


# Meta-Analysis and the Integration of Terrorism Event Databases

Timothy Lee Jones, University of Michigan, USA\*

 <https://orcid.org/0000-0002-9289-0121>

## ABSTRACT

Why do terrorist attacks occur in certain places and times but not others? Despite advances in collection and empirical methods, the literature has produced divergent results and reached little consensus for common hypotheses about the economic, political, and social causes of terrorism. It is hard to know what to make disagreements as studies adopt disparate research designs using different datasets covering different locations and times. This article applies the xSub data protocol to conduct a meta-analysis of terrorism event datasets and isolate explanations for variations in findings. Although the datasets are constructed for different purposes by different research teams, with different inclusion standards, processing data onto a common event typology, and conducting analysis across common coverage reduces heterogeneity in findings. This protocol also facilitates comparisons with general conflict event datasets, providing researchers, policymakers, and practitioners with a broader context for understanding terrorism in relation to other forms of violence.

## KEYWORDS

Data Integration, Event Data, Meta-Analysis, Political Violence, Subnational, Terrorism

## INTRODUCTION

One of the most widely studied questions in contemporary political science is why terrorism occurs in certain places and times but not others. Since the year 2000, an article on this topic has appeared in, on average, every fourth issue of the *American Political Science Review*, every fifth issue of *International Organization*, and every third issue of *The Journal of Conflict Resolution*. There are currently at least nine peer-reviewed journals dedicated exclusively to the study of this phenomenon and dozens of terrorism databases and datasets have been constructed for associated analysis (SCImago, 2022; Bowie, 2021; Chenoweth, 2019). Despite the scale of this combined research effort, scholars have reached little consensus on the empirical determinants of terrorism. In the analysis of political, economic, and social factors, studies have recorded contradictory findings in signs, size, and significance in their findings. Why do studies on the same topic report such divergent results? Are these differences driven by some underlying heterogeneities and causal complexities or by differences in scope conditions, the usage of disparate datasets, or other some other elements of research design?

This article outlines a systematic approach for researchers to conduct cross-dataset comparisons, isolate sources of variation in empirical findings, and determine the robustness or uniqueness of

DOI: 10.4018/IJCWT.335944

\*Corresponding Author

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

determinants in the context of terrorism and other forms of political violence. To demonstrate the utility of this process, the author assembles three of the largest and most widely used terrorism datasets and applies the Cross-National Data on Sub-National Violence (xSub) data integration protocols to process event data into a common event typology with consistent categories and units by space (country, province, district, grid cell), time (year, month, week, day), and target (Zhukov et al., 2019). After processing the events onto a common typology, these standardized measures are combined with data for economic conditions, regime type, demographics, and weather and fit empirical models across a common set of spatial-temporal coverage and scales. Once these data are harmonized onto a standardized event typology with consistent categories and the analysis is confined to shared spatio-temporal dimensions, the findings exhibit greater consistency. Past divergences observed in cross-national studies may, in part, reflect that relationships between common correlates of terrorism are context-specific, and vary across different time periods and geographical locations examined in individual studies.

Terrorism research would also benefit from a process by which scholars can more confidently compare findings between terrorism datasets and general conflict event datasets that capture other forms of political violence, often perpetrated by the same actors. Our understanding of terrorism remains incomplete when studied in isolation as, “most uses of terror actually occur as complements or as byproducts of struggles in which participants...are engaging simultaneously or successively in other more routine varieties of political claim making” (Tilly, 2004). In fact, many hypothesized determinants of terrorism are shared with other forms of violent contention. Therefore, a framework, such as that presented in this article, which facilitates such a comparison, has the potential to provide additional insight into whether certain correlates explain the occurrence of terrorism or simply rebellion in general (Beuno De Mesquita, 2005).

Consider recent events in Afghanistan. The Taliban, an entity that has oscillated between status of an incumbent government and an insurgent organization, has employed a spectrum of political violence. Some of these actions, particularly indiscriminate attacks on civilians, align with most scholarly definitions of terrorism. Consequently, these events are likely to be reflected in terrorism event databases. However, what about other forms of violence in which the Taliban is engaged, such as skirmishes with Pakistani border guards or the former Afghan Army? What about the violence they pursue now that they have regained control in Afghanistan? Most terrorism databases exclude acts carried out by state forces. Therefore, if we exclusively consider events involving the Taliban using only terrorism event databases, we are likely to obtain an incomplete picture regarding the determinants of when they use terrorism or other forms of violence.

As such, this article compares findings from the terrorism event databases with some of the general conflict datasets already available in the xSub repository.<sup>1</sup> Additionally, the author demonstrates how this protocol facilitates the integration of the databases using the Merging Event Data by Location, Time, and Type (MELTT) software package, which can help account for missingness and provide more comprehensive coverage of violence for researchers (Donnay et al., 2018).

The contributions of this exercise are threefold. First, this type of meta-analysis helps identify factors driving the heterogeneity of results. Adopting a consistent set of data aggregation standards allows us to isolate the role of specific research design decisions, such as sampling variation across datasets or differences driven by model specification. Second, by carrying out hypotheses testing in the broadest of empirical settings, at different levels of analysis, it allows scholars to systematically assess whether their geographic and temporal scope conditions are valid and whether the types of empirical phenomena to which a given theory applies are narrower (or more general) than initially specified. Finally, this process can reduce barriers to conducting comparative research of different forms of political violence, facilitating discovery of previously unknown heterogeneities or phenomenon while opening new lines of inquiry. While the xSub protocol has been applied to 22 different conflict databases, this is the first time it has been applied to terrorism event datasets. Scholars can find replication code online, which can be customized to align with variation in researchers’ definitions of terrorism or to account for specific research questions.<sup>2</sup>

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/article/meta-analysis-and-the-integration-of-terrorism-event-databases/335944](http://www.igi-global.com/article/meta-analysis-and-the-integration-of-terrorism-event-databases/335944)

## Related Content

---

### The Need for a National Data Breach Notification Law

Kirk Y. Williams (2016). *National Security and Counterintelligence in the Era of Cyber Espionage* (pp. 190-202).

[www.irma-international.org/chapter/the-need-for-a-national-data-breach-notification-law/141046](http://www.irma-international.org/chapter/the-need-for-a-national-data-breach-notification-law/141046)

### #TerroristFinancing: An Examination of Terrorism Financing via the Internet

Michael Tierney (2018). *International Journal of Cyber Warfare and Terrorism* (pp. 1-11).

[www.irma-international.org/article/terroristfinancing/198315](http://www.irma-international.org/article/terroristfinancing/198315)

### IP-CHOCK Reference Detection and Prevention of Denial of Service (DoS) Attacks in Vehicular Ad-Hoc Network: Detection and Prevention of Denial of Service (DoS) Attacks in Vehicular Ad-Hoc Network

Karan Verma (2021). *Research Anthology on Combating Denial-of-Service Attacks* (pp. 579-601).

[www.irma-international.org/chapter/ip-chock-reference-detection-and-prevention-of-denial-of-service-dos-attacks-in-vehicular-ad-hoc-network/262001](http://www.irma-international.org/chapter/ip-chock-reference-detection-and-prevention-of-denial-of-service-dos-attacks-in-vehicular-ad-hoc-network/262001)

### Cyber Security Models

Norman F. Schneidewind (2007). *Cyber Warfare and Cyber Terrorism* (pp. 228-240).

[www.irma-international.org/chapter/cyber-security-models/7460](http://www.irma-international.org/chapter/cyber-security-models/7460)

### Multi-Contextual Analysis of Internet Security Perception and Behavior: Perspectives of Anglophone and Francophone Internet Users

Alfred Paa Gyaisay and Acheampong Owusu (2022). *International Journal of Cyber Warfare and Terrorism* (pp. 1-20).

[www.irma-international.org/article/multi-contextual-analysis-of-internet-security-perception-and-behavior/305243](http://www.irma-international.org/article/multi-contextual-analysis-of-internet-security-perception-and-behavior/305243)