompson (2006) is expected to increase terror counts by at least 97% (Model A4) and at most by 196% (Model A2) holding all other variables at their means.

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Table A1—Negative Binomial Model of Rivalry and Terrorism (Rasler-Thompson Measure)

Models A1 and A3 use a dyad where the origin country is the nationality of the terrorists and the target country as the location in which the terrorist event occurred. Models A2 and A4 use a dyad where the origin country is the nationality of the terrorists and the target country is the nationality of the victims. RT signifies a rivalry based on the Rasler and Thompson (2006) definition. Robust standard errors in parentheses clustered on dyad; *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(A1) Terror Counts 1	(A2) Terror Counts 2	(A3) Terror Counts 1	(A4) Terror Counts 2
Rivalry (RT)	0.771**	1.084***	0.385	0.677***
	(0.316)	(0.227)	(0.318)	(0.225)
Joint Democracy	1.033***	1.001***	-0.219	-0.261*
	(0.209)	(0.135)	(0.265)	(0.139)
Log(Capability Ratio)	-0.0587	-0.257***	0.0905	-0.574***
	(0.0420)	(0.0216)	(0.108)	(0.0546)
Past Terror (Origin)			0.428***	0.734***
			(0.0756)	(0.041)
Past Terror (Target)			0.778***	0.642***
			(0.085)	(0.043)
Cold War			-0.412***	-0.0597
			(0.140)	(0.101)
Interstate War (Origin)			0.470***	0.369***
			(0.162)	(0.137)
Interstate War (Target)			-0.188	0.290***
			(0.173)	(0.0958)
Contiguity	1.139***	0.263*	1.829***	0.988***
	(0.217)	(0.147)	(0.229)	(0.145)
Civil War (Origin)			0.740***	0.639***
			(0.224)	(0.132)
Civil War (Target)			-0.214	-0.404***
			(0.207)	(0.126)
Constant	-4.630***	-3.479***	-5.811***	-5.067***
	(0.229)	(0.113)	(0.255)	(0.141)
Observations	55,662	55,662	39,756	39,756

The models in Table A2 are identical to the models from Table 2 of the main text except the Rasler and Thompson measure is included instead of Klein, Goertz, and Diehl. Of all of the modeling sections, the results for these models are the most uncertain. Although the coefficient for rivalry is positive across the four models, rivalry is significant in just two of the four models. ($p<0.10$ in Model A7, and $p<0.01$ in Model A8) In substantive terms, the presence of a rivalry as defined by Rasler and Thompson (2006) is expected to increase terror counts by at least 88% (Model A7) and at most 101% (Model A8) holding all other variables at their means.

Table A2—Z.I. Neg Binomial Model of Rivalry and Terrorism (Rasler-Thompson Measure)

Models A5 and A7 use a dyad where the origin country is the nationality of the terrorists and the target country as the location in which the terrorist event occurred. Models A6 and A8 use a dyad where the origin country is the nationality of the terrorists and the target country is the nationality of the victims. RT signifies a rivalry based on the Rasler and Thompson (2006) definition. Robust standard errors in parentheses clustered on dyad; *** p<0.01, ** p<0.05, * p<0.1

	(A5)	(A6)	(A7)	(A8)
VARIABLES	Terror Counts 1	Terror Counts 2	Terror Counts 1	Terror Counts 2
Rivalry (RT)	1.260	0.448	0.630*	0.698***
	(0.990)	(0.319)	(0.351)	(0.231)
Joint Democracy	-1.058***	0.103	-1.357***	-0.367**
	(0.388)	(0.164)	(0.489)	(0.147)
Log(Capability Ratio)	0.690*	-0.837***	0.0873	-0.638***
	(0.368)	(0.114)	(0.112)	(0.0795)
Past Terror (Origin)	0.434**	0.512***	0.512***	0.855***
	(0.184)	(0.124)	(0.0767)	(0.060)
Past Terror (Target)	0.666***	0.673***	1.073***	0.784***
	(0.177)	(0.0908)	(0.101)	(0.0589)
Cold War	-0.677*	-0.268	-0.966***	-0.166
	(0.394)	(0.211)	(0.194)	(0.154)
Interstate War (Origin)	0.0671	0.335	0.109	0.333**
	(0.357)	(0.220)	(0.245)	(0.155)
Interstate War (Target)	0.956**	0.223	0.181	0.317***
	(0.438)	(0.150)	(0.361)	(0.109)
Contiguity	-0.239	1.759***	2.269***	1.439***
	(0.420)	(0.277)	(0.223)	(0.176)
Civil War (Origin)	0.213	0.0723	0.689***	0.645***
	(0.738)	(0.199)	(0.233)	(0.142)
Civil War (Target)	-0.847**	-0.537***	-0.768**	-0.671***
	(0.358)	(0.174)	(0.311)	(0.150)
Constant	-3.097***	-4.652***	-5.662***	-5.721***
	(0.920)	(0.484)	(0.448)	(0.188)
Inflate	Terror Present	Terror Present	Terror Present	Terror Present
Rivalry (RT)	1.688	-0.873		
	(1.032)	(0.708)		
Joint Democracy	-0.608	1.190***	-17.206***	3.891
	(0.592)	(0.374)	(1.003)	(31.774)
Log(Capability Ratio)	0.637*	-0.755**		
	(0.343)	(0.328)		
Past Terror (Origin)	-0.335	-0.898***		
	(0.333)	(0.133)		
Past Terror (Target)	-0.755*	-0.237		
	(0.394)	(0.196)		
Cold War	0.313	-0.255		
	(0.819)	(0.464)		
Interstate War (Origin)	-0.544	-0.420		
	(0.402)	(0.673)		
Interstate War (Target)	1.383***	-0.291		
	(0.505)	(0.294)		
Contiguity	-4.815	1.536*		
	(3.053)	(0.790)		
Civil War (Origin)	-0.539	-2.224**		
	(1.151)	(0.969)		
Civil War (Target)	-0.416	0.430		
	(0.506)	(0.381)		
Constant	3.996***	-0.285	-0.008	-17.241***
	(0.537)	(1.227)	(0.731)	(1.118)
Observations	39,756	39,756	39,756	39,756

All Directed Dyads

We first considered a number of statistical tests in which we did not restrict the set of observations to politically-relevant dyads. Instead, we estimate models using *all* dyads. The results of these additional tests are nearly all consistent with those reported in the paper. Specifically, models A9-A12 of the Appendix are all significant similar to the results in the main paper.

Turning to an examination of the ZINB models using the Klein, Goertz, and Diehl (2006) measure (noted as KGD in the tables), models A13-A16 of the appendix are similar to models in the main paper, with a couple of exceptions. In the count equation for model A14, the result for rivalry is no longer significant. And the result for rivalry in the inflate equation also becomes insignificant using the full-set of directed dyads. Otherwise, the results are all the same.

Moving to a consideration of Rasler and Thompson's measure of rivalry (noted as RT in the tables), models A17-A20 using the full set of dyads yields results qualitatively the same as those in the main paper. Finally, the results of models A21-A24 actually improve when using the full set of dyads. The result in the count equation in Model A21 now becomes significant at the 0.1 level and the rivalry result in the inflate equation of Model A22 now becomes significant.

In sum, the results are nearly identical to those in the main paper with some of the results losing significance while other results become significant. We reiterate that we consider the politically relevant dyads the most appropriate test, but we are encouraged that the results are largely the same using all directed dyads (Lemke and Reed 2001).

Table A3: Negative Binomial Regression Models of Terror Counts using All Dyads, KGD Measure of Rivalry

VARIABLES	(A9) Terror Counts 1	(A10) Terror Counts 2	(A11) Terror Counts 1	(A12) Terror Counts 2
Rivalry (KGD)	1.568***	2.128***	0.919***	1.313***
	(0.296)	(0.291)	(0.245)	(0.183)
Joint Democracy	1.408***	1.480***	-0.129	-0.0174
	(0.140)	(0.103)	(0.157)	(0.101)
Log Capability Ratio	-0.00545	-0.345***	0.0544	-0.642***
	(0.0397)	(0.0304)	(0.0776)	(0.0484)
Past Incident of Terrorism Origin			0.636***	0.841***
			(0.0480)	(0.0314)
Past Incident of Terrorism Target			0.834***	0.748***
			(0.0506)	(0.0344)
Cold War			-0.532***	-0.134*
			(0.109)	(0.0785)

Interstate Conflict Origin			0.718***	0.493***
			(0.118)	(0.111)
Interstate Conflict Target			-0.285**	0.279***
			(0.138)	(0.0848)
Contiguity	2.067***	1.465***	1.771***	1.280***
	(0.265)	(0.248)	(0.234)	(0.170)
Civil War Origin			0.381***	0.694***
			(0.143)	(0.0976)
Civil War Target			-0.477***	-0.753***
			(0.140)	(0.105)
Constant	-6.223***	-5.695***	-6.374***	-6.281***
	(0.121)	(0.0730)	(0.122)	(0.0888)
Observations	648108	648108	380662	380662

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A4: Zero-Inflated Negative Binomial Regression Models of Terror Counts using All Dyads, KGD Measure of Rivalry

	(A13)	(A14)	(A15)	(A16)
VARIABLES	Terror Counts 1	Terror Counts 2	Terror Counts 1	Terror Counts 2
Rivalry (KGD)	1.231***	0.305	1.779***	1.584***
	(0.299)	(0.228)	(0.492)	(0.264)
Joint Democracy	-0.318	0.197	-0.283	-0.0645
	(0.293)	(0.457)	(0.349)	(0.0966)
Log(Capability Ratio)	0.514**	-0.451	0.147*	-0.660***
	(0.203)	(0.323)	(0.0826)	(0.0596)
Past Terror Origin	0.439***	0.401*	0.725***	0.937***
	(0.114)	(0.238)	(0.0565)	(0.0389)
Past Terror Target	0.763***	0.465***	1.064***	0.843***
	(0.124)	(0.154)	(0.0570)	(0.0437)
Cold War	-0.843***	-0.234	-0.992***	-0.206*
	(0.260)	(0.219)	(0.150)	(0.108)
Interstate War Origin	0.112	0.484	0.817***	0.487***
	(0.215)	(0.326)	(0.168)	(0.128)
Interstate War Target	0.187	0.223	-0.208	0.261***
	(0.248)	(0.188)	(0.192)	(0.0918)
Contiguity	-0.0695	0.688	2.177***	1.870***
	(0.216)	(0.807)	(0.277)	(0.200)
Civil War Origin	0.414	0.172	0.268*	0.742***
	(0.290)	(0.480)	(0.151)	(0.0938)
Civil War Target	-0.729***	-0.907***	-0.860***	-0.938***
	(0.271)	(0.167)	(0.172)	(0.118)
Constant	-4.096***	-3.404***	-6.720***	-6.754***
	(0.325)	(0.609)	(0.333)	(0.0988)
Inflate	Terror Present	Terror Present	Terror Present	Terror Present
Rivalry (KGD)	-1.098	-3.123		
	(0.789)	(3.734)		
Joint Democracy	-0.160	0.323	-13.19***	-1.304
	(0.316)	(0.531)	(2.028)	(4.117)
Log(Capability Ratio)	0.453**	0.361		
	(0.209)	(0.377)		
Past Terror Origin	-0.474***	-0.747***		
	(0.125)	(0.224)		
Past Terror Target	-0.460***	-0.526***		
	(0.134)	(0.152)		
Cold War	0.140	-0.0120		
	(0.341)	(0.252)		
Interstate War Origin	-0.962***	-0.0931		
	(0.274)	(0.363)		
Interstate War Target	0.572**	-0.0596		
	(0.288)	(0.244)		

Contiguity	-7.119	-1.831		
	(11.08)	(2.024)		
Civil War Origin	0.185	-0.842		
	(0.362)	(0.528)		
Civil War Target	0.137	0.101		
	(0.289)	(0.211)		
Constant	2.979***	3.673***	-1.706	-14.72***
	(0.360)	(0.499)	(1.876)	(2.527)
Observations	380,662	380,662	380,662	380,662

Table A5: Negative Binomial Regression Models of Terror Counts using All Dyads, Rasler and Thompson Measure of Rivalry

VARIABLES	(A17) Terror Counts 1	(A18) Terror Counts 2	(A19) Terror Counts 1	(A20) Terror Counts 2
Rivalry (RT)	0.938***	1.495***	0.458	1.009***
	(0.313)	(0.246)	(0.322)	(0.236)
Joint Democracy	1.357***	1.427***	-0.162	-0.0600
	(0.144)	(0.104)	(0.162)	(0.105)
Log Capability Ratio	-0.00924	-0.347***	0.0572	-0.636***
	(0.0395)	(0.0299)	(0.0775)	(0.0478)
Past Incident of Terrorism Origin			0.628***	0.827***
			(0.0477)	(0.0313)
Past Incident of Terrorism Target			0.837***	0.758***
			(0.0500)	(0.0359)
Cold War			-0.527***	-0.124
			(0.109)	(0.0791)
Interstate Conflict Origin			0.757***	0.564***
			(0.116)	(0.115)
Interstate Conflict Target			-0.229	0.328***
			(0.140)	(0.0867)
Contiguity	2.439***	2.025***	2.000***	1.558***
	(0.198)	(0.150)	(0.209)	(0.162)
Civil War Origin			0.413***	0.718***
			(0.143)	(0.100)
Civil War Target			-0.468***	-0.753***
			(0.142)	(0.107)
Constant	-6.201***	-5.668***	-6.365***	-6.250***
	(0.123)	(0.0743)	(0.125)	(0.0918)
Observations	648108	648108	380662	380662

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A6: Zero-Inflated Negative Binomial Regression Models of Terror Counts using All Dyads, Rasler and Thompson Measure of Rivalry

	(A21)	(A22)	(A23)	(A24)
VARIABLES	Terror Counts 1	Terror Counts 2	Terror Counts 1	Terror Counts 2
Rivalry (RT)	0.895*	0.0541	0.736**	1.184***
	(0.536)	(0.326)	(0.356)	(0.275)
Joint Democracy	-0.467	0.311	-0.571	-0.168
	(0.341)	(0.266)	(0.434)	(0.226)
Log(Capability Ratio)	0.411	-0.527***	0.0943	-0.680***
	(0.267)	(0.204)	(0.0868)	(0.0593)
Past Terror Origin	0.346*	0.321***	0.735***	0.937***
	(0.181)	(0.0855)	(0.0542)	(0.0395)
Past Terror Target	0.712***	0.448***	1.104***	0.860***
	(0.110)	(0.0758)	(0.0763)	(0.0469)
Cold War	-0.949***	-0.306	-0.991***	-0.203*
	(0.321)	(0.223)	(0.150)	(0.111)
Interstate War Origin	0.162	0.553**	0.835***	0.547***
	(0.245)	(0.253)	(0.168)	(0.129)
Interstate War Target	0.598*	0.211	0.0889	0.332***
	(0.361)	(0.189)	(0.325)	(0.0957)
Contiguity	0.308	1.089**	2.648***	2.230***
	(0.353)	(0.467)	(0.233)	(0.170)
Civil War Origin	0.186	0.0937	0.205	0.720***
	(0.439)	(0.218)	(0.159)	(0.0956)
Civil War Target	-0.731**	-0.945***	-0.945***	-0.958***
	(0.293)	(0.185)	(0.202)	(0.121)
Constant	-3.601***	-3.300***	-6.521***	-6.707***
	(0.518)	(0.392)	(0.373)	(0.222)
Inflate	Terror Present	Terror Present	Terror Present	Terror Present
Rivalry (RT)	0.732	-2.705**		
	(1.098)	(1.264)		
Joint Democracy	-0.232	0.541	-14.14***	-12.89
	(0.361)	(0.332)	(1.398)	(9.708)
Log(Capability Ratio)	0.341	0.299		
	(0.240)	(0.213)		
Past Terror Origin	-0.550***	-0.827***		
	(0.165)	(0.120)		
Past Terror Target	-0.507***	-0.553***		
	(0.140)	(0.0798)		
Cold War	-0.0422	-0.126		
	(0.430)	(0.252)		
Interstate War Origin	-0.937***	-0.120		
	(0.298)	(0.285)		
Interstate War Target	0.800**	-0.181		
	(0.313)	(0.229)		
Contiguity	-3.951*	-1.630***		
	(2.044)	(0.608)		

Civil War (Origin)	-0.107	-0.915***		
	(0.525)	(0.295)		
Civil War (Target)	0.162	0.0528		
	(0.311)	(0.231)		
Constant	3.427***	3.720***	-0.984	-3.896
	(0.462)	(0.383)	(1.189)	(9.577)
Observations	380,662	380,662	380,662	380,662

Rare-Events Logit

Most politically relevant dyads do not experience any terrorism, which is the primary reason for supplementing the negative binomial regression models with zero-inflated models. Because zero-inflated models can be difficult to interpret and may be unstable, we collapsed the count of terror events to a dummy variable indicating that terrorism did or did not occur in a dyad-year and used rare-events logit (King and Zeng 2001).

Using rare-events logit on the set of politically relevant dyads, we find that the results in seven of the eight regressions are positive and statistically significant. As with the results in the main paper and the full-set of directed dyads, the results indicating a relationship between rivalry and terrorism appear to be strongest using the Klein, Goertz and Diehl measure. We also modeled time-dependence in the logit models using Carter and Signorino's (2010) approach. The results are consistent with those reported below.

Table A7: Rare Events Logit Models, estimating the Presence of Terror, Using KGD Measure of Rivalry

VARIABLES	(A25) Terror Dummy 1	(A26) Terror Dummy 2	(A27) Terror Dummy 1	(A28) Terror Dummy 2
Rivalry (KGD)	1.309***	1.444***	0.835***	0.929***
	(0.260)	(0.192)	(0.256)	(0.173)
Joint Democracy	1.137***	1.079***	-0.140	-0.318**
	(0.205)	(0.136)	(0.244)	(0.130)
Log Capability Ratio	-0.0556	-0.263***	0.0785	-0.601***
	(0.0426)	(0.0230)	(0.106)	(0.0610)
Past Incident of Terrorism Origin			0.449***	0.780***
			(0.0773)	(0.0484)
Past Incident of Terrorism Target			0.794***	0.666***
			(0.0833)	(0.0449)
Cold War			-0.429***	-0.0308
			(0.147)	(0.107)
Interstate Conflict Origin			0.413**	0.324**
			(0.178)	(0.139)
Interstate Conflict Target			-0.258	0.210**
			(0.175)	(0.0983)
Contiguity	0.898***	0.0236	1.712***	0.962***
	(0.259)	(0.172)	(0.253)	(0.160)
Civil War Origin			0.749***	0.658***
			(0.220)	(0.127)
Civil War Target			-0.265	-0.381***
			(0.205)	(0.135)
Constant	-5.395***	-4.283***	-6.548***	-5.843***
	(0.145)	(0.0807)	(0.217)	(0.148)
Observations	55662	55662	39756	39756

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A8: Rare Events Logit Models, estimating the Presence of Terror, Using Rasler and Thompson Measure of Rivalry

VARIABLES	(A29) Terror Dummy 1	(A30) Terror Dummy 2	(A31) Terror Dummy 1	(A32) Terror Dummy 2
Rivalry (RT)	0.787**	1.115***	0.410	0.716***
	(0.319)	(0.234)	(0.323)	(0.246)
Joint Democracy	1.048***	1.014***	-0.196	-0.374***
	(0.211)	(0.137)	(0.249)	(0.134)
Log Capability Ratio	-0.0601	-0.262***	0.0779	-0.596***
	(0.0417)	(0.0223)	(0.104)	(0.0601)
Past Incident of Terrorism Origin			0.441***	0.772***
			(0.0762)	(0.0484)
Past Incident of Terrorism Target			0.795***	0.672***
			(0.0807)	(0.0456)
Cold War			-0.412***	-0.0182
			(0.145)	(0.107)
Interstate Conflict Origin			0.494***	0.395***
			(0.170)	(0.140)
Interstate Conflict Target			-0.182	0.252**
			(0.181)	(0.0986)
Contiguity	1.149***	0.275*	1.897***	1.131***
	(0.219)	(0.149)	(0.226)	(0.153)
Civil War Origin			0.788***	0.678***
			(0.217)	(0.128)
Civil War Target			-0.251	-0.383***
			(0.203)	(0.135)
Constant	-5.322***	-4.218***	-6.514***	-5.801***
	(0.151)	(0.0837)	(0.223)	(0.148)
Observations	55662	55662	39756	39756

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Additional Specifications – GDP and Population Instead of CINC

In the main paper, we used the composite indicator of national capabilities (Singer, Bremer, and Stucki 1972). Because of the high correlation with the measure and GDP and population, we omitted the latter two from the main specifications. Because population, especially, but also GDP might be considered important predictors of terrorism, we omit the CINC measure here and instead include controls for GDP and population.

The results of the analyses in Models A33-A40 in the Appendix, which use the Klein, Goertz, and Diehl rivalry measure, are qualitatively identical to those in the main paper with one exception. In model A38, the rivalry measure is no longer significant in the inflate equation. In all other cases, however, the rivalry measure appears to be correlated strongly with terrorism when controlling for GDP and population.

The results of the analyses in Models A41-A44 in the Appendix, using the Rasler and Thompson measure, are qualitatively similar to those in the main paper. Examining the ZINB models shows that the results for rivalry are stronger when controlling for GDP and population; in Model A46, the rivalry measure in the count equation is now statistically significant. Further, the rivalry measure is now significant in the inflate equation in Model A45, when it was not significant nor in the expected direction in the main paper.

In sum, the results of these additional analyses are robust to additional specifications and estimators. Nearly all of the results offer strong support for a rivalry-terrorism relationship.

Table A9: Negative Binomial Regression Models of Terror Counts using GDP and Population instead of CINC, KGD Measure of Rivalry

	(A33)	(A34)	(A35)	(A36)
VARIABLES	Terror Counts 1	Terror Counts 2	Terror Counts 1	Terror Counts 2
Rivalry (KGD)	1.116***	1.060***	0.862***	0.840***
	(0.251)	(0.205)	(0.247)	(0.169)
Joint Democracy	0.840***	0.757***	0.0382	-0.0303
	(0.272)	(0.165)	(0.258)	(0.131)
GDP Origin	-1.82e-05	-5.06e-05***	-3.38e-05*	-0.000107***
	(1.52e-05)	(9.41e-06)	(1.91e-05)	(1.35e-05)
GDP Target	3.71e-05***	7.71e-05***	-1.26e-05	4.88e-05***
	(9.20e-06)	(6.28e-06)	(1.39e-05)	(9.75e-06)
Population (log) Origin	0.0463	0.0624*	-0.181*	-0.208***
	(0.0554)	(0.0323)	(0.101)	(0.0496)
Population (log) Target	0.0846*	0.257***	-0.0963	0.229***
	(0.0507)	(0.0375)	(0.104)	(0.0504)
Past Incident of Terrorism Origin			0.562***	0.860***
			(0.0993)	(0.0480)
Past Incident of Terrorism Target			0.722***	0.559***
			(0.0993)	(0.0489)
Cold War			-0.230	-0.208*
			(0.158)	(0.117)
Interstate Conflict Origin			0.718***	0.253*
			(0.194)	(0.144)
Interstate Conflict Target			-0.187	0.319***
			(0.165)	(0.0926)
Contiguity	1.218***	0.604***	1.436***	0.810***
	(0.273)	(0.196)	(0.260)	(0.172)
Civil War Origin			0.615***	0.401***
			(0.211)	(0.125)
Civil War Target			-0.253	-0.286**
			(0.231)	(0.131)
Constant	-6.753***	-9.022***	-0.910	-5.179***
	(1.646)	(1.051)	(2.614)	(1.186)
Observations	33570	33570	31468	31468

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A10: Zero-Inflated Negative Binomial Regression Models of Terror Counts using GDP and Population Instead of CINC, KGD Measure of Rivalry

VARIABLES	(A37) Terror Counts 1	(A38) Terror Counts 2	(A39) Terror Counts 1	(A40) Terror Counts 2
Rivalry (KGD)	1.420***	0.905***	1.619***	1.105***
	(0.325)	(0.291)	(0.466)	(0.276)
Joint Democracy	-0.460	-0.0699	-0.682*	-0.195
	(0.280)	(0.165)	(0.361)	(0.141)
GDP Origin	0.000101***	-2.67e-05	-3.74e-05	-0.000115***
	(3.57e-05)	(3.80e-05)	(2.60e-05)	(1.41e-05)
GDP Target	-0.000129***	3.09e-05	-3.66e-05**	6.96e-05***
	(3.86e-05)	(2.97e-05)	(1.66e-05)	(1.21e-05)
Population (log) Origin	-0.0295	-0.199**	-0.148	-0.185***
	(0.100)	(0.0868)	(0.0909)	(0.0656)
Population (log) Target	-0.410***	0.0570	-0.183*	0.256***
	(0.137)	(0.157)	(0.0964)	(0.0643)
Past Terrorism Origin	0.404***	0.759***	0.588***	0.995***
	(0.133)	(0.191)	(0.107)	(0.0709)
Past Terrorism Target	1.001***	0.625***	1.040***	0.688***
	(0.141)	(0.103)	(0.108)	(0.0586)
Cold War	-0.415*	-0.509***	-0.685***	-0.503***
	(0.234)	(0.190)	(0.201)	(0.163)
Interstate Conflict Origin	0.368	0.0225	0.181	0.121
	(0.281)	(0.225)	(0.241)	(0.172)
Interstate Conflict Target	0.200	0.453**	-0.0792	0.422***
	(0.196)	(0.194)	(0.204)	(0.110)
Contiguity	-0.741	0.00588	1.522***	1.195***
	(0.565)	(0.503)	(0.285)	(0.231)
Civil War Origin	1.017***	0.759***	0.766***	0.364**
	(0.277)	(0.291)	(0.222)	(0.150)
Civil War Target	-1.034***	-0.776***	-0.759**	-0.427***
	(0.303)	(0.183)	(0.304)	(0.152)
Constant	3.549	-1.984	0.0554	-6.842***
	(2.721)	(3.569)	(2.016)	(1.667)
Inflate Equation				
Rivalry (KGD)	-0.957	-1.292		
	(0.821)	(1.432)		
Joint Democracy	-0.396	0.652	-45.03***	3.023
	(0.443)	(0.669)	(1.061)	(4.566)
GDP Origin	0.000210***	0.000253		
	(4.84e-05)	(0.000177)		
GDP Target	-0.000131*	-0.000111		

	(7.07e-05)	(0.000158)		
Population (log) Origin	0.0502	-0.219		
	(0.163)	(0.293)		
Population (log) Target	-0.466**	-0.699		
	(0.184)	(0.445)		
Past Terrorism Origin	-0.671***	-0.941***		
	(0.198)	(0.198)		
Past Terrorism Target	-0.338*	-0.292		
	(0.197)	(0.283)		
Cold War	-0.0844	-0.593		
	(0.699)	(0.923)		
Interstate Conflict Origin	-0.209	-0.300		
	(0.372)	(0.708)		
Interstate Conflict Target	0.889**	0.165		
	(0.452)	(0.646)		
Contiguity	-23.03***	-20.10***		
	(2.164)	(1.740)		
Civil War Origin	0.784*	1.262		
	(0.426)	(1.520)		
Civil War Target	-0.835**	-1.159**		
	(0.416)	(0.534)		
Constant	10.00**	17.16*	-0.450	-18.37***
	(4.410)	(9.827)	(0.860)	(1.334)
Observations	31468	31468	31468	31468

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A11: Negative Binomial Regression Models of Terror Counts using GDP and Population Instead of CINC, Rasler and Thompson Measure of Rivalry

VARIABLES	(A41) Terror Counts 1	(A42) Terror Counts 2	(A43) Terror Counts 1	(A44) Terror Counts 2
Rivalry (RT)	0.612*	0.753***	0.366	0.690***
	(0.320)	(0.229)	(0.330)	(0.229)
Joint Democracy	0.783***	0.697***	0.0229	-0.0705
	(0.282)	(0.168)	(0.261)	(0.137)
GDP Origin	-1.96e-05	-5.03e-05***	-3.90e-05**	-0.000110***
	(1.53e-05)	(9.16e-06)	(1.88e-05)	(1.36e-05)
GDP Target	3.76e-05***	7.92e-05***	-1.38e-05	4.95e-05***
	(9.57e-06)	(6.18e-06)	(1.45e-05)	(9.76e-06)
Population Origin (log)	0.0651	0.0826***	-0.167*	-0.196***
	(0.0538)	(0.0310)	(0.100)	(0.0493)
Population Target (log)	0.109**	0.283***	-0.0948	0.236***
	(0.0536)	(0.0370)	(0.106)	(0.0507)
Past Terrorism Origin			0.550***	0.853***
			(0.0960)	(0.0487)
Past Terrorism Target			0.719***	0.561***
			(0.0970)	(0.0485)
Cold War			-0.203	-0.196*
			(0.157)	(0.118)
Interstate Conflict Origin			0.776***	0.313**
			(0.188)	(0.155)
Interstate Conflict Target			-0.106	0.349***
			(0.169)	(0.0943)
Contiguity	1.487***	0.857***	1.627***	0.952***
	(0.230)	(0.167)	(0.227)	(0.161)
Civil War Origin			0.653***	0.417***
			(0.214)	(0.125)
Civil War Target			-0.238	-0.279**
			(0.226)	(0.129)
Constant	-7.437***	-9.807***	-1.076	-5.450***
	(1.664)	(1.019)	(2.640)	(1.216)
Observations	33570	33570	31468	31468

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A12: Zero-Inflated Negative Binomial Regression Models of Terror Counts using GDP and Population Instead of CINC, Rasler and Thompson Measure of Rivalry

VARIABLES	(A45) Terror Counts 1	(A46) Terror Counts 2	(A47) Terror Counts 1	(A48) Terror Counts 2
Rivalry (RT)	0.176	0.660**	0.748**	0.765***
	(0.475)	(0.267)	(0.375)	(0.250)
Joint Democracy	0.0172	-0.162	-1.261**	-0.309*
	(0.337)	(0.174)	(0.490)	(0.160)
GDP Origin	-5.66e-05	-2.85e-05	-4.52e-05**	-0.000114***
	(3.71e-05)	(4.27e-05)	(2.25e-05)	(1.44e-05)
GDP Target	1.29e-05	2.94e-05	-4.63e-05**	6.64e-05***
	(2.54e-05)	(3.35e-05)	(2.14e-05)	(1.34e-05)
Population (log) Origin	-0.456***	-0.218**	-0.160*	-0.190***
	(0.145)	(0.0854)	(0.0867)	(0.0662)
Population (log) Target	-0.0868	0.0724	-0.108	0.275***
	(0.0828)	(0.154)	(0.0933)	(0.0635)
Past Terrorism Origin	0.0812	0.727***	0.595***	0.987***
	(0.225)	(0.156)	(0.0962)	(0.0765)
Past Terrorism Target	1.065***	0.612***	1.061***	0.697***
	(0.107)	(0.115)	(0.126)	(0.0624)
Cold War	-0.879***	-0.507***	-0.605***	-0.482***
	(0.295)	(0.192)	(0.202)	(0.160)
Interstate Conflict Origin	0.318	0.127	0.264	0.218
	(0.250)	(0.235)	(0.243)	(0.169)
Interstate Conflict Target	0.289	0.500**	0.135	0.449***
	(0.403)	(0.201)	(0.242)	(0.107)
Contiguity	1.987***	0.0799	1.800***	1.399***
	(0.433)	(0.487)	(0.254)	(0.203)
Civil War Origin	0.701	0.739***	0.721***	0.350**
	(0.441)	(0.278)	(0.219)	(0.149)
Civil War Target	-0.907***	-0.805***	-0.905**	-0.457***
	(0.297)	(0.184)	(0.365)	(0.160)
Constant	4.494*	-1.701	-0.368	-6.972***
	(2.623)	(3.009)	(1.936)	(1.631)
Inflate Equation				
Rivalry (RT)	-1.214*	-0.863		
	(0.634)	(1.292)		
Joint Democracy	0.921**	0.615	-40.58***	-5.899
	(0.445)	(0.499)	(0.900)	(6.234)
GDP Origin	-0.000145**	0.000227		
	(6.45e-05)	(0.000139)		
GDP Target	0.000135***	-9.46e-05		
	(4.30e-05)	(0.000124)		
Population (log) Origin	-0.558	-0.244		
	(0.471)	(0.277)		
Population (log) Target	0.171	-0.699		

	(0.176)	(0.471)		
Past Terrorism Origin	-1.000***	-0.953***		
	(0.155)	(0.189)		
Past Terrorism Target	0.282	-0.375		
	(0.355)	(0.251)		
Cold War	-0.679	-0.552		
	(0.504)	(0.767)		
Interstate Conflict Origin	-0.777	-0.250		
	(0.473)	(0.646)		
Interstate Conflict Target	0.419	0.230		
	(0.472)	(0.608)		
Contiguity	1.598*	-20.42***		
	(0.862)	(1.762)		
Civil War Origin	-0.103	1.094		
	(0.986)	(1.069)		
Civil War Target	-0.195	-1.082**		
	(0.415)	(0.502)		
Constant	5.631	17.94*	0.198	-15.13***
	(6.511)	(9.679)	(0.657)	(4.887)
Observations	31468	31468	31468	31468

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Exclusion of Multiple Nationalities and Vuong Tests

We operationalized the origin and target countries in the dyadic analysis based on the nationalities of the terrorists. This is potentially hazardous, because multiple nationalities could be responsible for a given terrorist attack, which means that that attack may be more accurately considered multilateral rather than dyadic. To test the sensitivity of the results, we estimated the models after dropping any event in which multiple nationalities were involved and find that the results are similar.

Table A13: *Comparing Rivalry Results with a Different Sample.* All attacks that included perpetrators with multiple nationalities are dropped in these sensitivity results. The previous results include results for rivalry from the main estimations. KGD signifies a rivalry based on the Klein, Goertz, and Diehl definition and RT signifies a rivalry based on the Rasler and Thompson definition.

Previous Result	Sensitivity Result	Rivalry Variable	Model
1.287*** (Model 1)	1.230***	KGD	(NBREG, base model)
0.793*** (Model 3)	0.714***	KGD	(NBREG, full model)
1.753*** (Model 5)	1.929**	KGD	(ZINB count equation)
1.538*** (Model 7)	1.528***	KGD	(ZINB count equation)
0.771** (Model 9)	0.742**	RT	(NBREG, base model)
0.385 (Model 11)	0.344	RT	(NBREG, full model)
1.260 (Model 13)	0.894	RT	(ZINB count equation)
0.630* (Model 15)	0.457	RT	(ZINB count equation)

As noted in the paper, we considered whether a negative binomial or zero-inflated negative binomial is needed. The tests included below demonstrate that in many cases the ZINB is needed. We report both throughout to gauge the robustness of the results.

Table A14: *Vuong Test Results for Zero Inflated vs. Negative Binomial Models*

Model	Covariates	Vuong Test Z Score	Pr>z	Result
Model 5	Full	5.42	0.000	ZINB
Model 6	Full	6.35	0.000	ZINB
Model 7	Small	1.25	0.106	NBREG
Model 8	Small	0.31	0.378	NBREG
Model 13	Full	5.15	0.000	ZINB
Model 14	Full	6.46	0.000	ZINB
Model 15	Small	1.73	0.042	ZINB
Model 16	Small	0.00	0.501	NBREG

Endogeneity

As noted in the paper, rivalry and terrorism counts could be simultaneously causing each other. This simultaneity problem can bias the rivalry coefficient. The most straightforward way to deal with this problem is to lag rivalry one period (i.e., $rivalry_{t-1}$ influences $terrorism_t$). Since previous values of rivalry are predicting future terrorism, they cannot be simultaneously causing each other. The benefits of this approach are that it is easy to implement, it is intuitive, and it does not require additional data/instruments. The downside is that, it does not allow us to have a formal test of whether endogeneity is indeed a problem. We re-estimated all 8 models from the main paper as well as the Rasler and Thompson models (A1-A8 of this appendix) lagging the independent variables in the model one period. The results are nearly identical to those 16 models (see Table A15, Lagged Results Column).

Another way to deal with the simultaneity problem is to use instrumental variables. A good instrumental variable is one that correlates highly with the endogenous variable (rivalry) but not with the error term. Good instruments in the social sciences are notoriously hard to find and, after reviewing the literature and talking with prominent rivalry scholars, we could not find an appropriate one.

In the absence of a strong instrument, some analysts use a two-stage least squares (2SLS) approach to create an instrumental variable (Kennedy 2003, 188). In practice this means that the analyst uses all exogenous variables in a system of equations to predict the endogenous variable (rivalry in this case). These predictions are then used as the instrument for the endogenous variable. Monte Carlo studies confirm the small sample properties of this approach and show that this estimator is both consistent and quite robust (Kennedy 2003, 189). Although not a perfect solution, we utilize a 2SLS approach as a second way to address endogeneity. We use all exogenous regressors to predict rivalry, then use these predictions as the instrument for rivalry.

Our data complicate this procedure in two important ways. First, rivalry is binary instead of continuous. This mismatch between estimator and functional form should still lead to consistent estimates, but the standard errors can be biased. The forecasts of this model may not be restricted to the (0, 1) interval but is often suggested as a simplified alternative (Heckman and MaCurdy 1985). Second, the dependent variable is a count. Most of the 2SLS procedures used in statistical software require either this dependent variable to be binary or continuous. Count models will generate different errors and thus the standard errors of the estimates may be biased due to this problem as well. Using predictions of rivalry, based on all the exogenous variables in our larger model, leads to estimates that are qualitatively similar to results from our main estimations (see Table A15, 2SLS Column). The standard errors are similar and none of the main inferences change, but as discussed above, there are important reasons to be skeptical as this is where the bias could likely develop. The coefficients are different as the instrument is the probability that a rivalry occurs. For the instrument for the Klein, Goertz, and Diehl measure, this variable ranges from 0.004 to 0.510. For the Rasler and Thompson measure instrument, the range is 0.002 to 0.272. There is one more technique that may be better at dealing with our more complicated data.

Another way to assess the problem is to use a bivariate probit model. We recoded the dependent variable as a binary variable (i.e. all positive counts are coded 1 and all zero counts stay 0). We then use a bivariate probit model to assess whether the errors from these two equations (the endogenous variable equation and the binary terrorism model) are correlated. If these errors are correlated, this provides some evidence of endogeneity. Again, using the bivariate probit approach, rivalry remains significant, and the rho parameter, which measures the correlation of the residuals from the two models, is small and not significant.

Table A15: Rivalry Results when Accounting for Endogeneity

Model	Base Models	Lagged Results	2SLS
1	1.287***	1.265***	3.120**
	(0.259)	(0.248)	(1.580)
2	1.420***	1.380***	2.818**
	(0.198)	(0.197)	(1.207)
3	0.793***	0.787***	3.833**
	(0.248)	(0.249)	(1.507)
4	0.903***	0.882***	3.114***
	(0.166)	(0.172)	(1.153)
5	1.753***	1.894***	9.617***
	(0.625)	(0.589)	(2.955)
6	0.568**	0.448	3.005*
	(0.251)	(0.313)	(1.536)
7	1.538***	1.532***	5.748**
	(0.429)	(0.437)	(2.622)
8	1.003***	0.950***	4.185***
	(0.241)	(0.229)	(1.530)
9	0.771**	0.779**	5.866**
	(0.316)	(0.317)	(2.985)
10	1.084***	1.049***	5.419**
	(0.227)	(0.232)	(2.275)
11	0.385	0.429	7.313**
	(0.318)	(0.325)	(2.916)
12	0.677***	0.689***	6.006***
	(0.225)	(0.225)	(2.256)
13	1.260	1.415*	20.134***
	(0.990)	(0.729)	(6.302)
14	0.448	0.434	15.180***
	(0.319)	(0.508)	(3.121)
15	0.630*	0.689*	11.014**
	(0.351)	(0.356)	(5.151)
16	0.698***	0.704***	8.086***
	(0.231)	(0.236)	(2.994)

Robust standard errors in parentheses clustered on dyad

*** p<0.01, ** p<0.05, * p<0.1

Possible Conditional Relationships

One part of our theory suggests that rivalry should matter more when there is an imbalance of capabilities. Weaker parties might use or support terrorism as a way of compensating for strategic weakness (see page 8 of the manuscript). To test for this more explicitly, we identified all dyads in which the origin state was substantially weaker than the target state (the lower half of our sample) and estimated the rivalry-terrorism relationship in this context. The results become even stronger with the coefficient increasing to 1.846 (p=0.000) in the first test below, compared to 1.287 (p=0.000) using the full sample. When estimating the relationship with the states at parity, the relationship is still positive, but the coefficient on rivalry is much smaller than with the full set (0.756; p=0.002). These additional results at least suggest that, consistent with the theoretical story, rivalries occurring within uneven dyads may be even more likely to experience terror than rivalries in matched dyads. The results of these two models appear in Table A16 below.

Table A16: Rivalry Results Conditional on Asymmetric Capabilities

VARIABLES	Terror Counts 1 Asymmetric Dyads	Terror Counts 1 Symmetric Dyads
Rivalry (KGD)	1.846***	0.756***
	(0.373)	(0.245)
Joint Democracy	1.039***	1.221***
	(0.256)	(0.326)
Contiguity	-0.0862	2.070***
	(0.364)	(0.302)
Constant	-4.274***	-5.500***
	(0.283)	(0.270)
Observations	27830	27842

While we do not develop the joint-democracy argument extensively in this paper, we note that the expectation is not straightforward. On the one hand, the interstate conflict literature expects that joint democracy should generate more peaceful relations. In our context, this would mean that joint democracy should make terrorism less likely. On the other hand, much of the terrorism literature expects that terrorism is more likely in democracies. The extension to the dyadic context might be that there should be more terrorism in dyads. Both of these expectations leave open the question of how rivalry and democracy would interact. As our theory does not develop the democracy expectations, we remain agnostic about what the effect should be. In considering a possible relationship empirically, we interacted rivalry and democracy and re-estimated the models with rivalry, democracy, and the interactive term all included (along with other covariates) and find that the interactive relationship is not statistically significant and does not appear, therefore, to provide a different explanation (see pages 11-12 of the paper). The results of this additional model appear in Table A17 below.

Table A17: Rivalry Results Conditional on Joint Democracy

VARIABLES	Terror Counts 1 Base Model	Terror Counts 1 Full Model
Rivalry (KGD)	1.404***	0.924***
	(0.276)	(0.257)
Joint Democracy	1.208***	-0.0676
	(0.225)	(0.278)
Log Capability Ratio	-0.0553	0.0865
	(0.0435)	(0.112)
Past Terrorism Origin		0.436***
		(0.0781)
Past Terrorism Target		0.776***
		(0.0878)
Cold War		-0.419***
		(0.139)
Interstate Conflict Origin		0.389**
		(0.170)
Interstate Conflict Target		-0.277*
		(0.167)
Contiguity	0.890***	1.659***
	(0.260)	(0.256)
Civil War Origin		0.705***
		(0.225)
Civil War Target		-0.230
		(0.205)
Rivalry Democracy Interaction	-0.518	-0.559
	(0.453)	(0.472)
Constant	-4.742***	-5.890***
	(0.218)	(0.242)
Observations	55,662	39,756

Monadic Rivalry Results

In this section, we replicate two recent, prominent monadic studies of terrorism and included a rivalry variable (see Tables A18-A21). We used both rivalry measures in replicating Li (2005) and Chenoweth (2010). Tables A18 and A19 replicate Li (2005) using both rivalry measures. Tables A20 and A21, replicate Chenoweth (2010) in the same manner. Similar to other results above, rivalry continues to predict terrorist events well. Rivalry is positive and significantly related to terrorism in all of the monadic estimations except one using the Rasler & Thompson measure when replicating Li (2005) (Table A18).

Table A18--Replicating Li (2005) JCR using Monadic Measures of Rivalry, Rasler & Thompson

VARIABLES	Terror Attacks	Terror Attacks	Terror Attacks
Rivalry (Rasler & Thompson)	--	0.030	--
	--	(0.129)	--
Rivalry Count (Rasler & Thompson)	--	--	0.049
	--	--	(0.076)
Executive Constraints	0.061***	0.069***	0.070***
	(0.023)	(0.024)	(0.024)
Participation	-0.009**	-0.008*	-0.008
	(0.004)	(0.005)	(0.005)
Inequality	0.001	-0.008	-0.007
	(0.014)	(0.014)	(0.013)
GDP	-0.177	-0.175	-0.171
	(0.109)	(0.116)	(0.114)
Regime Durability	-0.076	-0.075	-0.076*
	(0.047)	(0.046)	(0.046)
Population	0.118***	0.112**	0.108**
	(0.044)	(0.044)	(0.045)
Government Capabilities	0.275**	0.311**	0.315**
	(0.137)	(0.145)	(0.145)
History of Attacks	0.547***	0.549***	0.549***
	(0.045)	(0.046)	(0.046)
Post Cold War	-0.578***	-0.221	-0.219
	(0.097)	(0.161)	(0.161)
Conflict	-0.170	-0.187	-0.209
	(0.113)	(0.132)	(0.135)
Europe	0.221	0.153	0.182
	(0.200)	(0.194)	(0.180)
Asia	-0.494**	-0.538**	-0.500**
	(0.248)	(0.251)	(0.246)
America	-0.349**	-0.289*	-0.276*
	(0.147)	(0.155)	(0.148)
Africa	-0.423**	-0.325*	-0.305
	(0.178)	(0.186)	(0.188)
Constant	-0.443	-0.192	-0.226
	(1.537)	(1.534)	(1.506)
Observations	2,232	1,681	1,681

Robust standard errors clustered on country in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A19--Replicating Li (2005) JCR using Monadic Measures of Rivalry, Klein, Goertz, & Diehl

VARIABLES	Terror Attacks	Terror Attacks	Terror Attacks
Rivalry (Klein, Goertz, & Diehl)	--	0.152*	--
	--	(0.092)	--
Rivalry Count (Klein, Goertz, & Diehl)	--	--	0.049**
	--	--	(0.023)
Executive Constraints	0.061***	0.063***	0.060***
	(0.023)	(0.023)	(0.023)
Participation	-0.009**	-0.009**	-0.008*
	(0.004)	(0.004)	(0.004)
Inequality	0.001	0.004	0.007
	(0.014)	(0.015)	(0.013)
GDP	-0.177	-0.155	-0.199*
	(0.109)	(0.112)	(0.112)
Regime Durability	-0.076	-0.076	-0.087*
	(0.047)	(0.046)	(0.047)
Population	0.118***	0.110***	0.092**
	(0.044)	(0.043)	(0.046)
Government Capabilities	0.275**	0.288**	0.310**
	(0.137)	(0.140)	(0.139)
History of Attacks	0.547***	0.528***	0.541***
	(0.045)	(0.046)	(0.043)
Post Cold War	-0.578***	-0.581***	-0.563***
	(0.097)	(0.100)	(0.095)
Conflict	-0.170	-0.173	-0.207*
	(0.113)	(0.112)	(0.110)
Europe	0.221	0.271	0.337*
	(0.200)	(0.198)	(0.197)
Asia	-0.494**	-0.427	-0.388
	(0.248)	(0.265)	(0.260)
America	-0.349**	-0.304**	-0.343**
	(0.147)	(0.147)	(0.146)
Africa	-0.423**	-0.397**	-0.426**
	(0.178)	(0.180)	(0.174)
Constant	-0.443	-0.806	-0.312
	(1.537)	(1.523)	(1.500)
Observations	2,232	2,232	2,232

Robust standard errors clustered on country in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A20--Replication of Chenoweth (2010) including a Monadic Measure of Rivalry, Rasler & Thompson

VARIABLES	(1) Terror Attacks	(1) Terror Attacks	(5) Terror Attacks	(5) Terror Attacks
Rivalry (Rasler & Thompson)	--	0.342***	--	0.308**
	--	(0.130)	--	(0.143)
Political Competition	0.061***	0.070***	0.104***	0.082**
	(0.017)	(0.016)	(0.038)	(0.035)
Press Freedom	--	--	-0.229	-0.155
	--	--	(0.214)	(0.165)
Executive Constraints	--	--	-0.021	0.006
	--	--	(0.063)	(0.054)
Democratic Participation	--	--	0.001	0.000
	--	--	(0.006)	(0.005)
Population	0.251***	0.167***	0.251***	0.165***
	(0.045)	(0.048)	(0.049)	(0.050)
Government Capability	0.526***	0.573***	0.598***	0.542***
	(0.091)	(0.100)	(0.107)	(0.101)
History of Attacks	0.020***	0.038***	0.018***	0.039***
	(0.004)	(0.004)	(0.005)	(0.004)
Post Cold War	-0.674***	0.032	-0.412***	-0.005
	(0.092)	(0.138)	(0.102)	(0.150)
Conflict	-0.011	-0.419**	-0.051	-0.431**
	(0.144)	(0.184)	(0.144)	(0.189)
Constant	-5.723***	-4.866***	-6.171***	-4.687***
	(0.808)	(0.854)	(0.968)	(0.938)
Observations	2,650	1,741	2,024	1,694

Robust standard errors clustered on country in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A21--Replication of Chenoweth (2010) including a Monadic Measure of Rivalry, Klein, Goertz and Diehl

VARIABLES	(1) Terror Attacks	(1) Terror Attacks	(5) Terror Attacks	(5) Terror Attacks
Rivalry (Klein, Goertz & Diehl)	--	0.455***	--	0.440***
	--	(0.134)	--	(0.134)
Political Competition	0.065***	0.073***	0.104***	0.100***
	(0.017)	(0.016)	(0.038)	(0.034)
Press Freedom	---	--	-0.229	-0.134
	--	--	(0.214)	(0.176)
Executive Constraints	--	--	-0.021	-0.018
	--	--	(0.063)	(0.058)
Democratic Participation	--	--	0.001	0.001
	--	--	(0.006)	(0.005)
Population	0.249***	0.209***	0.251***	0.212***
	(0.047)	(0.044)	(0.049)	(0.045)
Government Capability	0.591***	0.608***	0.598***	0.609***
	(0.101)	(0.102)	(0.107)	(0.113)
History of Attacks	0.019***	0.017***	0.018***	0.016***
	(0.005)	(0.004)	(0.005)	(0.005)
Post Cold War	-0.528***	-0.555***	-0.412***	-0.421***
	(0.095)	(0.100)	(0.102)	(0.104)
Conflict	-0.033	-0.098	-0.051	-0.112
	(0.141)	(0.134)	(0.144)	(0.138)
Constant	-5.998***	-5.623***	-6.171***	-5.767***
	(0.864)	(0.775)	(0.968)	(0.879)
Observations	2,315	2,315	2,024	2,024

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Societal Grievance as an Explanation for Rivalry and Terrorism?

To investigate a potential alternative societal grievance explanation, we conducted a large series of sensitivity analyses using different measures of minorities at risk within dyads (Minorities at Risk 2009). If having disgruntled minorities within dyads explains both transnational terrorism and rivalry, then omission of this from the analysis may lead to biased and even spurious results. Accordingly, if the grievance explanation holds, then inclusion of this omitted variable should change the rivalry result to be spurious.

We considered many different permutations to investigate this alternative claim (see Table A22 below). Specifically, we use six different indicators to operationalize this concept: 1. The number of minorities at risk within the origin country (# of MAR in Origin), 2. A dichotomous variable coded 1 for an origin country that has at least one minority at risk and 0 otherwise (MAR in Origin?), 3. The number of minorities at risk in the target country (# of MAR in Target), 4. A dichotomous variable coded 1 for a target country that has at least one minority at risk and 0 otherwise (MAR in Target?), 5. The number of minorities at risk in the dyad (# of MAR in Dyad), 6. A dichotomous variable coded 1 for dyad that has at least one minority at risk and 0 otherwise (MAR in Dyad?). These six different possibilities capture whether the presence of a MAR or increases in the number of MAR, at either the state level (in origin or target) or dyad level, increases the likelihood that a group would use transnational terrorism. Because specifying a State-MAR dyad would be difficult and potentially problematic, we think that this is a reasonable approximation of the alternative to our rivalry argument.

As Table A22 clearly shows, the rivalry results hold with the inclusion of a MAR measure *regardless of how it is operationalized*. Each six-model group uses the same estimator, rivalry measure and specification, but varies the MAR measure (1-6, 7-12, 13-18, 19-24, 25-30, 31-36, 37-42, 43-48). These six models correspond to results from the tables in the main paper. None of the rivalry results that were significant in the main tables become insignificant; and the substantive effect is also quite similar, suggesting that such grievances are not explaining both rivalry and terrorism. In some cases, the rivalry results actually improve (in some of the zero-inflated models). The MAR results are sometimes positive, sometimes negative, sometimes significant, and other times not. Table A23 shows the correlations between the MAR measures and the rivalry measures. These correlations are quite small and demonstrate what the models show: there is not a strong relationship between rivalry and different MAR measures within dyads.

Table A22--Minorities at risk and transnational terror, varying the estimator, rivalry variable, specification, and way to operationalize minorities at risk in dyads

Model	Variable	Estimator/Rivalry/Spec.	Rivalry Coef/SE	MAR Coef/SE
1	# of MAR in Origin	NBREG/KGD/Limited	1.237*** (0.254)	0.029 (0.021)
2	MAR in Origin?	NBREG/KGD/Limited	1.139*** (0.267)	1.106*** (0.358)
3	# of MAR in Target	NBREG/KGD/Limited	1.292*** (0.259)	-0.019 (0.020)
4	MAR in Target?	NBREG/KGD/Limited	1.202*** (0.250)	0.531 (0.364)
5	# of MAR in Dyad	NBREG/KGD/Limited	1.260*** (0.267)	0.006 (0.013)
6	MAR in Dyad?	NBREG/KGD/Limited	1.223*** (0.254)	1.708*** (0.597)
7	# of MAR in Origin	NBREG/KGD/Full	0.913*** (0.168)	-0.022 (0.022)
8	MAR in Origin?	NBREG/KGD/Full	0.876*** (0.171)	0.549** (0.217)
9	# of MAR in Target	NBREG/KGD/Full	0.900*** (0.168)	0.003 (0.016)
10	MAR in Target?	NBREG/KGD/Full	0.914*** (0.165)	-0.243 (0.270)
11	# of MAR in Dyad	NBREG/KGD/Full	0.909*** (0.168)	-0.004 (0.013)
12	MAR in Dyad?	NBREG/KGD/Full	0.897*** (0.167)	1.378 (1.127)
13	# of MAR in Origin	ZINB/KGD/Full	1.321*** (0.301)	-0.116** (0.046)
14	MAR in Origin?	ZINB/KGD/Full	0.894** (0.441)	-2.605** (0.358)
15	# of MAR in Target	ZINB/KGD/Full	2.023*** (0.525)	0.105 (0.118)
16	MAR in Target?	ZINB/KGD/Full	1.904*** (0.570)	-0.547 (0.476)
17	# of MAR in Dyad	ZINB/KGD/Full	1.346*** (0.309)	-0.090*** (0.029)
18	MAR in Dyad?	ZINB/KGD/Full	Won't converge	Won't converge
19	# of MAR in Origin	ZINB/KGD/Limited	1.528*** (0.412)	-0.038 (0.039)
20	MAR in Origin?	ZINB/KGD/Limited	1.417*** (0.337)	-0.669** (0.431)
21	# of MAR in Target	ZINB/KGD/Limited	1.541*** (0.420)	-0.083** (0.038)
22	MAR in Target?	ZINB/KGD/Limited	1.586***	-1.046***

			(0.409)	(0.332)
23	# of MAR in Dyad	ZINB/KGD/Limited	1.526***	-0.048*
			(0.404)	(0.029)
24	MAR in Dyad?	ZINB/KGD/Limited	Won't converge	Won't converge
25	# of MAR in Origin	NBREG/RT/Limited	0.707**	0.038**
			(0.254)	(0.019)
26	MAR in Origin?	NBREG/RT/Limited	1.223***	0.653**
			(0.267)	(0.318)
27	# of MAR in Target	NBREG/RT/Limited	0.776**	-0.005
			(0.318)	(0.018)
28	MAR in Target?	NBREG/RT/Limited	0.694**	0.658*
			(0.318)	(0.364)
29	# of MAR in Dyad	NBREG/RT/Limited	0.740***	0.016
			(0.320)	(0.012)
30	MAR in Dyad?	NBREG/RT/Limited	0.727**	1.919***
			(0.317)	(0.590)
31	# of MAR in Origin	NBREG/RT/Full	0.391	-0.008
			(0.316)	(0.030)
32	MAR in Origin?	NBREG/RT/Full	0.384	0.004
			(0.320)	(0.373)
33	# of MAR in Target	NBREG/RT/Full	0.391	-0.034
			(0.316)	(0.034)
34	MAR in Target?	NBREG/RT/Full	0.424	-0.587*
			(0.316)	(0.363)
35	# of MAR in Dyad	NBREG/RT/Full	0.402	-0.016
			(0.318)	(0.019)
36	MAR in Dyad?	NBREG/RT/Full	0.381	0.348
			(0.318)	(0.747)
37	# of MAR in Origin	ZINB/RT/Full	1.136	-0.158*
			(0.846)	(0.085)
38	MAR in Origin?	ZINB/RT/Full	1.381**	-3.131***
			(0.680)	(0.868)
39	# of MAR in Target	ZINB/RT/Full	1.351*	-0.014
			(0.739)	(0.220)
40	MAR in Target?	ZINB/RT/Full	1.317	-0.479
			(0.570)	(0.552)
41	# of MAR in Dyad	ZINB/RT/Full	1.039	-0.113**
			(0.666)	(0.050)
42	MAR in Dyad?	ZINB/RT/Full	1.276	0.983
			(0.947)	(1.276)
43	# of MAR in Origin	ZINB/RT/Limited	0.684**	-0.052
			(0.345)	(0.047)
44	MAR in Origin?	ZINB/RT/Limited	0.615*	-1.003*
			(0.334)	(0.582)
45	# of MAR in Target	ZINB/RT/Limited	0.625*	-0.086**
			(0.339)	(0.041)
46	MAR in Target?	ZINB/RT/Limited	0.720**	-0.948***

			(0.345)	(0.326)
47	# of MAR in Dyad	ZINB/RT/Limited	0.685**	-0.057*
			(0.332)	(0.034)
48	MAR in Dyad?	ZINB/RT/Limited	0.625*	0.341
			(0.352)	(1.128)

Table A23--Bivariate correlations between rivalry and MAR measures

	# of MAR in Origin	MAR in Origin?	# of MAR in Target	MAR in Target?	# of MAR in Dyad	MAR in Dyad?	KGD Rivalry	RT Rivalry
# of MAR in Origin	1.000							
MAR in Origin?	0.433	1.000						
# of MAR in Target	-0.136	-0.101	1.000					
mardum2	-0.101	-0.014	0.433	1.0000				
# of MAR in Dyad	0.657	0.252	0.657	0.252	1.000			
MAR in Dyad?	0.177	0.408	0.177	0.408	0.269	1.000		
KGD Rivalry	0.042	0.070	0.042	0.070	0.064	0.039	1.000	
RT Rivalry	0.062	0.064	-0.003	0.034	0.045	0.027	0.698	1.000

Variable Operationalization

Rivalry is measured dichotomously with a 1 indicating the presence of a rivalry and a 0 otherwise. The rivalry measure is based on Klein, Goertz, and Diehl (2006) as well as Rasler and Thompson (2006).

Joint Democracy is measured dichotomously where 1 indicates that both states in a dyad have Polity III scores greater than or equal to six and 0 indicates any other set of values. The democracy scores were obtained from Eugene (Bennett and Stam 2000) and were originally compiled by Polity III (Jaggers and Gurr 1996).

Capability Ratio is measured as the log of the ratio of dyad's capabilities: $\log(cap_1/cap_2)$ based on the Correlates of War Composite Indicator of National Capabilities (Singer, Bremer, Stuckey 1972) as distributed by the Eugene Software (Bennett and Stam 2000).

Contiguity is measured dichotomously where 1 indicates that the two countries in the dyad are connected by a land or river border or are less than 24 miles by water from each other (<4 on the direct contiguity scale) and 0 otherwise. This measure is from Stinnett et al (2002) as distributed by the Eugene Software (Bennett and Stam 2000).

History of Terrorism is the logged average annual number of terrorist attacks in a country since 1968 or since independence if after 1968 based on Li (2005).

Cold War is measured dichotomously and indicates whether the directed-dyad-year observation occurred during the Cold War based on Li (2005).

Interstate Conflict is measured dichotomously and captures whether a state is engaged in interstate conflict (1) or not (0) during a given year based on Li (2005).

Civil War is a measure of whether an ongoing civil war is occurring in a country based on Fearon and Laitin (2003).

GDP is the real per capita measure of Gross Domestic Product from the Penn World Tables 6.3.

Population is the logged total population for each country from Li (2005).

A variable name followed by *Origin* denotes the country where the attack originates. It is coded based on the nationality of the terrorist group who perpetrates the attack. A variable name followed by *Target* denotes the country where the attack takes place OR the nationality of the victims. The results are robust to this coding decision.

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