

Corruption and Terror in Nigeria

Statistical Appendix & Bibliography

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Descriptive Statistics

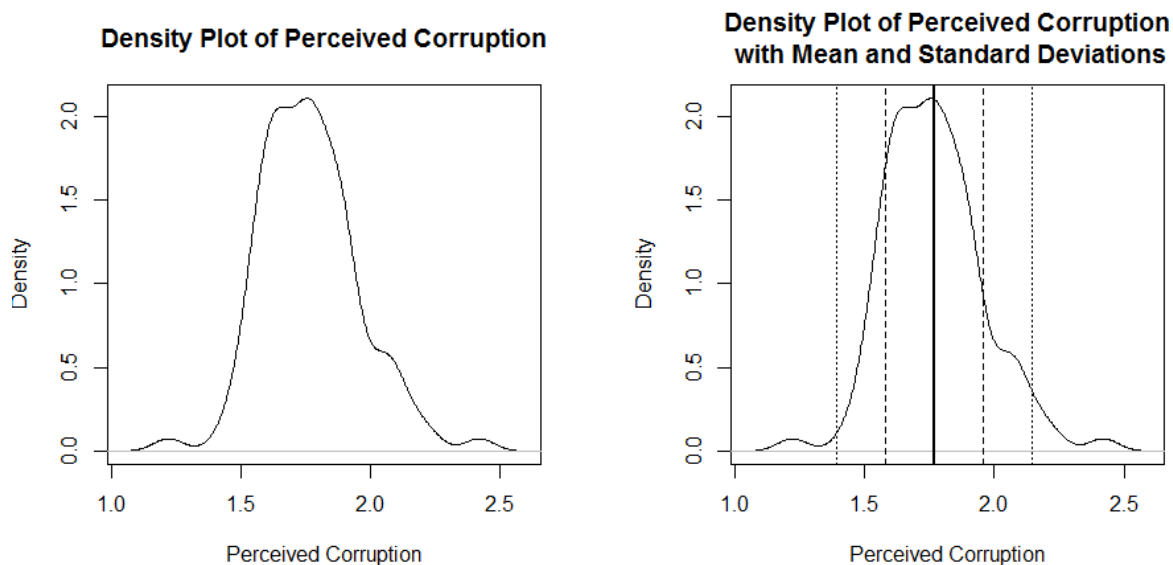
The dataset, which is a subset from a larger pan-African dataset, is structured at the region-year level. Each region is represented from 2009 to 2014. This statistical appendix is designed to provide in-depth statistical results from the tests run for “Corruption and Terror in Nigeria”.

A note on corruption: perceived corruption is measured from Round 5 of the Afrobarometer data, and takes the aggregated values of reported perceptions of corruption in various governmental posts (executive, legislative, judicial). The responses ranged from 0 (indicating no corruption) to 3 (indicating pervasive corruption).

Table 1 – Descriptive Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Perceived Corruption	185	1.768	0.188	1.222	2.420
Terror Attacks	185	6.908	22.046	0	189
Attacks by Boko Haram	185	12.870	60.347	0	597
Attacks by Other Groups	185	7.362	14.281	0	74
GDP (logged)	185	4.279	0.872	2.218	5.778
Development (logged)	185	0.937	0.879	0.048	3.141
At least one terrorist attack	185	0.562	0.497	0	1
At least one attack by Boko Haram	185	0.227	0.420	0	1
At least one attack by other groups	185	0.443	0.498	0	1

Figure 1 – Density Plots of Perceived Corruption in Nigeria



Data and R-Scripts can be obtained for results replication by contacting the author by email at jlewis1023@gmail.com.

Figure 2 - Density Plots of Logged Terror Attacks (by group)

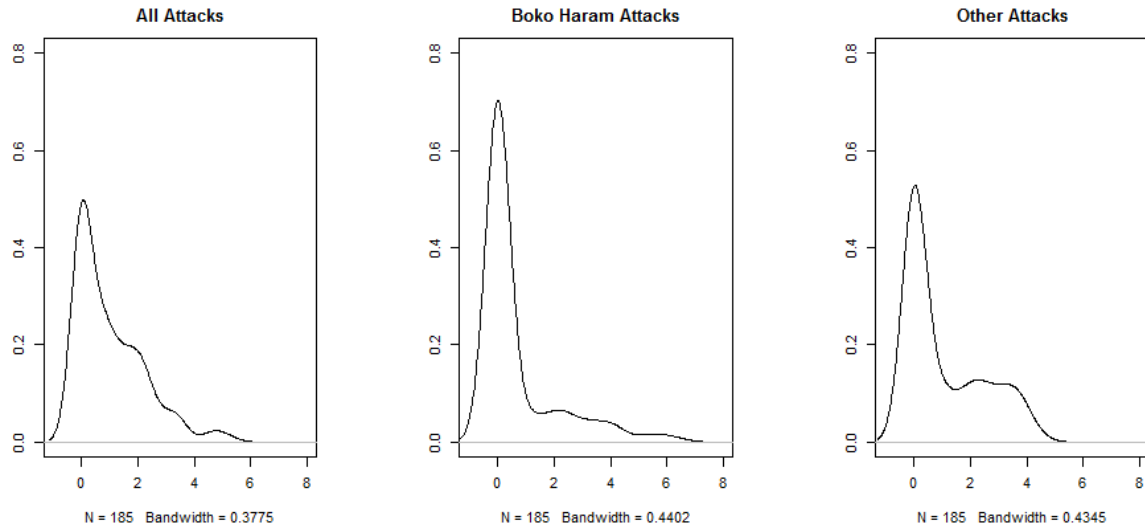


Figure 1 provides density plots of the logged dependent variables. These plots demonstrate that, in any given year, most regions experienced no attacks. This indicates that there is something particular about those regions that *do* experience at least one attack versus those that experience no attacks.

Figure 3 – Distribution of Terror Attacks and Perceived Corruption

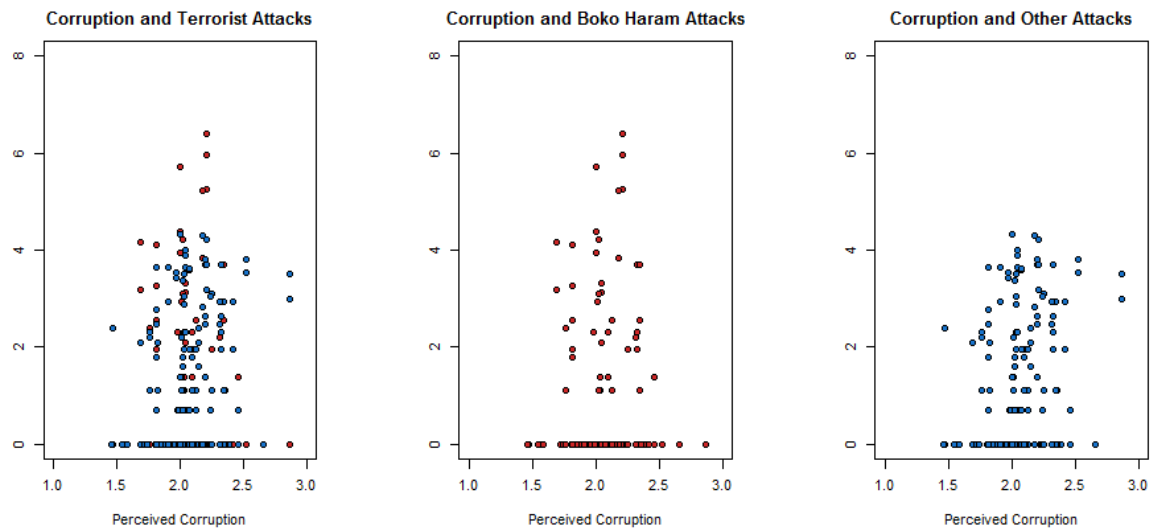


Figure 2 plots the distribution of terror attacks against aggregate perceived corruption. The scatterplots demonstrate that most attacks by Boko Haram occur in regions with perceived levels of corruption around 1.8 to 2.5.

Regression Model

The hypothesis was tested using a two-staged zero-inflated negative-binomial count model, which measures the impact of corruption on the number of incidents of terror in a given region in a given year. Given the scarcity of observations (185), a hierarchical model could be used at the region level¹. The results reveal strong support for the argument that corruption is correlated with more attacks by Boko Haram. The first model, which tests whether corruption impacts the *likelihood* of at least one terrorist attack, indicates that higher levels of perceived political corruption are very important for predicting the likelihood of an attack by Boko Haram, but are less significant in predicting the likelihood of terror by other groups.

The second model, which tests the predicted number of attacks, given the occurrence of at least one attack, strengthens this conclusion. Holding constant economic and infrastructural development, increased perceptions of corruption are strongly correlated with increased incidents of Boko Haram terror attacks. The results indicate that corruption is positively correlated with terror by other groups; however, the relationship is not statistically significant.

Regression Results

Table 2 – First Stage Results

	All Terror	Boko Haram	Non-Boko Haram
Corruption	0.154 (0.964)	2.673** (1.249)	1.074 (0.957)
GDP	2.235*** (0.461)	2.173*** (0.566)	2.194*** (0.443)
Development	2.579*** (0.460)	0.879 (0.547)	2.163*** (0.428)
Ethnic Irrelevance	39.759* (23.766)	71.126*** (27.169)	7.709 (19.998)
Junior Ethnic Partner	-2.958 (2.611)	-1.672 (2.956)	-1.250 (2.482)
Senior Ethnic Partner	-0.928** (0.370)	-1.513*** (0.462)	-0.393 (0.343)
Constant	-11.027*** (2.964)	-15.485*** (4.107)	-13.229*** (3.029)
Observations	185	185	185

Note:

*p<0.1; ** p<0.05; *** p<0.01

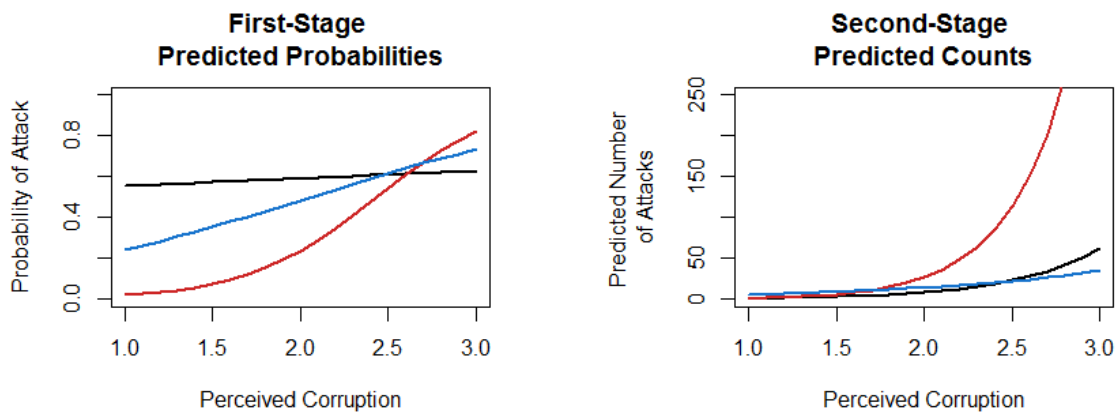
¹ Replication data and r-scripts are available from the author: jlewis1023@gmail.com

Table 3 – Second Stage Results

	All Terror	Boko Haram	Non-Boko Haram
Corruption	1.944** (0.748)	2.862* (1.456)	0.873 (0.883)
GDP	0.966*** (0.329)	0.308 (0.727)	0.648** (0.261)
Development	0.746** (0.311)	0.522 (0.696)	0.767*** (0.261)
Ethnic Irrelevance	58.494*** (10.608)	89.672*** (30.155)	22.185** (10.385)
Junior Ethnic Partner	-0.980 (2.296)	-4.944 (5.563)	0.749 (1.707)
Senior Ethnic Partner	-0.931*** (0.288)	-1.507* (0.750)	-0.292 (0.276)
Constant	-5.873** (2.320)	-2.822 (4.860)	-2.455 (2.212)
Observations	104	42	82

Note:

*p<0.1; **p<0.05; ***p<0.01

Figure 4 – Predicted Probabilities and Counts

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