Location Matters: Average Annual Risk of Domestic Terrorism, 1990-2010 – A Subnational Analysis

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Fears about the prevalence of terrorism have shaped political discourse since the 9/11 attacks. Contrary to popular belief, however, the risk of domestic terrorism – its most prevalent strain – is exceedingly low. To visually depict the rarity of this form of violence, and its propensity to cluster in certain locations, we created this map by running a modified statistical model from Nemeth *et al.*[1] which utilizes the Global Terrorism Database (GTD)[2] with the cellular grid structure from the PRIO-GRID project.[3] These cells, which measure roughly 55km x 55km for every terrestrial location on the Earth's surface, provide a range of social, economic, and geographical variables that were shown in the past research to impact a wide range of political phenomena. For our model, we utilized domestic terrorism data from the GTD with PRIO-GRID measures. In particular, we use the following variables:

- Terrain: PRIO-GRID's measure assesses the percent of mountainous terrain within a cell. The definition of mountainous is drawn from UNEP World Conservation Monitoring Centre's (2002) *Mountain Watch Report*. To account for the potential diminishing returns of terrain for terrorism, we log this variable.

- Distance to border: This is adopted from PRIO-GRID and is measured as the logged straight-line distance from the cell centroid to the border of the nearest contiguous state.

- Capital Distance: Also from PRIO-GRID, this is the logged distance from the cell centroid to the state's capital.

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1   Nemeth *et al*. 2014.

2   START 2017.

3   Tollefsen et al. 2012.

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- <u>Economic development</u>: We use logged Gross Cellular Product (GCP), as well as a squared value of logged GCP to capture potential curvilinear effects relating to economic development and the risk of terrorism. This measure is adapted from Nordhaus's 2006 G-Econ dataset for use in the PRIO-GRID.[4] GCP is defined as the "gross value added in a specific geographic region; [calculated as the] total production ofmarket goods and services in a region fewerpurchases from otherbusinesses."[5]

- <u>Population</u>: This is the logged population of the cell. This is adapted by PRIO-GRID from the Gridded Population of the World Dataset.[6] Because these are available in five-year increments, we use STATA and interpolate across the missing years.

- <u>Population Density</u>: We use the population variable referenced above divided by PRIO-GRID's measure of cell area. This result, which we log, provides us with the average number of people per square kilometer of each cell.

- <u>Excluded Ethnic groups</u>: This is measured as the average number of ethnic groups residing in the cell that are defined as "excluded" by the Ethnic Power Relations (GeoEPR) database.[7]

- <u>Spatial lag</u>: This is measured as the number of contiguous cells experiencing a terrorist attack over the total number of contiguous cells.

Using Stata, we estimated a logit model with the above variables with standard errors clustered on the county. Then, we generated in-sample predictions for each cell/year from 1990–2010. We then average these predictions to generate one value for each cell. This results in predictions for roughly 95 percent of the Earth's surface. Lastly, we utilized ArcMap 10.4 to assign the cells and the predictions to the correct location.

Our map demonstrates that the prevailing narrative regarding terrorism is incorrect. The risk of domestic terrorism varies greatly across the world, within countries, and even within their administrative units. Most of the world's population lives in areas where terrorism is not a significant risk at all. Even in those areas where the risk is heightened, the risk is often very low. Areas with the most significant risks are those that have experienced low-running conflict or neighbor those places that do. This suggests that terrorism is most often used in complement with these other forms of violence.

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4   Nordhaus 2006.

5   *Ibid.*, 3511.

6   CIESIN 2005.

7   Vogt *et al*. 2015; Wucherpfennig *et al*. 2011.

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Average Annual Risk of Terrorism, 1990-2010

- 0.00% - 0.95%
- 0.95% - 3.86%
- 3.86% - 10.52%
- 10.52% - 24.23%
- 24.23% - 43.96%
- Missing Data

Miles
0   950   1,900   3,800   5,700   7,600

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Data Sources: Global Terrorism Database, PRIO-GRID, Ethnic Power Relations Dataset

Map Source: US National Park Service

South Asia

Israel and Surrounding States