

**The real enemy within:  
A comprehensive analysis of terrorist kill zones across the world**

Kumar Aniket  
Faculty of Built Environment,  
University College London

30 June 2019

**ABSTRACT.** The paper construct a longitudinal database by drawing on two separate sources to examine the link between incidence of terrorism and terrorism related fatalities to economic and demographic variables.

INTRODUCTION

Every age has its narrative about the violence it experiences. The prevalent narrative for our age is that violence is driven by a recent surge in terrorism. Previous generations were more concerned with the violence from external sources. The unnerving narrative about terrorism is that it is the violence from the enemy within. It is the enemy within that is potentially tearing apart the fabric of the society woven and mended through years of considered deliberation across boundaries that polarise and fractionalise.

The objective of this paper is to try to quantify the patterns of terrorism-related violence across the world using the Global Terrorism Database. The database goes back to the 1970s and thus we cannot go back any further. By combining the Global Terrorism Database with the economic data from the Penn World tables, we construct a database that is able to look at the link between terrorism and economic and demographic variables. We find that even though terrorist incidents are largely unrelated to the economic and demographic variable, i.e., the causes of terrorism are likely to more structural, terrorism becomes far less effective as the country becomes economically becomes more

TABLE 1. Terrorist incidents and fatalities due to terrorism

Country	Average number killed per million citizens per year	Average number of incidents per million citizens per year	Average income per capita in 2011 US\$	No. of years of data
Iraq	27.65	14.98	5559.36	34
Algeria	4.57	3.11	9618.03	28
Burundi	3.36	2.70	701.26	22
Nigeria	1.71	0.51	2855.54	27
Colombia	1.56	5.40	7576.05	42
Pakistan	1.30	1.78	2830.98	40
Turkey	0.20	1.33	10958.63	43
United Kingdom	0.05	1.94	26569.17	44
United States	0.03	0.26	38131.18	44
France	0.01	1.06	27089.97	42

prosperous. Even though terrorism is more prosperous makes more news and influences the new cycles and shapes our narrative, it is rare in the context of terrorism across the world. As some selective examples in Table 1 illustrate, the real impact of terrorism in terms of fatalities is actually felt in middle and lower-income countries. Table 3 is the full version of Table 1 and has data from all the 145 countries we have in our database.

The empirical analysis that follows below finds that terrorism has a tendency to erupt in a country or a region and then last for a period before dissipating. The eruption of violence is not related to economic variables. Put another way, the probability of being at the receiving end of a terrorist incident is not strongly related to per-capita income and economic prosperity is not an insurance against the blight of terrorism. This is in line with the arguments by papers like [Montalvo and Reynal-Querol \(2005\)](#), [Ray and Esteban \(2017\)](#) and [Esteban et al. \(2012\)](#) that the cause of conflict is rooted in structural factors like the fractionalisation and polarisation of the society.

Further, we find that the dissipation of terrorism by the state is largely determined by the economic prosperity of the country. The terrorist violence dissipates faster in countries with higher per-capita income. It is likely that this is because countries with

high per-capita income are also countries that have a greater fiscal capacity and have more levers to counter-act both the symptoms and cause of terrorist violence. [Besley and Persson \(2009\)](#), [Besley and Persson \(2010\)](#), [Besley et al. \(2013\)](#) and [Besley and Persson \(2009\)](#) argue that economic development in countries is marked by them developing fiscal capacity, i.e., the states' power to tax and spend judiciously, which in turn allows it to invest in ways that encourage further economic development. In this case, developed economies seem to be able to use their fiscal capacity effectively in counter-acting terrorism. Terrorism is more likely to take hold in middle and low-income countries, trapping them in their less than ideal status.

The empirical analysis suggests that a state that is economically weak is likely to fail to protect its citizens from the scourge of terrorism. When it comes to terror-related violence, the real enemy within is the lack of economic prosperity.

## 1. DATA AND CONSTRUCTED VARIABLES

For the empirical analysis in this paper, we have created a database by collating data from two entirely different sources. The first source for data was the Global Terrorism Database. [LaFree and Dugan \(2007\)](#) and [LaFree \(2010\)](#) provide an excellent introduction to the database. The details of the database can be found in the [Study of Terrorism and Responses to Terrorism \(2018\)](#).<sup>1</sup> The database contains the details of each terrorist incident that occurs. The coverage starts from 1970 and runs until 2014. There are very few countries in the early years and the coverage increases with time. The second source for data was the Penn World Table version 9.1. [Feenstra et al. \(2015\)](#) provide an excellent introduction and description of the database.<sup>2</sup> The Penn World Tables contains a wealth of economic variables from 1950 to 2017.

Using these two separate sources, we created a database of terrorism-related variables and economic variables that run from 1970 to 2014. Table 3 list the 145 country's in the

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<sup>1</sup>The data is accessible at [www.start.umd.edu/gtd/](http://www.start.umd.edu/gtd/).

<sup>2</sup>The data is accessible at [www.rug.nl/ggdc/productivity/pwt/](http://www.rug.nl/ggdc/productivity/pwt/).

database and the number of years for which the database contains their economic and terrorism-related data. The Penn World Tables are very comprehensive. Hence, all the holes in the data are a result of the unavailability of the data in the Global Terrorism Database.

We aggregated the terrorism data at the yearly and country level. From this, we obtained the two variables we were interested in. These are the *number of terrorist incidents* and the *total number of people killed* in these incidents in each country in each year. To compare these numbers across the world, we needed to account for the population size of the country. Using the population data from the Penn World Tables, we created the number of terrorist incidents per-million citizens and total number killed per-million citizens of the country. To examine how these variables are related to economic factors, we obtained the real gross domestic production (GDP) output in constant 2011 US dollars from the Penn Data Tables and divided it by the population to get the per-capita output for the country. The per-capita real income of the country is conceptually equal to the per-capita real output and thus we use the latter as a proxy for the former in the paper.

## 2. A BIRD'S EYE CONTINENTAL VIEW

To examine the pattern of terrorist violence across the world let's first examine the pattern at the level of the continent.<sup>3</sup> Figure 1 gives us the number of terrorist incidents per-capita in countries in each continent over the 1970-2014 period. Figure 1 indicates that there has been a sharp increase in terrorist incidents in the Middle East & North Africa, Southeast Asia and South Asia. Conversely, terrorist incidents in South America and Central America & Caribbean peaked in the 1980s and has been in declines since then. In terms of the geo-politics, the end of Cold war abated the violence in the Western hemisphere and unleashed it in the Eastern hemisphere. Figure 2 gives us the number of

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<sup>3</sup>In 1 and 2, each dot is a country's data point in a particular year.

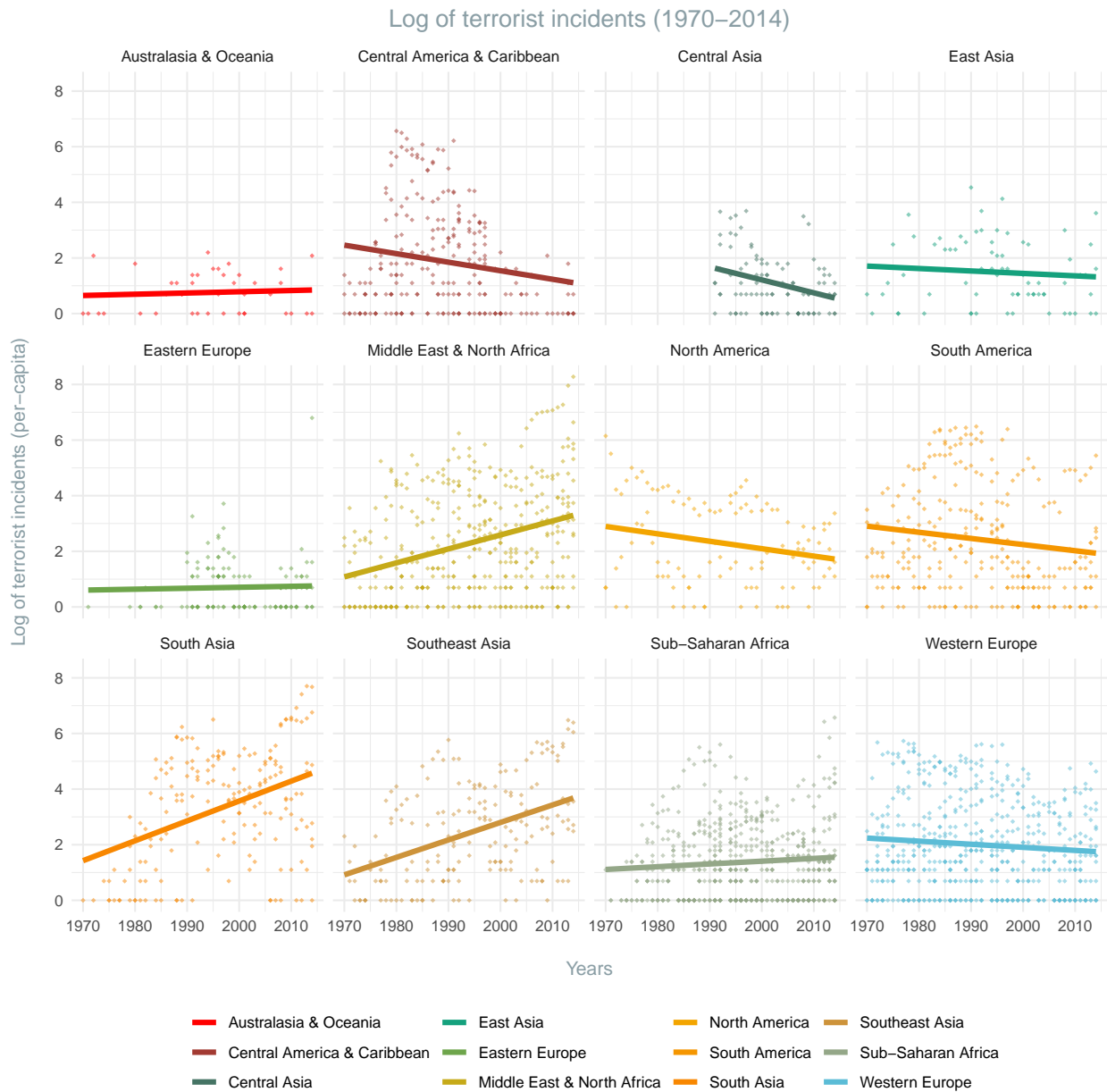


FIGURE 1

people killed per-capita in countries in each continent over the 1970-2014 period. Figure 2 does not show a clear pattern in terms of an increase in the number fatalities resulting from the increase in the number of terrorist incidents per-capita.

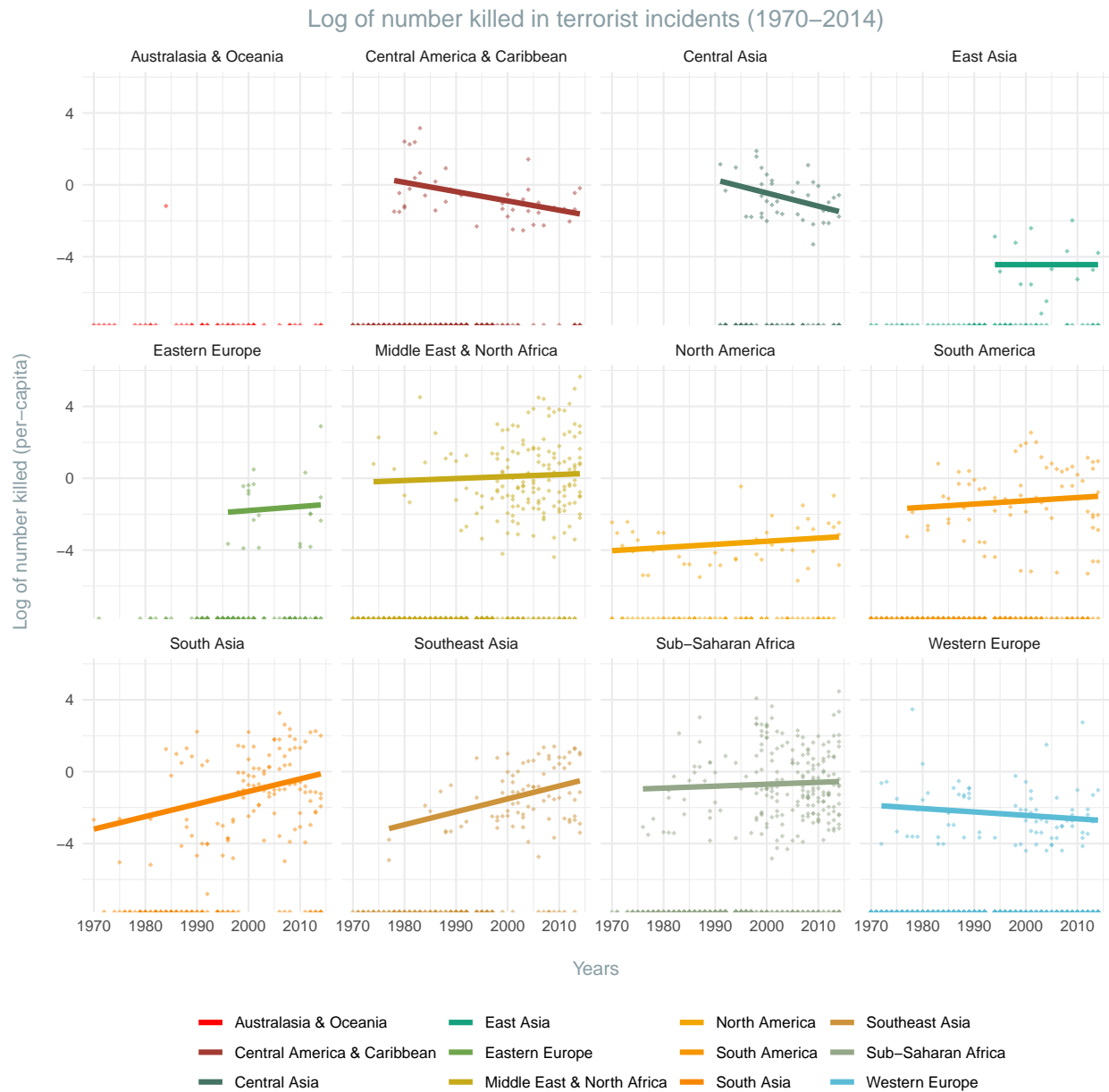


FIGURE 2

Figure 3 shows us the relationship between a country's income and terrorist incidents per-capita in that country. Similarly, Figure 4 shows us the relationship between a country's income and terrorism-related fatalities per-capita in that country. It seems that there is a strong relationship between a country's per-capita income terrorism-related fatalities per-capita. This relationship varies from the continent to continent and seems related to

the level of economic prosperity in that continent. Conversely, there is no discernible relationship between a country's per-capita income and terrorist incidents per-capita.

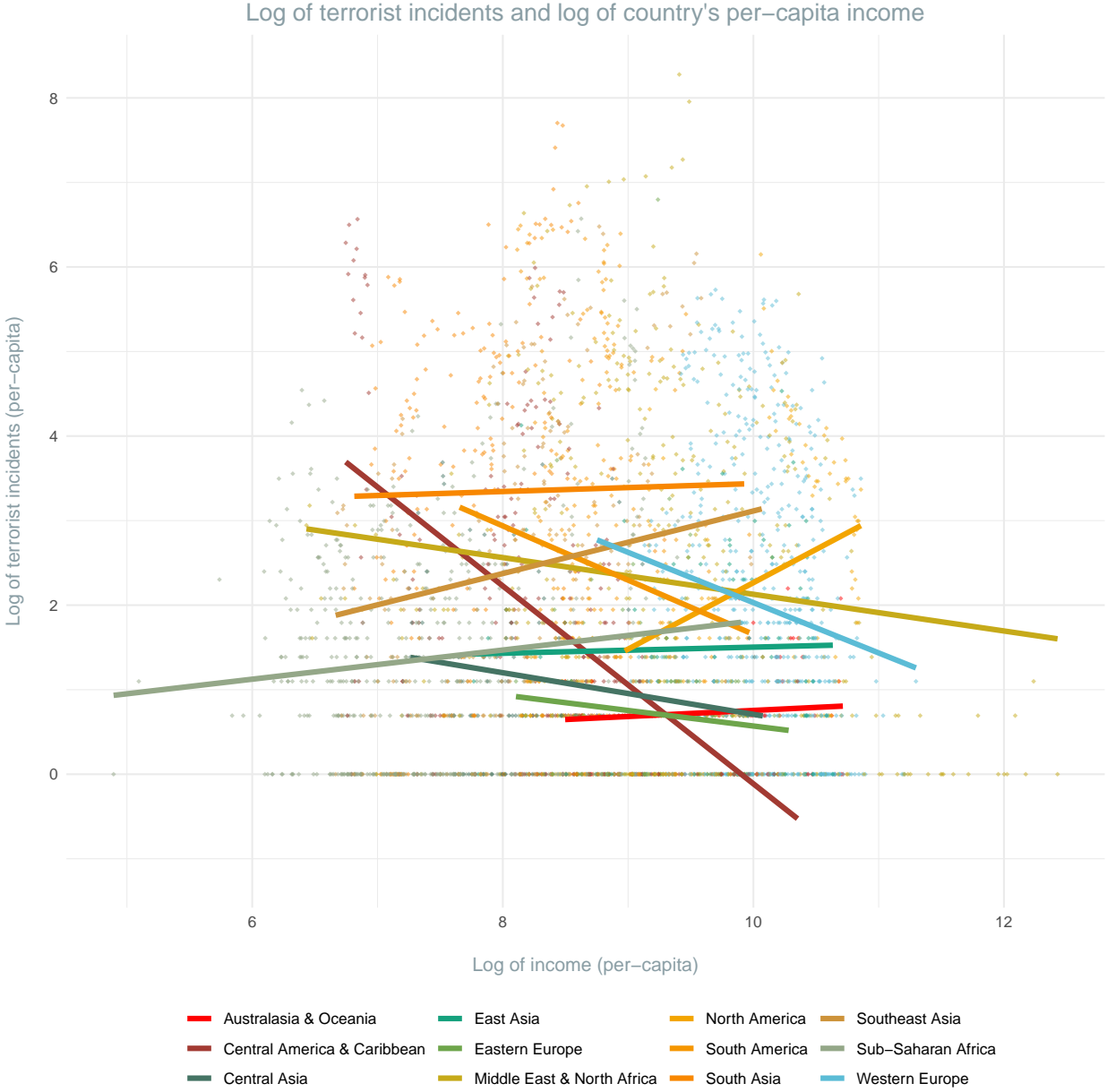


FIGURE 3. caption

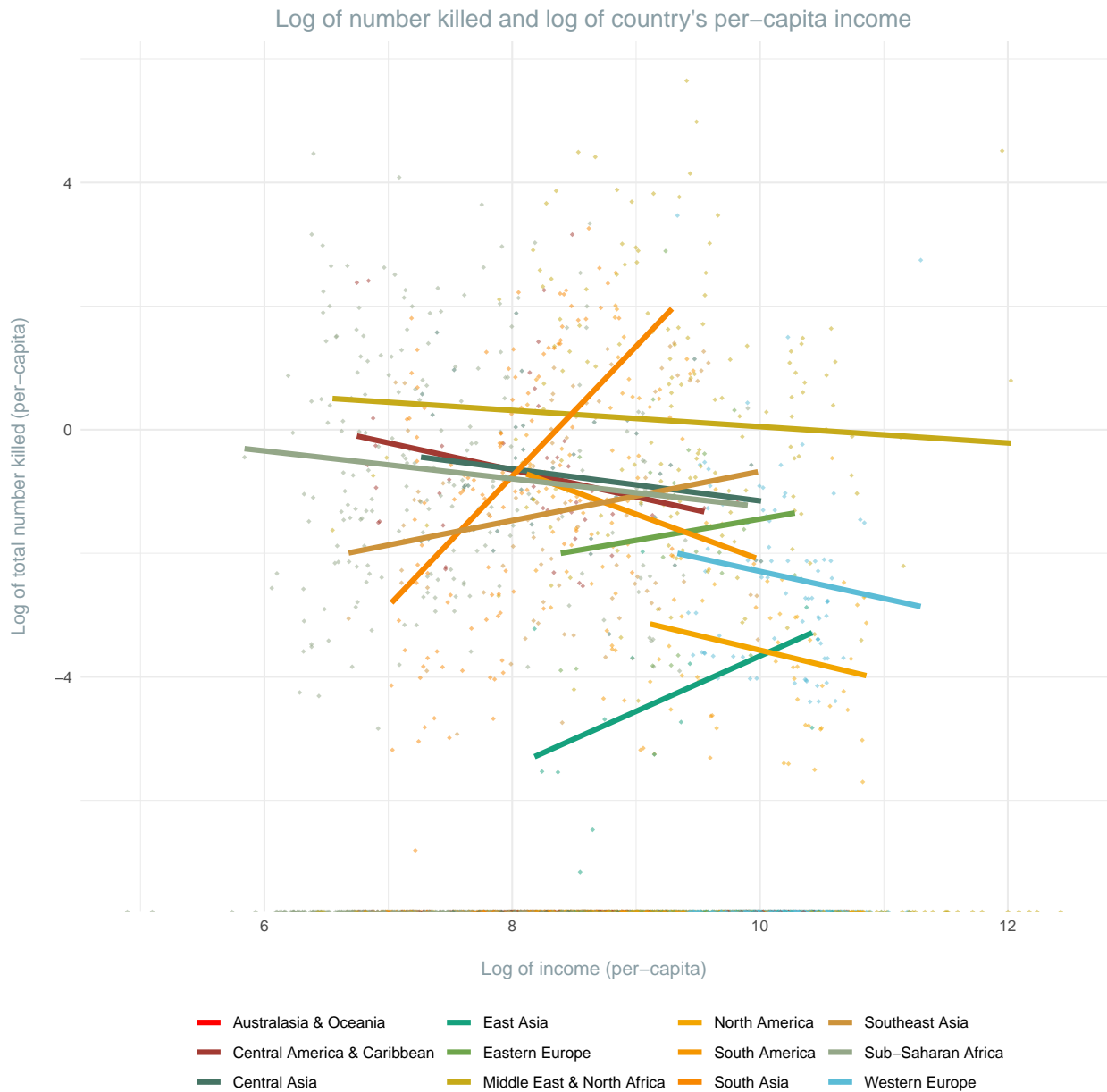


FIGURE 4. caption

### 3. EXPLORING THE RELATIONSHIPS BETWEEN THE VARIABLE

In the graphs below we visually explore the relationship between our three variables, i.e., terrorist incidents per-capita, the total number killed per-capita and income per-capita. We do this by averaging these variables across time for each country. The number



of years for which we have data for each country is detailed in Table 3. Averaging the variables like this is at one level clumsy, but at another level allows us to get a feel of the data. In the section below, we run a more sophisticated Poisson (log-linear) Panel Generalised Linear Models and obtain a more precise estimate of the relationship between the variables.

FIGURE 5. Log of average number of terrorist incidents per-capita and log of country's average income per-capita

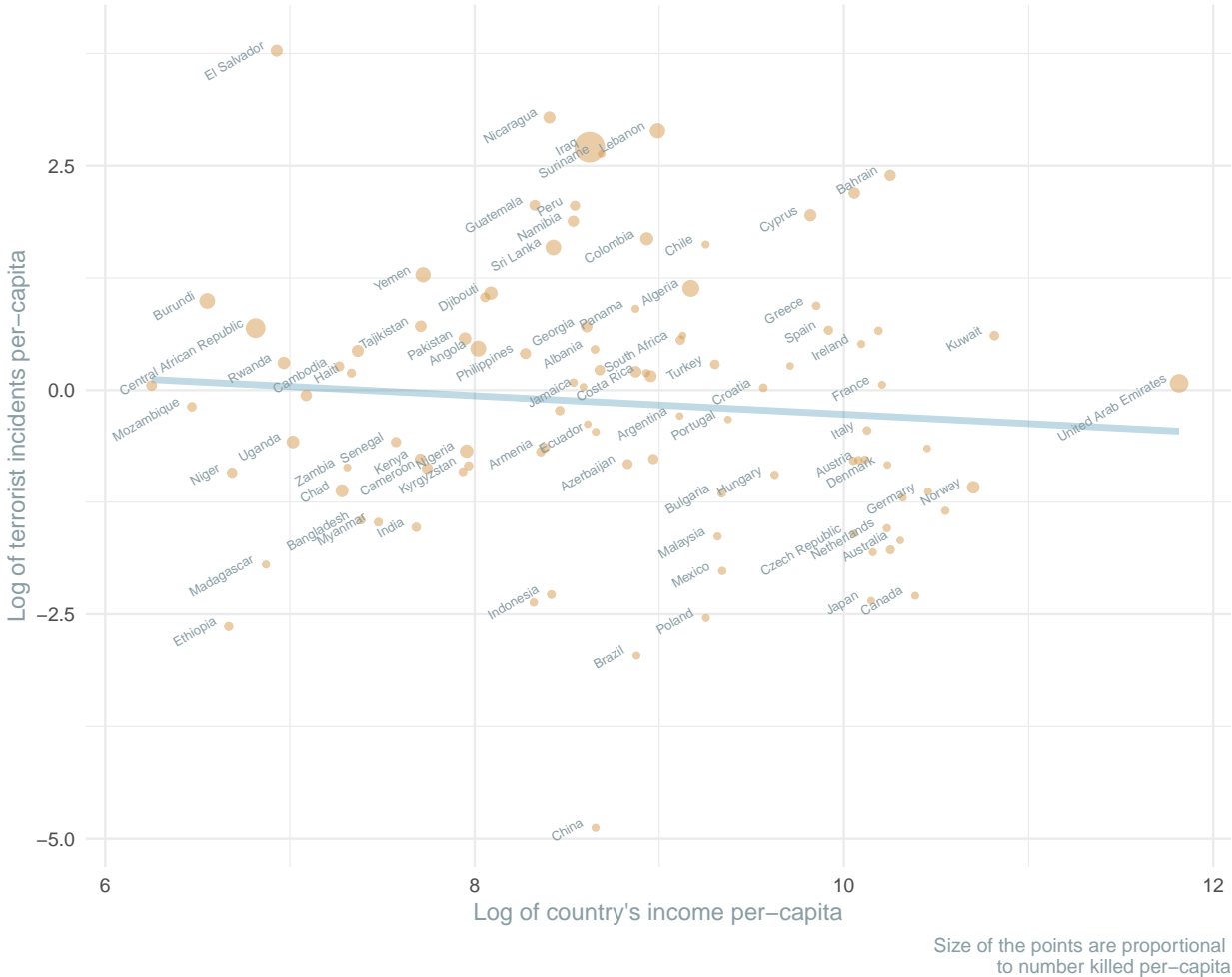


FIGURE 6. Log of average number killed per-capita and log of average number of terrorist incidents per-capita: *The number of people killed due to terrorism in a country is positively correlated with terrorist incidents per-capita.*

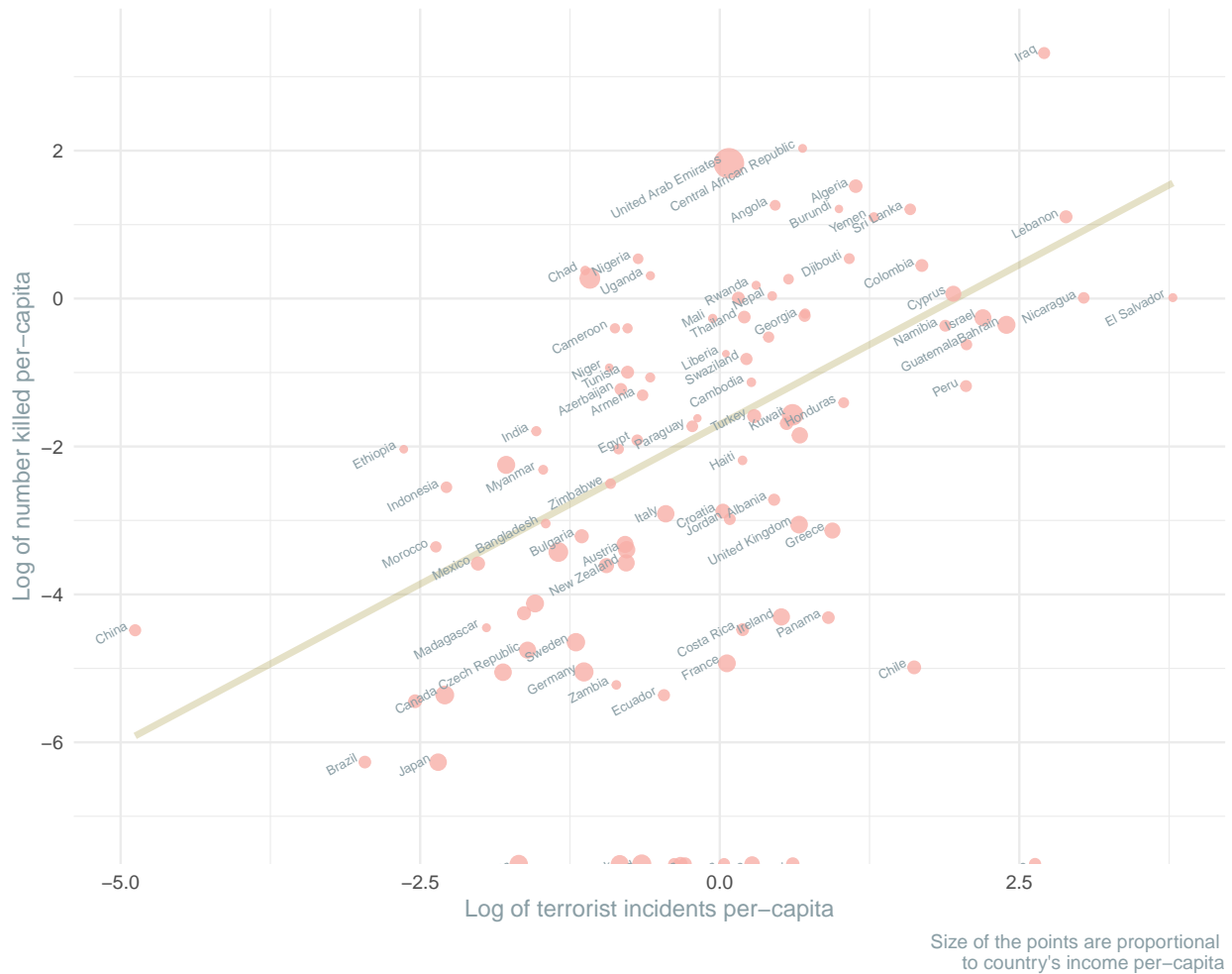


Figure 5 plots the log of average number of terrorist incidents in a country against the log of the country's average per-capita income. Figure 5 indicates that the two variables are weakly correlated. This suggests that there is a very small decrease in average terrorist incidents per-capita for a more prosperous country.

Figure 6 plots the average number killed per-capita against the average number of incidents per-capita in a country. These two variable are strongly correlated positively.

FIGURE 7. Log of average number killed per-capita and log of country's average income per-capita

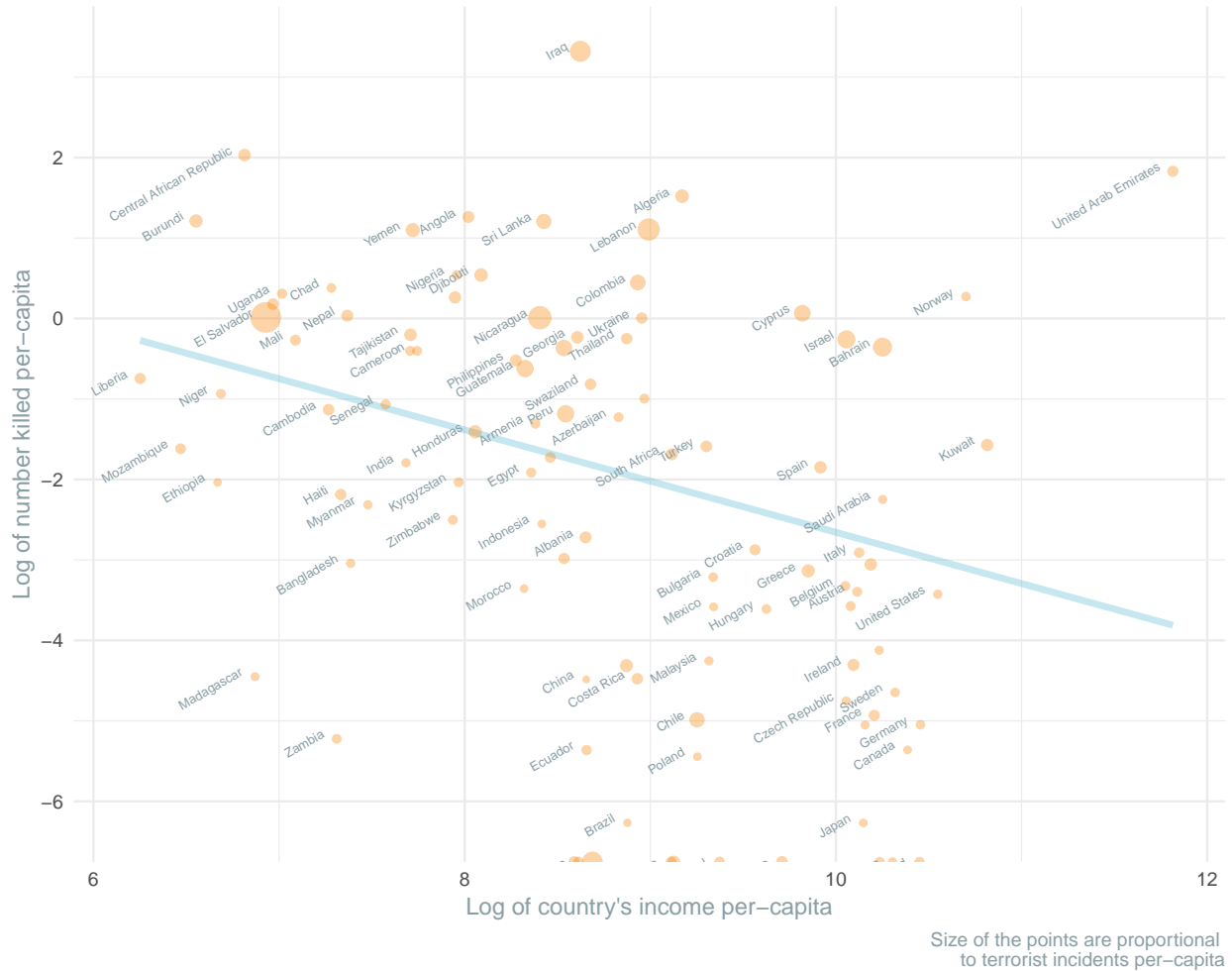


Figure 7 plots the average number killed per-capita against the country's average per-capita income. Figure 7 indicates that the number of people killed per-capita is negatively correlated with the country's income per capita. To summarise, the three figures paint a picture where economic prosperity does not seem to insulate the society from terrorist incidents, yet, countries that are more prosperous are able to reduce the number of fatalities from these terrorist incidents.

**3.1. Frequency and Distribution of violence at the country level.** In this section, we move away from the average and get a sense of what the underlying data looks like. Out of the 145 countries in our database, the average killed per-capita is greater than 1 per million citizens for 25 countries and greater than 0.2 per million citizens for 52 countries. Figure 8 gives us the frequency and density function for number of terrorist incidents per-capita and total number killed per-capita for each country. Even though the range which these variables vary differs from country to country, what is striking is for countries that have incidents of violence, the density function for both variables are positively skewed and appear to be drawn from an underlying Poisson distribution. Between the two, the total number killed is more positively skewed than the total number of incidents.

#### 4. PANEL ESTIMATION FOR GENERALISED LINEAR MODEL

We run a Poisson Panel Estimation for Generalised Linear Model to examine total number killed per-capita as our dependent variable and number of incidents per-capita, per-capita income and population as our independent variables. The panel allows us to examine the effect a change in each independent variable has on the dependent variable. The results are summarised in Table 2. The R-code used to run the regression is listed in Section A.1 and the detailed results of the regression is presented in Table 4.

The results in Table 2 show that fatality per-capita decreases with the country's per-capita income and is weakly related to the incident per-capita if we don't control for the size of the country. This relationship between fatality per-capita disappears when we control for the size of the country through the country's population. The coefficient on population indicates that larger countries have lower fatality per-capita due to terrorism. The coefficient on the interaction term between income per-capita and incident per-capita is positive. This indicates that prosperous countries have a marginally higher rate of fatality per-capita when incidents occur. Given the size of the respective coefficients, the

net impact of an increase in per-capita income is to decrease the fatality per-capita due to terrorism.

To summarise, even though the terrorist incidents per-capita are largely uncorrelated with the per-capita income of a country, the number of people killed in those incidents decreases with the per-capita income of the country. The rate of fatality per-capita is also marginally lower for larger countries.

TABLE 2. Results of the Poisson PGLM

	<i>Dependent variable:</i>		
	Number killed per capita		
	(1)	(2)	(3)
log (income pc)	-0.255*** (0.018)	-0.279*** (0.019)	-0.276*** (0.019)
Incidents pc	0.054*** (0.001)	0.016* (0.009)	0.014 (0.008)
log(income pc) × incidents pc		0.004*** (0.001)	0.004*** (0.001)
Country's population			-0.003*** (0.0004)
Constant	-3.062 (2.547)	-2.860 (2.547)	-2.803 (2.547)
Yearly effects	Yes	Yes	Yes
<i>Note:</i>		*p<0.1; **p<0.05; ***p<0.01	

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APPENDIX A. APPENDIX

TABLE 3. Description of the database constructed for the paper. *The third, fourth and fifth columns are obtained by averaging the variables at the country level over time. The sixth column gives use the number of years for which the data was available and over which the variables were averaged. The table is arranged in the descending order for the third column.*

	Country	Avg killed per million citizens	Avg. incidents per million citizens	Avg. income per capita in 2011 US\$	No. of years of data
1	Iraq	27.65	14.98	5559.36	34
2	Sierra Leone	8.63	2.75	1451.86	9
3	Central African Republic	7.62	2.00	910.69	17
4	United Arab Emirates	6.23	1.08	135273.01	15
5	Algeria	4.57	3.11	9618.03	28
6	Angola	3.53	1.59	3041.46	26
7	Burundi	3.36	2.70	701.26	22
8	Sri Lanka	3.34	4.90	4566.80	34
9	Bhutan	3.30	2.12	6511.28	4
10	Lebanon	3.02	17.98	8032.54	44
11	Yemen	3.00	3.62	2254.69	22
12	Djibouti	1.72	2.95	3256.44	12
13	Nigeria	1.71	0.51	2855.54	27
14	Colombia	1.56	5.40	7576.05	42
15	Chad	1.46	0.33	1454.31	19
16	Guinea-Bissau	1.43	1.01	1347.03	6
17	Uganda	1.36	0.56	1114.81	31
18	Norway	1.31	0.34	44385.02	12
19	Pakistan	1.30	1.78	2830.98	40
20	Rwanda	1.20	1.35	1061.40	17
21	Cyprus	1.07	7.02	18379.22	30
22	Nepal	1.04	1.55	1584.14	22
23	El Salvador	1.01	43.87	1020.98	25
24	Nicaragua	1.01	20.86	4469.90	26
25	Ukraine	1.01	1.17	7738.96	18
26	Guinea	0.94	0.39	1744.37	7
27	Tajikistan	0.82	2.04	2226.87	15
28	Georgia	0.79	2.03	5470.55	22
29	Thailand	0.78	1.23	7136.58	38
30	Israel	0.77	8.99	23312.33	43
31	Mali	0.76	0.94	1197.96	15
32	Equatorial Guinea	0.71	1.94	10216.17	2
33	Bahrain	0.70	10.94	28308.46	15
34	Namibia	0.69	6.57	5089.09	19

35	Cameroon	0.67	0.42	2307.79	12
36	Kenya	0.67	0.46	2221.20	26
37	Philippines	0.59	1.50	3926.79	43
38	Guatemala	0.54	7.84	4129.54	33
39	Montenegro	0.54	2.15	13260.55	3
40	Mauritania	0.51	0.88	2645.11	8
41	Liberia	0.47	1.05	518.80	13
42	Swaziland	0.44	1.25	5874.15	14
43	Niger	0.39	0.40	802.08	17
44	Tunisia	0.37	0.46	7848.79	16
45	Senegal	0.34	0.56	1948.17	22
46	Cambodia	0.32	1.30	1432.13	19
47	Peru	0.31	7.81	5135.71	38
48	Azerbaijan	0.29	0.44	6831.56	13
49	Turkmenistan	0.28	0.20	13763.73	2
50	Armenia	0.27	0.53	4364.87	12
51	Honduras	0.24	2.81	3154.39	25
52	Kuwait	0.21	1.84	49757.34	23
53	Mozambique	0.20	0.83	645.28	22
54	Turkey	0.20	1.33	10958.63	43
55	South Africa	0.19	1.75	9091.17	31
56	Paraguay	0.18	0.80	4728.44	17
57	India	0.17	0.22	2173.67	39
58	Spain	0.16	1.95	20268.30	43
59	Belarus	0.15	0.15	12339.55	9
60	Egypt	0.15	0.50	4266.87	33
61	Ethiopia	0.13	0.07	787.68	38
62	Kyrgyzstan	0.13	0.43	2886.58	12
63	Haiti	0.11	1.21	1529.55	23
64	Saudi Arabia	0.11	0.17	28340.95	24
65	Estonia	0.10	1.39	11748.84	7
66	Myanmar	0.10	0.23	1770.61	31
67	Uzbekistan	0.10	0.14	4633.80	6
68	Indonesia	0.08	0.10	4517.15	31
69	Zimbabwe	0.08	0.40	2798.83	26
70	Albania	0.07	1.57	5721.29	15
71	Croatia	0.06	1.03	14246.72	12
72	Bangladesh	0.05	0.23	1613.00	35
73	Italy	0.05	0.64	24972.32	43
74	Jordan	0.05	1.09	5093.44	29
75	Latvia	0.05	0.82	10664.37	8
76	United Kingdom	0.05	1.94	26569.17	44
77	Belgium	0.04	0.45	23176.65	32
78	Bulgaria	0.04	0.32	11374.40	19
79	Greece	0.04	2.56	18976.16	44
80	Kazakhstan	0.04	0.16	13182.85	9



81	Malawi	0.04	0.20	906.75	2
82	Austria	0.03	0.46	24698.84	31
83	Hungary	0.03	0.39	15147.26	11
84	Mexico	0.03	0.13	11401.22	42
85	Morocco	0.03	0.09	4106.37	15
86	New Zealand	0.03	0.46	23848.78	11
87	Serbia	0.03	0.38	12127.61	4
88	United States	0.03	0.26	38131.18	44
89	Netherlands	0.02	0.21	27812.61	38
90	Chile	0.01	5.07	10423.59	37
91	China	0.01	0.01	5739.45	23
92	Costa Rica	0.01	1.21	7555.89	22
93	Czech Republic	0.01	0.20	23274.93	11
94	France	0.01	1.06	27089.97	42
95	Germany	0.01	0.32	34733.02	23
96	Ireland	0.01	1.67	24211.01	38
97	Madagascar	0.01	0.14	963.72	12
98	Malaysia	0.01	0.20	11118.97	18
99	Panama	0.01	2.48	7126.87	21
100	Sweden	0.01	0.30	30295.21	25
101	Taiwan	0.01	0.16	25779.72	14
102	Zambia	0.01	0.42	1496.67	18
103	Antigua and Barbuda	0.00	15.76	11224.35	1
104	Argentina	0.00	0.75	9060.12	37
105	Australia	0.00	0.19	29891.87	27
106	Bahamas	0.00	4.86	16945.05	4
107	Barbados	0.00	5.95	14232.44	2
108	Belize	0.00	7.97	5594.41	5
109	Benin	0.00	0.26	1331.16	5
110	Botswana	0.00	1.15	4549.90	7
111	Brazil	0.00	0.05	7165.68	35
112	Burkina Faso	0.00	0.14	1098.27	3
113	Canada	0.00	0.10	32404.81	25
114	Comoros	0.00	3.45	1888.39	3
115	Denmark	0.00	0.43	27891.53	16
116	Dominica	0.00	20.33	7178.86	2
117	Dominican Republic	0.00	0.68	5502.10	19
118	Ecuador	0.00	0.63	5747.98	35
119	Fiji	0.00	3.17	5780.33	7
120	Finland	0.00	0.20	28502.29	6
121	Gabon	0.00	1.03	10531.93	4
122	Gambia	0.00	0.91	1739.60	3
123	Ghana	0.00	0.16	2230.22	7
124	Grenada	0.00	27.68	3537.89	2
125	Iceland	0.00	3.62	32734.85	4
126	Jamaica	0.00	1.04	5375.47	14

127	Japan	0.00	0.10	25534.22	34
128	Lesotho	0.00	2.15	1831.83	9
129	Lithuania	0.00	0.44	9307.35	5
130	Luxembourg	0.00	10.72	28477.04	4
131	Maldives	0.00	7.27	16231.77	7
132	Malta	0.00	6.08	13617.86	9
133	Mauritius	0.00	0.96	9094.68	2
134	Poland	0.00	0.08	10440.06	12
135	Portugal	0.00	0.72	11769.14	20
136	Qatar	0.00	2.04	56398.96	6
137	Romania	0.00	0.04	8024.17	6
138	Seychelles	0.00	29.72	12192.94	1
139	Singapore	0.00	0.41	19606.99	6
140	Slovenia	0.00	0.75	19143.41	4
141	Suriname	0.00	13.89	5932.91	12
142	Switzerland	0.00	0.52	34564.26	32
143	Togo	0.00	1.71	1257.99	7
144	Trinidad and Tobago	0.00	1.31	16465.85	13
145	Uruguay	0.00	1.84	9203.75	15

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TABLE 4. Detailed results of the Poisson PGLM Regression

	<i>Dependent variable:</i>		
	Number killed per capita		
	(1)	(2)	(3)
log (income pc)	−0.255*** (0.018)	−0.279*** (0.019)	−0.276*** (0.019)
Incidents pc	0.054*** (0.001)	0.016* (0.009)	0.014 (0.008)
log(income pc) × incidents pc		0.004*** (0.001)	0.004*** (0.001)
Country's population			−0.003*** (0.0004)
1971	−1.125 (5.253)	−1.127 (5.253)	−1.140 (5.253)
1972	1.211 (2.867)	1.214 (2.867)	1.239 (2.867)
1973	1.272 (2.826)	1.270 (2.826)	1.252 (2.826)
1974	2.542 (2.622)	2.543 (2.622)	2.527 (2.622)
1975	3.987 (2.561)	3.988 (2.561)	4.008 (2.561)
1976	−1.604 (5.127)	−1.604 (5.129)	−1.593 (5.129)
1977	−0.613	−0.612	−0.586

	(3.763)	(3.763)	(3.763)
1978	4.737*	4.753*	4.743*
	(2.548)	(2.548)	(2.548)
1979	0.051	0.319	0.309
	(2.723)	(2.723)	(2.723)
1980	-0.988	0.447	0.508
	(2.559)	(2.577)	(2.577)
1981	-0.516	0.806	0.856
	(2.561)	(2.576)	(2.575)
1982	1.076	2.015	2.039
	(2.558)	(2.565)	(2.564)
1983	4.120	4.420*	4.408*
	(2.544)	(2.545)	(2.545)
1984	1.807	1.985	1.972
	(2.568)	(2.568)	(2.568)
1985	0.329	0.796	0.797
	(2.627)	(2.628)	(2.628)
1986	3.581	3.635	3.632
	(2.552)	(2.552)	(2.552)
1987	3.886	3.981	3.971
	(2.548)	(2.548)	(2.548)
1988	2.560	2.820	2.820
	(2.560)	(2.560)	(2.560)
1989	2.758	2.982	2.988
	(2.555)	(2.556)	(2.556)
1990	3.328	3.366	3.384
	(2.556)	(2.556)	(2.556)
1991	1.089	1.584	1.592

	(2.575)	(2.576)	(2.576)
1992	2.535	2.539	2.532
	(2.562)	(2.562)	(2.562)
1994	2.451	2.450	2.448
	(2.566)	(2.566)	(2.566)
1995	1.010	1.011	1.018
	(2.656)	(2.656)	(2.656)
1996	0.822	0.817	0.825
	(2.684)	(2.684)	(2.684)
1997	2.162	2.166	2.177
	(2.580)	(2.580)	(2.580)
1998	6.216**	6.213**	6.267**
	(2.543)	(2.543)	(2.543)
1999	5.281**	5.275**	5.309**
	(2.544)	(2.544)	(2.544)
2000	5.515**	5.510**	5.535**
	(2.544)	(2.544)	(2.544)
2001	5.635**	5.634**	5.663**
	(2.543)	(2.543)	(2.543)
2002	5.040**	5.031**	5.088**
	(2.546)	(2.546)	(2.546)
2003	4.859*	4.856*	4.925*
	(2.547)	(2.547)	(2.547)
2004	5.737**	5.737**	5.837**
	(2.545)	(2.545)	(2.545)
2005	5.657**	5.657**	5.718**
	(2.544)	(2.544)	(2.544)
2006	6.257**	6.262**	6.309**

	(2.543)	(2.543)	(2.543)
2007	5.954**	5.960**	5.994**
	(2.543)	(2.543)	(2.543)
2008	5.789**	5.796**	5.834**
	(2.543)	(2.543)	(2.543)
2009	5.358**	5.362**	5.409**
	(2.544)	(2.544)	(2.544)
2010	5.413**	5.418**	5.473**
	(2.544)	(2.544)	(2.544)
2011	5.652**	5.655**	5.707**
	(2.544)	(2.544)	(2.544)
2012	5.694**	5.693**	5.746**
	(2.544)	(2.544)	(2.544)
2013	5.694**	5.646**	5.687**
	(2.543)	(2.543)	(2.543)
2014	5.367**	5.291**	5.347**
	(2.543)	(2.543)	(2.543)
Constant	-3.062	-2.860	-2.803
	(2.547)	(2.547)	(2.547)

---



---

*Note:*

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

```
library(pglm)
library(lmtest)
library(stargazer)
library(dplyr)
```

```

library(arm)

# Specifying the three formulas and their regression form
spec1<- formula(
  tkillpc ~ log(pci) + countpc +
  factor(year) )
spec2<- formula(
  tkillpc ~ log(pci) + countpc +
  logpci_countpc + factor(year) )
spec3<- formula(
  tkillpc ~ log(pci) + countpc +
  logpci_countpc + pop + factor(year))

reg1<- pglm(spec1,
  index=c("country", "year"),data = data,
  family = poisson,model = "pooling",
  print.level=0,method="nr")
reg2<- pglm(spec2,
  index=c("country", "year"),data = data,
  family = poisson,model = "pooling",
  print.level=0,method="nr")
reg3<- pglm(spec3,
  index=c("country", "year"),data = data,
  family = poisson,model = "pooling",
  print.level=0,method="nr")

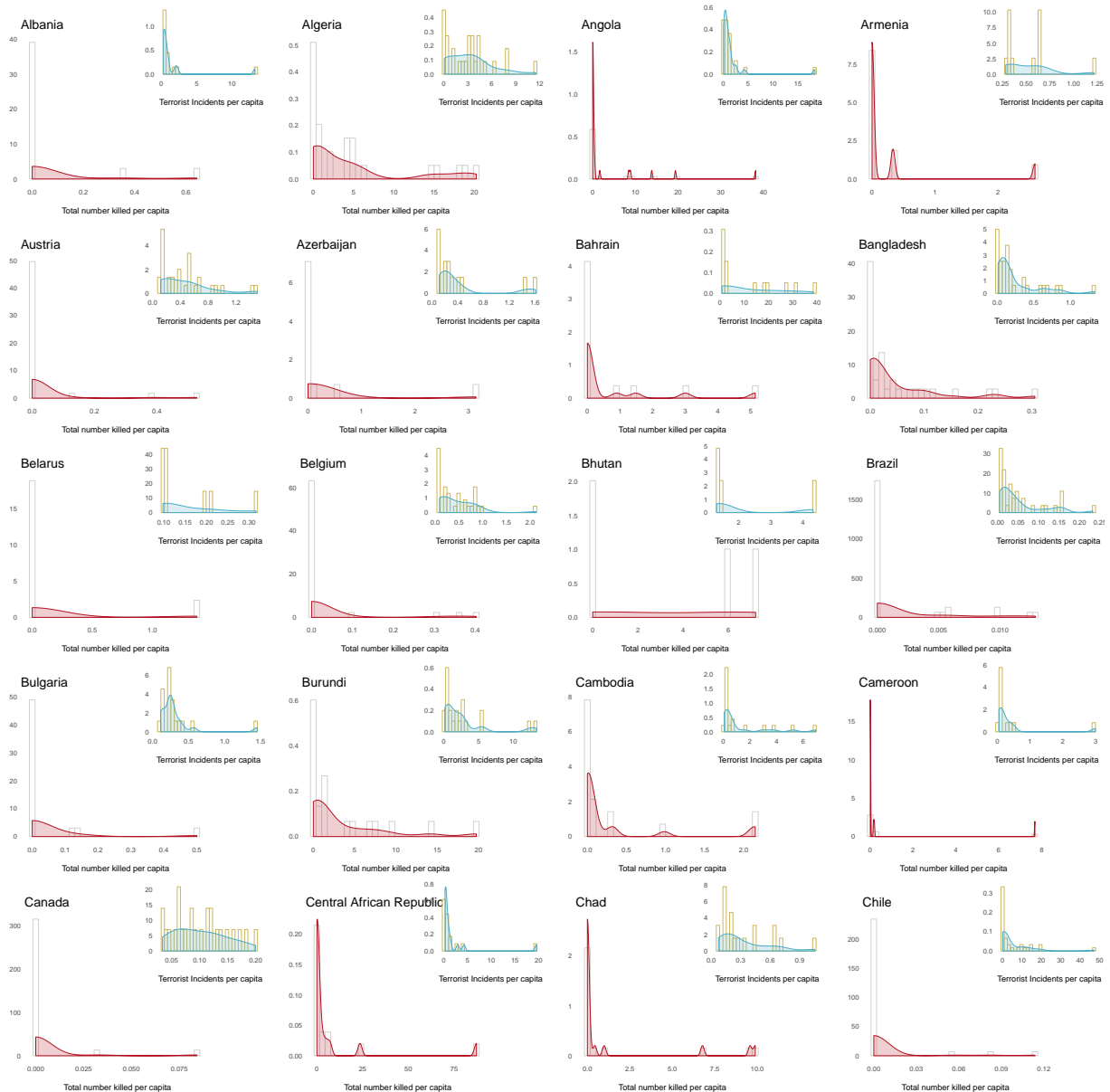
# Obtaining the results

```

```
stargazer(coeftest(reg1), coeftest(reg2), coeftest(reg3),
title="Results_of_the_Poisson_PGLM",
dep.var.labels=c("Number_killed_per_capita", "Number_killed_per_capita",
"Number_killed_per_capita"),
covariate.labels=c("log_(income_pc)", "Incidents_pc",
"log(income_pc)$\\times$_incidents_pc", "Country's_population"),
align=T, omit.stat=c("LL", "ser", "f"), no.space=TRUE,
single.row=F, type="latex", out="tex/ppglm.tex")
```



FIGURE 8. Frequency and density of total number killed per-capita and incidents per capita in each country: *The density is represented by the bars and frequency is represented by the continuous coloured area. The greater the positive skew of the distribution, the shorter-lived the episodes of violence are in that country.*



UNIVERSITY COLLEGE LONDON, 19 TORRINGTON PLACE, LONDON WC1E 7HB, UK

E-mail address: k.aniket@ucl.ac.uk



