

Terrorism and Freedom of Expression

An Econometric Analysis

Author:
Wah-Kwan Lin

Faculty Advisor:
Professor Carolyn Gideon



THE FLETCHER SCHOOL
TUFTS UNIVERSITY

Master of Arts in Law and Diplomacy Capstone Project

©2014 Wah-Kwan Lin

Abstract

We apply empirical methods to examine the relationship between the frequency of terrorist incidences and freedom of expression, which we measure using Freedom House's Freedom of the Press report, and access to landline telephones, mobile phones, and the Internet. Using standard ordinary least squares econometric methods, we ultimately find that greater mobile phone access tends to increase the frequency of terrorist incidences at a diminishing rate and that greater Internet access tends to decrease the frequency of terrorist incidences at a diminishing rate. On average, the frequency of terrorist incidences is highest when societies have access to 137.89 mobile phone subscriptions for each 100 people, and lowest when the percentage of people with Internet access is at 64.79%. Based on our results, we cannot conclude that either freedom of the press or landline telephone access have any statistically significant influence on the frequency of terrorist incidences.

Contents

- 1 Introduction** **6**

- 2 Literature Review** **8**
 - 2.1 Terrorism 8
 - 2.2 Freedom of Expression 12
 - 2.3 Terrorism and Freedom of Expression 15

- 3 Analytic Framework** **21**
 - 3.1 Terrorism 21
 - 3.1.1 Measuring Terrorism 22
 - 3.1.2 Factors Underlying Terrorism 22
 - 3.2 Freedom of Expression 23
 - 3.2.1 Components of Freedom of Expression 24
 - 3.2.2 Measuring Freedom of Expression 26
 - 3.3 Terrorism and Freedom of Expression 27
 - 3.3.1 Low Terrorism, Low Freedom of Expression 27
 - 3.3.2 Low Terrorism, High Freedom of Expression 29
 - 3.3.3 High Terrorism, Low Freedom of Expression 30
 - 3.3.4 High Terrorism, High Freedom of Expression 32
 - 3.4 Other Factors of Terrorism 33
 - 3.4.1 Regime Instability 34

3.4.2	Regime Type	35
3.4.3	Corruption	36
3.4.4	Political Violence	37
3.4.5	Economic Prosperity and Inequality	39
3.4.6	Literacy	40
3.4.7	Ethnic, Linguistic, and Religious Diversity	41
4	Model and Analysis	43
4.1	Model	43
4.2	Analysis	47
5	Conclusion	57
A	Data	62

List of Tables

4.1	Summary of Terrorist Incidences by Year	45
4.2	First Order Correlates	48
4.3	Variance Inflation Factors (VIF) — All Variables	49
4.4	Variance Inflation Factors — Regime Instability Removed	50
4.5	Summary of Regression Results	52
4.6	Summary of Joint Hypothesis Tests	55
A.1	Summary of Original Data	64
A.2	Summary of Transformed Data	65
A.3	Summary Statistics of Transformed Data	66

List of Figures

3.1	A Framework for Examining Terrorism and Freedom of Expression	28
4.1	Terrorist Incidences vs. Elements of Freedom of Expression	44
5.1	Terrorist incidences vs. Elements of Freedom of Expression — Results	58

Chapter 1

Introduction

“They who would give up essential Liberty, to purchase a little temporary Safety, deserve neither Liberty nor Safety.”

— *Benjamin Franklin*

There is a perpetual balance between security and liberty. Societies can attempt to provide for greater degrees of security, at the expense of liberty. Alternatively, societies can risk greater threats to security, while preserving the sanctity of liberty. The question of balancing security and liberty is particularly germane in the consideration of the relationship between terrorism and freedom of expression. There is often an assumption that freedom of expression may be constrained for the purpose of deterring terrorism. Yet, how effective exactly are constraints on freedom of expression in deterring acts of terrorism? Is it possible that restrictions imposed on the freedom of expression are actually contributing factors to the severity of terrorism?

The purpose of this study is to address one central question: what is the relationship between terrorism and freedom of expression? To date, this question has not been examined rigorously or empirically, yet its potential implications in terms of understanding terrorism and countering terrorism is possibly quite significant.

This study is structured as follows. Chapter 2 presents a literature review of the research and writing that has already been produced on terrorism, freedom of expression, the linkage

between terrorism and freedom of expression, and it also highlights the existing gaps in the literature that relates terrorism to freedom of expression. Chapter 3 outlines a framework for how to conceptualize the relationship between terrorism and freedom of expression, as well the analytical approach necessary to discern the relationship between terrorism and freedom of expression. Chapter 4 constructs an econometric model that would be appropriate to developing an understanding of the relationship between terrorism and freedom of expression. Chapter 4 also presents the quantitative results from the econometric analysis. Chapter 5 concludes this study.

Chapter 2

Literature Review

A significant body of research and writing has been produced relating terrorism to freedom of expression. Much of the existing literature reflects on the methods by which terrorism has utilized the communications opportunities made available through allowances of freedom of expression, the influence that specific aspects of freedom of expression has on the the occurrence of terrorist incidences, the possible challenges that particular elements of freedom of expression can pose for terrorism, and based on presumed understandings of the factors driving terrorism, much of the existing literature also prescribes counter-terrorism measures that might indirectly impair freedom of expression. However, there remain significant deficiencies in the existing literature relating terrorism and a holistic examination of freedom of expression. In this chapter, we elaborate on the literature that has already been produced on terrorism, freedom of expression, and the intersection of terrorism and freedom of expression. We also highlight voids in the current terrorism and freedom of expression literature that this study hopes to fill.

2.1 Terrorism

Terrorism is a remarkably difficult concept to define, and a great deal of the existing literature on terrorism has focused explicitly on clarifying its definition, which is highly beneficial

for our study as we attempt to conceptualize terrorism. Bruce Hoffman, a renowned scholar of terrorism, commits a substantial section of his book, *Inside Terrorism*, to examining the varying definitions of terrorism. According to Hoffman, in common usage, the term “terrorism” has been imprecisely applied to a wide range of violent activities, oftentimes without adequate consideration of the greater complexities that might underly the acts of violence. As a result, such disparate occurrences as assassinations, bombings, prescription drug contaminations, and massacres of civilians by military forces have all been described as terrorist activities at some point.¹ Oftentimes, the term “terrorism” is used interchangeably with “insurgency,” “revolution,” and “crime,” amongst other categorizations of violent activities, without any clear distinction between the different forms of violence. Furthermore, similar cases of violence have not been consistently described as terrorism, leading to a further confounding of the understanding of what exactly terrorism entails. For example, the 2013 Boston Marathon bombing was promptly described by the media and government spokespersons alike as being an act of terrorism, even when the motives or actors behind the bombing had not yet been identified. However, other relatively contemporary acts of indiscriminate mass violence, such as the Tucson mass shooting of a constituent meeting hosted by U.S. Representative Gabrielle Giffords or the Sandy Hook elementary school shooting, were rarely described as terrorism.²

Hoffman also elaborates that terrorism as a term has also evolved over time, further complicating its usage. As a label, terrorism has transformed from a benign descriptor to a pejorative term.³ In the past, violent groups did not resist the label of “terrorist.” In fact, past actors who carried out acts of violence often proudly identified themselves as terrorists. For example, David Rapaport, in his article, “The Four Waves of Terrorism,” presents a case from 1878, where Russian anarchist Vera Zasulich proudly declared that she

1. Bruce Hoffman, *Inside Terrorism* (New York, New York: Columbia University Press, 2006), 1.

2. Glenn Greenwald, “Why is Boston ‘terrorism’ but not Aurora, Sandy Hook, Tucson and Columbine? Can an act of violence be called ‘terrorism’ if the motive is unknown?,” *The Guardian*, Accessed 2013 December 13, 2013, <http://www.theguardian.com/commentisfree/2013/apr/22/boston-marathon-terrorism-aurora-sandy-hook>.

3. Hoffman, *Inside Terrorism*, 21, 23.

was a “terrorist, not a killer” after attacking a Russian police commander.⁴ Today however, different actors and groups actively avoid being described as terrorists, and often adopt labels that conjure connotations of liberation (e.g., Freedom for the Basque Homeland), defense (e.g., Jewish Defense Organization), military organizations (e.g., the Popular Liberation Army), righteousness (e.g., the Organization for the Oppressed on Earth), or are simply neutral (e.g., al-Qaeda, Arabic for the “base of operation” or “foundation”).⁵

Hoffman further explains that in the modern era, the term “terrorism” carries negative connotations and is typically used to describe enemies and opponents. The term is itself imbued with moral judgment, and rather than being neutral and objective, labeling individuals or groups as terrorists is highly subjective and dependent on perspective. As a result, violent acts carried out against groups that one is more sympathetic to tend to be regarded as acts of terrorism, whereas violence committed against other groups that are not regarded as sympathetically tend not be described as terrorism. For example, the Nazis characterized the resistance groups that they faced in occupied territories as terrorists, while sympathizers regarded those same resistance groups as liberators.⁶

Those who study terrorism have attempted to develop a precise, inclusive, and infallible definition of terrorism. However, as Audrey Kurth Cronin points out, given the inherently subjective nature of terrorism, constructing a universally accepted definition of terrorism is inevitably a futile endeavor.⁷ Even departments or agencies within the same government may differ over the proper definition of terrorism, as revealed by the varied definitions of terrorism used by the U.S. Federal Bureau of Investigation, the U.S. Department of Homeland Security, the U.S. Department of Defense, and the U.S. Department of State.⁸

Nonetheless, Hoffman and many other terrorism scholars indicate that there are a num-

4. David Rapoport, “The Four Waves of Terrorism,” in *Attacking Terrorism: Elements of a Grand Strategy*, ed. Audrey Kurth Cronin and James M. Ludes (Washington, DC: Georgetown University Press, 2004), 50.

5. Hoffman, *Inside Terrorism*, 22.

6. *Ibid.*, 23-24.

7. Audrey Kurth Cronin, “Behind the Curve: Globalization and International Terrorism,” in *Terrorism and Counterterrorism: Understanding the New Security Environment*, 4th, ed. Russell D. Howard and Bruce Hoffman (McGraw Hill, 2012), 58-59.

8. Hoffman, *Inside Terrorism*, 30-32.

ber of characteristics that are common for almost all acts that may be considered terrorism. Despite how alien the acts of indiscriminate violence may appear to civil society, terrorism is neither random nor senseless, but rather the product of rational decision-making.⁹ Terrorism is an instrument intended to create power for those that do not have it by manipulating public sentiments in a manner that grants the perpetrators of violence leverage and influence to effect change at a local or international level.¹⁰ Alex P. Schmid suggests that the power to influence is derived through instilling fear in a broader audience than those directly influenced by particular acts.¹¹ Terrorism is fundamentally political in nature, and its aims are to reconstitute the existing political order into a more preferable form as perceived by the perpetrators.¹² Additionally, terrorism is necessarily violent or threatening. An act that does not instill fear through violence — whether actual or merely implied — can hardly be regarded as terrorist.¹³ Furthermore, terrorism is conducted by non-state actors. While states do use violence to advance political ends, and oftentimes with the intent of terrorizing populations, their actions are more appropriately characterized as military actions or oppression.¹⁴

Much of the existing literature on terrorism reflects on its underlying rationale and triggers. Terrorism, as Martha Crenshaw argues in her article, “The Logic of Terrorism: Terrorist Behavior as a Product of Strategic Choice,” is not the manifestation of pathological or unreasonable proclivities, but is a calculated strategy selected from a range of possible courses of action based on the prevailing circumstances.¹⁵ Crenshaw maintains that the decision to engage in terrorism is purely a rational choice based on politics and strategy. Terrorism is but one of many possible options that may be pursued in modifying the status quo, and

9. Hoffman, *Inside Terrorism*, 173.

10. *Ibid.*, 41.

11. Alex P. Schmid, “Frameworks for Conceptualising Terrorism,” *Terrorism and Political Violence* 16, no. 2 (2004): 207.

12. Hoffman, *Inside Terrorism*, 2-3.

13. Schmid, “Frameworks for Conceptualising Terrorism,” 207.

14. Cronin, “Behind the Curve: Globalization and International Terrorism,” 59.

15. Martha Crenshaw, “The Logic of Terrorism: Terrorist Behavior as a Product of Strategic Choice,” in *Terrorism and Counterterrorism*, 4th ed., ed. Bruce Hoffman and Russell D. Howard (McGraw Hill, 2012), 43.

when terrorist incidences do occur, it is because a rational cost-benefit analysis has determined that terrorism is the most sensible and effective course of action.¹⁶ James Forest, in “Terrorism as a Product of Choices and Perceptions,” argues that the fundamental trigger of terrorism is the individual. He acknowledges that there are many root causes — or what he terms “risk factors”¹⁷ that may contribute to the outbreak of terrorism — but ultimately, Forest maintains that terrorist actions are the direct results of individuals deciding to act. The individuals’ choice to engage in terrorism is motivated by a range of personal characteristics, such as socioeconomic perception and religion, as well as influences from environmental conditions.¹⁸

This current study does not attempt to contribute to the definitional aspects of the terrorism literature. However, this study does integrate the definitional elements of the existing terrorism literature to frame the analysis. Furthermore, this study does not seek to expand on the broad range of underlying rationales and triggers that influence the occurrence of terrorist incidences, but rather focuses exclusively on the relationship between terrorism and freedom of expression, and tangentially incorporates other factors of terrorism in an effort to isolate the direct linkage between terrorism and freedom of expression.

2.2 Freedom of Expression

The subject of freedom of expression has been a matter of great interest for the international community. Consequently, freedom of expression has been comprehensively considered, examined, and ultimately defined. On December 10, 1948, the United Nations General Assembly approved the Universal Declaration of Human Rights. The Declaration, which had been passed with a vote of forty-eight to zero and eight abstentions, was intended to

16. Crenshaw, “The Logic of Terrorism: Terrorist Behavior as a Product of Strategic Choice,” 42-44.

17. James J.F. Forest, “Terrorism as a Product of Choices and Perceptions,” in *Terrorism and Counterterrorism: Understanding the New Security Environment*, 4th, ed. Russell D. Howard and Bruce Hoffman (McGraw Hill, 2012), 110.

18. *Ibid.*, 114-115.

embody a common set of universal aspirations for humanity.¹⁹ Article 19 of the Universal Declaration of Human Rights specifically codified freedom of expression as an essential right for all people, stating:

Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.²⁰

The principles stipulated in the Universal Declaration of Human Rights were subsequently formalized as legally binding treaty commitments with the ratification of the International Covenant on Civil and Political Rights. Article 19(2) of the Covenant, which expanded on the definition of freedom of expression provided for in the Universal Declaration of Human Rights, stipulates:

(2) Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice.²¹

Despite the central importance of freedom of expression, it is also commonly understood that the freedom of expression is not an absolute right. Under particular conditions, as Toby Mendel points out, freedom of expression can legitimately be constrained.²² Article 19(3) of

19. Lawrence Ziring, Robert E. Riggs, and Jack C. Plano, *The United Nations: International Organization and World Politics*, 4th ed. (Belmont, CA: Thomas Wadsworth, 2005), 407.

20. United Nations, "The Universal Declaration of Human Rights," United Nations, Accessed 2013 November 15, <http://www.un.org/en/documents/udhr/index.shtml>.

21. United Nations Office of the High Commissioner for Human Rights, "International Covenant on Civil and Political Rights," United Nations Office of the High Commissioner for Human Rights, Accessed 2013 November 15, <http://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx>.

22. Toby Mendel, "Restricting Freedom of Expression: Standards and Principles: Background Paper for Meetings Hosted by the UN Special Rapporteur on Freedom of Opinion and Expression, March 2010," Center for Law and Democracy, Accessed 2013 November 15, 2010, 1, <http://www.law-democracy.org/wp-content/uploads/2010/07/10.03.Paper-on-Restrictions-on-FOE.pdf>.

the International Covenant on Civil and Political Rights specifies the conditions under which freedom of expression may be constrained:

The exercise of the rights provided for in paragraph 2 of this article carries with it special duties and responsibilities. It may therefore be subject to certain restrictions, but these shall only be such as are provided by law and are necessary:

- (a) For respect of the rights or reputations of others;
- (b) For the protection of national security or of public order (*ordre public*), or of public health or morals.²³

In sum, based on past examinations of freedom of expression, it can be understood as a conditional right that generally permits all people to hold their own opinions, to convey information and ideas as they wish through any medium of their choosing, and to freely obtain information and ideas, except for situations where the practice of such freedom of expression might result in harm to others' rights and reputations, or present a risk of harm to national security, public order, public health, or public morals.

Though freedom of expression has commonly been acknowledged as a fundamental human right worthy of preservation, there exists no precise and explicit universal definition of what freedom of expression entails. At its most basic, freedom of expression is understood to encompass the right to convey messages and the right to seek out and receive information. Beyond this generalized conception of freedom of expression however, there is a great deal of divergence between different countries' interpretations of freedom of expression, and correspondingly, the appropriate conditions under which freedom of expression may be restricted. The laws and regulations that aim to protect freedom of expression and to restrict it vary dramatically from country to country as a result of such differences in understanding. As Kurt Wimmer highlights, even amongst Western democratic countries that share many

23. United Nations Office of the High Commissioner for Human Rights, "International Covenant on Civil and Political Rights."

historical and cultural commonalities, there is a great deal of disagreement on what freedom of expression precisely entails and when it is appropriate to curtail freedom of expression.²⁴ Furthermore, even within particular societies and countries, values may evolve over time, leading to changes in what is protected by restrictions on freedom of expression.²⁵

This study will adopt a particular definition of freedom of expression to facilitate its analysis. As the existing literature suggests, any definition adopted will likely be characterized by some degree of subjectivity and may not be universally embraced. Nonetheless, some form of definition for freedom of expression will be necessary to frame this study's analysis.

2.3 Terrorism and Freedom of Expression

There is a great deal of literature that suggests linkages — both positive and negative — between terrorism and freedom of expression. Much of the existing literature posits that the danger of terrorism is exacerbated by the privileges allowed for by freedom of expression. According to Hoffman, terrorist movements have persistently exploited the opportunities made available in environments that allow for any degree of freedom of expression. He highlights cases over the span of the past two centuries where terrorists have leveraged the “old media” — such as print, radio, and television — and the “new media” — such as digital communications and the Internet. Hoffman, through a detailed account of historical cases of terrorism, illustrates that terrorist movements have been highly dependent on the communications opportunities made available by the old media. Old media coverage has provided terrorist groups with significant tactical and strategic advantages, as demonstrated by the Irish Republic Army's ability to sway public opinion against the British government.²⁶ Similarly with the rise of new media, terrorist movements have been able to circumvent tra-

24. Kurt Wimmer, “Toward a World Rule of Law: Freedom of Expression,” *Annals of the American Academy of Political and Social Science* 603 (2006): 202-203.

25. Mendel, “Restricting Freedom of Expression: Standards and Principles: Background Paper for Meetings Hosted by the UN Special Rapporteur on Freedom of Opinion and Expression, March 2010,” 13.

26. Hoffman, *Inside Terrorism*, 177.

ditional media outlets to satisfy their publicity needs.²⁷ New media instruments have allowed terrorist movements to rapidly, pervasively, and inexpensively communicate with audiences and collaborators at will. Through modern communications, terrorist movements have become better equipped to engage in “perception management,” to engage in information dissemination, to raise funds, and to sustain effective command and control over terrorist operations.²⁸

The available literature also suggests that the relationship between terrorism and communication is so entwined that terrorism *is* communication and can only exist where freedom of expression is permitted. In the article, “Frameworks for Conceptualising Terror,” Alex Schmid reasons that terrorism — which has in the past been referred to as “propaganda by the deed” — is effectively an amalgam of violence of propaganda.²⁹ Terrorism cannot be understood outside of its intent to communicate some message. Echoing Walter Lippmann’s discussion of the “pictures in our heads,” Schmid posits that terrorism, by operating through mass media, can alter the *subjective* world, the interpretation of the world that people maintain in their minds as a result of stimuli from media.³⁰ The value of terrorism arises not from the direct influence of its acts, which is comparatively inconsequential at the macro-level in terms of direct influence, but from the symbolic and subjective influence of its acts that are communicated to the world at large.³¹ By extension, if terrorism is communication, and communication is dependent on allowances for freedom of expression, then higher degrees of freedom of expression would permit for the precipitant conditions necessary to foster terrorism.

Much of the existing literature examines how freedom of expression and its core instruments in the modern era — such as the Internet — have been essential to the very existence and perpetuation of terrorist movements. For instance, Jarret M. Brachman, in “Going Vi-

27. Hoffman, *Inside Terrorism*, 198.

28. *Ibid.*, 202.

29. Schmid, “Frameworks for Conceptualising Terrorism,” 205-206.

30. *Ibid.*, 208-209.

31. *Ibid.*, 205.

ral: Al-Qaeda's Use of Online Social Media," focuses on how al-Qaeda has leveraged modern information and communication technologies to great effect. Brachman argues that it has largely been due to the Internet that al-Qaeda — formerly structured as a hierarchical organization — has managed to transform itself into an "organic social movement" that is flexible enough to operate without a physical base of operation or a central leadership, and thus better resist the existential threats posed by state counter-terrorism efforts.³² In addition to using modern communication tools to recruit members, collect donations, and plan attacks, al-Qaeda has also turned to the Internet and other communication platforms to shape the worldview of masses to be sympathetic to al-Qaeda's cause.³³ al-Qaeda has demonstrated a remarkable adroitness in exploiting digital communications, as demonstrated by their effort to turn support of al-Qaeda into a socially-interactive online game through a process of "gamification" that rewards digital supporters with "reputation points." Though such online games may not have any direct material impact, it has been leveraged to attract susceptible Muslim youth and other potential bases of support.³⁴

Terrorist actors have themselves written extensively on the linkage between terror campaigns and freedom of expression. Notable terrorist strategists and representatives have extolled the power of the media in amplifying the capabilities of terrorist movements. For example, Carlos Marighela, a Brazilian urban guerilla who contributed to terrorism theory, developed a set of five principles for terrorist activity:

1. "Terrorist acts should be aimed at the audience, the general public;
2. Victims should be chosen for their symbolic meaning;
3. The media are eager to cover terrorist violence;
4. The media can be activated, directed, and manipulated for propagandistic effect; and
5. Governments are at a disadvantage because their only choice is between censorship

32. Jarret M. Brachman, "Going Viral: Al-Qaeda's Use of Online Social Media," chap. 5.6 in *Terrorism and Counterterrorism: Understanding the New Security Environment*, 4th, ed. Bruce Hoffman and Russell D. Howard (361-371: McGraw Hill, 2012), 361.

33. Ibid., 362.

34. Ibid., 365-366.

and letting terrorists make use of their media.”³⁵

Conversely, much of the existing literature also examines how freedom of expression, rather than enabling terrorism, can facilitate challenges to terrorism. Philip Seib, in “Public Diplomacy, New Media, and Counterterrorism,” discusses how public diplomacy can serve as an effective preventive measure to reduce the likelihood of terrorism. Public diplomacy refers to the practice of governments directly reaching out to foreign populations rather than foreign governments. For the purpose of countering terrorism, such outreach efforts can be structured to communicate ideas and narratives that undermine support for terrorist movements.³⁶ Such efforts to challenge terrorism can be conveyed through traditional communications mediums like television or through comparatively more modern channels like the Internet.³⁷ According to Joseph Nye, the effort to challenge extremism requires the use of “soft or attractive power to disseminate a positive narrative about globalization and the prospects for a better future that attracts moderates and counters the poisonous jihadist narratives” — or for that matter, other forms of violence-inciting messages — “on the Web.”³⁸ For such counter-narratives to be viable however, there must necessarily be a foundation of freedom of expression that permits for the free flow of information and ideas.

Much of the work that has been done on terrorism and freedom of expression are often inherently prescriptive and to an extent biased, rather than descriptive and neutral. Such writing often embraces implicit assumptions about the relationship between terrorism and freedom of expression. Oftentimes, the assumption is that more freedom of expression results in more terrorism, and that curtailing freedom of expression would be an effective means of reducing the frequency of terrorist incidences. For example, Dr. Yaël Ronen in his article, “Terrorism and Freedom of Expression,” reflects on counter-terrorism efforts that

35. Schmid, “Frameworks for Conceptualising Terrorism,” 208.

36. Philip Seib, “Public Diplomacy, New Media, and Counterterrorism,” in *Terrorism and Counterterrorism: Understanding the New Security Environment*, ed. Russell D. Howard and Bruce Hoffman (New York, NY: McGraw Hill, 2012), 624, 626.

37. *Ibid.*, 627, 629.

38. *Ibid.*, 635.

have focused on constraining freedom of expression as part of a broader effort to restrict the spread of terrorist ideology. In particular, Ronen discusses the passage of such measures as UN Resolution 1624 in the aftermath of the July 2005 London suicide bombings, which condemns the incitement of terrorist violence and encourages constraints to be imposed on particular forms of communication that might incite support for terrorism.³⁹ Criminalization of terrorist incitement — in effect a constraint on freedom of expression — has broadly been assumed to be an effective preventive measure against terrorism.⁴⁰

Efforts have been made to apply quantitative analysis to understanding the precipitant causes of terrorism. For instance, Jessica Teets and Erica Chenoweth, in “To Bribe or to Bomb: Do Corruption and Terrorism Go Together?” have attempted to apply econometric methods to examine the connection between public corruption and terrorism. Based on their statistically significant results, Teets and Chenoweth ultimately conclude that corruption does not motivate terrorism, though corruption might facilitate terrorism.⁴¹ Similarly, S. Brock Blomberg, Gregory D. Hess, and Akila Weerapana in “Economic Conditions and Terrorism” apply econometric methods to examine the relationship between terrorism and economic conditions. Through their analysis, they conclude that cycles of economic weakness tend to heighten the severity of terrorism.⁴² However, similarly quantitative methods have not been applied to examining the intersection between terrorism and freedom of expression.

Our literature review reveals that there is a widespread belief that terrorism and freedom of expression are in some manner linked. However, little empirical analysis has been attempted to understand the nature of the linkage. Scholarly research that has utilized quantitative methods to examine the the relationship between terrorism and other potential precipitant factors demonstrates that examining terrorism quantitatively can be quite

39. Yaël Ronen, “Terrorism and Freedom of Expression,” *International Law Forum at the Hebrew University of Jerusalem*, nos. 07-12 (2012): 1-2.

40. *Ibid.*, 7.

41. Jessica Teets and Erica Chenoweth, “To Bribe or to Bomb: Do Corruption and Terrorism Go Together?,” in *Corruption, Global Security, and World Order*, ed. Robert Rotberg (Brookings Institution Press, 2009), 179-180.

42. S. Brock Blomberg, Gregory D. Hess, and Akila Weerapana, “Economic Conditions and Terrorism,” *European Journal of Political Economy* 20, no. 20 (2004): 463-478.

revealing and effective. This study thus represents an effort to fill the quantitative gap in the literature that relates terrorism and freedom of expression.

Chapter 3

Analytic Framework

3.1 Terrorism

We adopt the Global Terrorism Database's (GTD) definition of terrorism:

... the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation.¹

The GTD applies particular standards in identifying unique instances of terrorism. For an event to be considered a unique terrorist incident in the GTD, it must have been the result of an intentional action by a perpetrator, it must entail some form of actual or threatened violence directed at people or property, and the perpetrators of the incident must be non-state actors.² Incidences that occur within the same geographic area and within the same time frame are considered to be part of the same terrorist incident.³

1. National Consortium for the Study of Terrorism and Responses to Terrorism (START), "Global Terrorism Database: Codebook," 2013, 7, http://www.start.umd.edu/gtd/downloads/dataset/GTD_Codebook_2013Final.pdf.

2. Ibid., 7-8.

3. Ibid., 8-9.

3.1.1 Measuring Terrorism

Terrorism may be quantified along a number of possible dimensions, including:

- Frequency of terrorist incidences
- Number of casualties and deaths from terrorist incidences
- Cost in property damage resulting from terrorist incidences
- Number of active terrorists and terrorist organizations
- Number of supporters or sympathizers of terrorism
- Scale of terrorist resources

The most directly observable dimension of terrorism are terrorist incidences that may simply be counted. For a terrorist incident to occur, there must be an active choice to engage in violence.⁴ Counts of terrorist incidences therefore serves as an indirect measure of individuals' choices to engage in terrorism. We acknowledge that simply counting the number of terrorist incidences as a means of measuring terrorism ignores many significant aspects of terrorism. However, such a count of terrorist incidences provides a highly neutral measure of terrorism and is not subject to chance, as alternate measures like casualties inflicted or property damage caused might be.

For the purpose of this study, no distinction will be made between domestic terrorism, which is the commissioning of terrorist acts by individuals of domestic origin, and international terrorism, which is the commissioning of terrorist acts within a particular country by individuals of foreign origin. Oftentimes, the identity of the assailant remains unknown, rendering a distinction between domestic or international terrorism impossible to make.

3.1.2 Factors Underlying Terrorism

The severity of terrorism can be influenced by a wide range of factors, including individual characteristics (e.g., personal belief systems), organizational characteristics (e.g., group

4. Forest, "Terrorism as a Product of Choices and Perceptions," 115.

leadership), precipitant conditions (e.g., socioeconomic conditions), environmental triggers (e.g., traumatic events), opportunities to act (e.g., presence of weak governments), or global environment (e.g., inter-state conflict).⁵ This study is primarily concerned with structural factors that might influence the frequency of terrorist incidences. Environmental factors are fundamental to providing legitimacy and resonance to terrorism, and are central facilitators for terrorist activities.⁶ We do not consider individual characteristics and organizational characteristics.

This study's focus is on the relationship between freedom of expression and terrorism. To isolate the *ceteris paribus*⁷ effect of freedom of expression on terrorism however, this study will also account for other systemic factors that can influence the frequency of terrorist incidences as discussed in the Literature Review, including:

- Regime instability
- Regime type
- Perceived corruption
- Political violence
- Economic prosperity and inequality
- Literacy
- Ethnic, cultural, and religious diversity

3.2 Freedom of Expression

This study adopts the definition of freedom of expression provided in Article 19 of the International Covenant on Civil and Political Rights, which loosely defines freedom of expression as the freedom to “seek, receive and impart information and ideas.”⁸ We consider such a

5. Forest, “Terrorism as a Product of Choices and Perceptions,” 112.

6. Ibid., 121.

7. Latin for “all other things being equal”

8. United Nations, “The Universal Declaration of Human Rights.”

generalized definition for freedom of expression to be highly neutral.

3.2.1 Components of Freedom of Expression

Freedom of expression, as the ability to impart, seek, and receive information and ideas, is facilitated or constrained by a range of inter-related factors within any given society, including:

- Laws and regulations
- Operating environment
- Media independence
- Media pluralism
- Information and communication technology

Laws and Regulations Governments can directly curtail freedom of expression by censoring or penalizing particular forms of expression.⁹ Alternatively, governments can also facilitate freedom of expression by implementing measures that encourage pluralism in the media markets¹⁰ and that prevent excessive media concentration that might result in the silencing of particular voices.¹¹

Operating environment The operating environment, which consists of non-legislative and extra-judicial factors, can be facilitative or hostile to freedom of expression. Facilitative operating environments for freedom of expression present few conditions that might discourage individuals from disseminating or accessing information and ideas. Hostile operating environments present conditions that make it difficult or even dangerous for individuals to

9. Mendel, “Restricting Freedom of Expression: Standards and Principles: Background Paper for Meetings Hosted by the UN Special Rapporteur on Freedom of Opinion and Expression, March 2010,” 7, 11.

10. Gillian Doyle, *Media Ownership: The Economic and Politics of Convergence and Concentration in the UK and Europe Media* (London: Sage Publications, Inc.), 6.

11. Mendel, “Restricting Freedom of Expression: Standards and Principles: Background Paper for Meetings Hosted by the UN Special Rapporteur on Freedom of Opinion and Expression, March 2010,” 5-6.

exercise their freedom of expression, such as when journalists are subject to intimidation or violence by government agents or non-state actors.

Media independence Media independence is the extent to which media outlets are both willing and able to freely determine how to gather, analyze, and disseminate information and ideas. The levels of media independence in different societies can be influenced by the degree to which governments can directly exert control over media outlets, and the dependence of media outlets on governments for resources and information.¹² High degrees of media independence imply high levels of freedom of expression.

Media pluralism Media pluralism refers to the diversity of media content and media ownership within particular societies. Pluralism facilitates freedom of expression by allowing for the production of diverse content by different actors. Concentration of media ownership on the other hand reduces media pluralism, and constrains the range of views and opinions that may be expressed.¹³

Information and communication technology The availability of information and communication technology can directly enhance freedom of expression.¹⁴ Without the appropriate tools to seek, receive, and share information and ideas, freedom of expression would be significantly constrained, even if there are no overt constraints by such factors as government or media industry regulation. The instruments that are critical for freedom of expression in the modern age include landline telephones, mobile phones, and Internet access.

12. Gadi Wolfsfeld, *Media and Political Conflict: News From the Middle East* (New York, NY: Cambridge University Press, 1997), 59-60.

13. Doyle, *Media Ownership: The Economic and Politics of Convergence and Concentration in the UK and Europe Media*, 11-13.

14. Ithiel de Sola Pool, *Technologies of Freedom* (Cambridge, MA: Harvard University Press, 1983), 5.

3.2.2 Measuring Freedom of Expression

Given the significance of freedom of expression, efforts have been made to develop measures of freedom of expression that permit for comparison across different countries. The three most commonly referenced measures of freedom of expression are the annual Freedom of the Press report by Freedom House, the Press Freedom Index by Reporters Without Borders, and the Media Sustainability Index by the International Research and Exchanges Board (IREX). None of these measures are perfect, each has been criticized to some extent, and all have introduced some degree of subjectivity into their methodologies.¹⁵ However, the fact that each of these measures are all fairly consistent in their assessments of freedom of expression lends some faith to the fairness of the methodologies applied.¹⁶

For this study, we utilize the Freedom of the Press as a component of our measure of freedom of expression because of the richness of its data set. The Freedom of the Press report assesses countries' legal, political, and economic environments.¹⁷ Countries are rated on a 100-point scale, where lower scores correspond to higher degrees of freedom.¹⁸ To enhance the intuitive interpretation of the Freedom of the Press measure, we invert the scale in this study so that higher values correspond to greater freedom.

While the Freedom of the Press report does account for environmental factors that might influence the freedom to produce, disseminate, seek, and access information and ideas, it does not sufficiently account for the penetration of modern information and communication technology — such as landline telephones, mobile phones, and Internet access — that is so essential to freedom of expression. We therefore supplement the Freedom of the Press measure with data provided by the International Telecommunications Union (ITU) on worldwide

15. John Burgess, "Evaluating the Evaluators: Media Freedom Indexes and What they Measure," Center for International Media Assistance, Accessed 2013 October 18. 4, http://cima.ned.org/sites/default/files/CIMA-Evaluating_the_Evaluators_Report.pdf.

16. *Ibid.*, 40.

17. Freedom House, "Freedom of the Press 2013," Freedom House, Accessed 2013 November 18. 3, <http://www.freedomhouse.org/sites/default/files/FOTP%202013%20Booklet%20Final%20Complete%20-%20Web.pdf>.

18. *Ibid.*, 3, 35.

fixed telephone subscriptions,¹⁹ mobile phone subscriptions,²⁰ and percentages of individuals using the Internet.²¹ The ITU data set extends from 1960 to 2012, and provides coverage of over 200 countries and territories.

3.3 Terrorism and Freedom of Expression

Countries can be categorized along dimensions of frequencies of terrorist incidences and freedom of expression into four broad groupings:

1. *Low frequency of terrorist incidences, low freedom of expression*
2. *Low frequency of terrorist incidences, high freedom of expression*
3. *High frequency of terrorist incidences, low freedom of expression*
4. *High frequency of terrorist incidences, high freedom of expression*

The four possible combinations of low and high terrorism and low and high freedom of expression are presented graphically in Figure 3.1.

3.3.1 Low Terrorism, Low Freedom of Expression

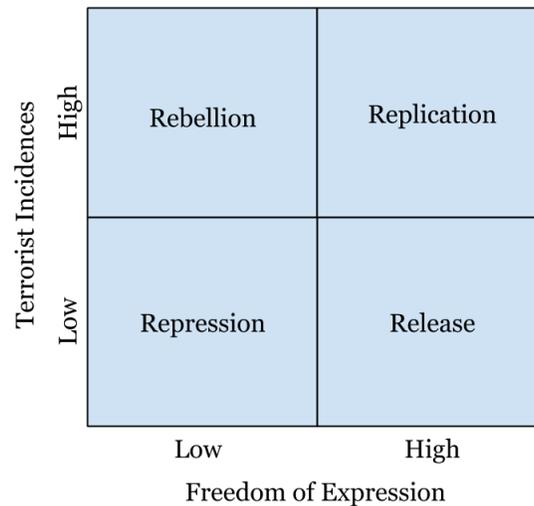
In cases where freedom of expression is low due to low media independence and low media pluralism, the frequency of terrorist incidences may be reduced as a result of constraints imposed on the available channels of communication and the opportunities for terrorist movements to broadcast their messages. Rather than offering a diverse range of views, including perspectives that might present terrorism sympathetically, the prevailing media

19. United Nations Data, "UN Data: A World of Information - Fixed Telephone Subscriptions," United Nations, Accessed 2013 November 25. <http://data.un.org/Data.aspx?d=ITU&f=ind1Code%3aI112>.

20. United Nations Data, "UN Data: A World of Information - Mobile-cellular telephone subscriptions," United Nations, Access 2013 October 18. <http://data.un.org/Data.aspx?d=ITU&f=ind1Code%3aI271>.

21. United Nations Data, "UN Data: A World of Information - Percentage of individuals using the Internet," United Nations, Accessed 2013 October 18. <http://data.un.org/Data.aspx?q=internet&d=ITU&f=ind1Code%3aI99H>.

Figure 3.1: A Framework for Examining Terrorism and Freedom of Expression



environment might only allow for select viewpoints to be expressed. Indeed, British Prime Minister Margaret Thatcher once famously remarked that the media provides “the oxygen of publicity on which [terrorists] depend.”²² By extension, if the media does not grant the publicity that which terrorist movements desire, then the frequency with which terrorist incidences occur would expectedly decline.

Additionally, freedom of expression may be low if there is poor access to information and communication technology. The lack of means may constrict the outbreak of terrorism in two manners: by depriving radical elements of the ability to incite further radicalization, and by denying them the ability to effectively orchestrate operations. The ability to promote radicalization is essential to sustaining the momentum of terrorist movements. According to David Rapoport, when terrorist movements are unable to inspire followers and sustain the “wave” of terrorism, terrorist movements gradually fade and disappear.²³ A central component of radicalization is access to technologies that may be used to convey messages of terrorist ideals. Without such means, as may be the case in situations of low freedom of

22. Hoffman, *Inside Terrorism*, 184-185.

23. Rapoport, “The Four Waves of Terrorism,” 48.

expression, the terrorist wave may simply vanish over time. Low allowances for freedom of expression may also constrain the outbreak of terrorist actions simply by depriving terrorists of the basic tools necessary to raise and collect funds required to finance operations, to issue orders for action, and to coordinate between individual terrorists effectively.

Cases where low freedom of expression correspond with low frequencies of terrorist incidences may be characterized as situations of repression. Under repression, the prevailing conditions that limit freedom of expression have effectively repressed the occurrence of terrorist incidences.

3.3.2 Low Terrorism, High Freedom of Expression

Freedom of expression serves as a release valve that allows parties to express their frustration and discontent in a manner short of violence.²⁴ Discontent may be analogized to a dam that is about to burst: without some way of allowing for incremental releases of discontent, “sullen anger behind the walls of restriction” will eventually manifest as explosive events.²⁵ High freedom of expression may therefore be regarded as a means of undercutting the motivation for terrorism.

Freedom of expression may also allow for the rise of views and accounts that can compete with terrorist narratives and undermine processes of radicalization. An environment of high freedom of expression can naturally foster accounts highly critical of terrorism.²⁶ Oftentimes, messages conveyed by independent parties free of government influence are often regarded more credibly and are far more potent in challenging terrorist narratives.²⁷ Freedom of expression can therefore be regarded as an important factor in curtailing the frequency of terrorist incidences by allowing the formulation of credible accounts that contradict the messages of terrorist causes.

24. Harvard Law Review, “Safety Valve Closed: The Removal of Nonviolent Outlets for Dissent and the Onset of Anti-Abortion Violence,” *Harvard Law Review* 113, no. 5 (March 2000): 120-1211.

25. *Ibid.*, 1222.

26. Hoffman, *Inside Terrorism*, 184.

27. Nicholas J. Cull, “Public Diplomacy: Taxonomies and Histories,” *The Annals of the American Academy of Political and Social Science* 616, no. 31 (2008): 49.

Freedom of expression is also a critical element in facilitating economic progress, which may undercut the motivation to engage in terrorism. A central component to freedom of expression is adequate access to the communication and technology tools necessary to produce and disseminate content, as well as to seek out and access content. There may exist a “Digital Divide,” where certain countries are less able to access modern communication tools than others, placing them at a significant economic disadvantage.²⁸ In cases where a “Digital Divide” may prevail, there is a greater chance of discontent amongst the “have nots” that could ultimately manifest in violence. Additionally, governments that attempt to secure their power by restricting access to information and communication technology face a “Dictator’s Dilemma,” where greater control may come at the risk of strangling economic progress.²⁹ Under both the Digital Divide and the Dictator’s Dilemma, there are ample conditions that might feed discontent that can ultimately arise as terrorist attacks.

Cases where countries with high freedom of expression experience low occurrences of terrorism may be characterized as situations of release. In situations of release, significant motivating factors for terrorism have been marginalized.

3.3.3 High Terrorism, Low Freedom of Expression

If we are to accept that information is power,³⁰ and that freedom of expression is simply the ability to project such power through the conveyance and acquisition of information, then barriers that curtail freedom of expression may be regarded as constraints on power. Such constraints on power may provide the impetus for terrorism by giving rise to conditions where countries may experience cases of terrorism at great frequency while permitting for low freedom of expression. Terrorism is fundamentally concerned with power. It is an asymmetric strategy intended to seize power for those that have little or no power, or rather

28. Pippa Norris, *Digital Divide* (Cambridge, MA: Cambridge University Press, 2001), 4.

29. Christopher Kedzie, “Communication and Democracy: Coincident Revolution and the Emergent Dictators,” RAND Corporation, Accessed 1 December 2013. http://www.rand.org/pubs/rgs_dissertations/RGSD127.html.

30. Monroe Price, *Media and Sovereignty: The Global Information Revolution and its Challenges to State Power* (Cambridge, MA: MIT Press, 2002), 32.

believe themselves to have little or no power. The publicity generated through violence is intended to grant terrorists leverage and influence over politics at the local or international level that may not be attainable through more conventional channels.³¹

Restrictions on freedom of expression may be considered a form of oppression. Such oppression might contribute to a sense of injustice, particularly if those denied the freedom of expression believe there to persist a state of *relative deprivation*, which is a perception that discrepancies exist between what people believe they are entitled to and what they have actually been granted.³² Individuals subject to oppression may choose to challenge such oppression through two different modes of responses: through *persuasion strategies*, which attempt to convince those perceived to be in power to implement changes so that the causes of oppression — whether real or perceived — are removed,³³ or *power strategies*, through which the oppressed attempt unilateral measures to force those perceived to be in power to implement changes to grant power to the oppressed.³⁴

Power strategies may manifest as violent acts of terrorism. The acts of terrorism are intended to capture the attention of those perceived to be in power who may otherwise not have granted any attention or regard to those not in power. Those that opt to engage in terrorism may be driven by rage and humiliation stemming from deprivations of power.³⁵ The use of terrorism is in effect a manifestation of what Albert O. Hirschman refers to as “voice,” which refers to the attempt to alter, rather than simply to escape, from a situation that is unfavorable.³⁶

Cases where low freedom of expression correspond with high frequencies of terrorist incidences may be characterized as situations of rebellion. In cases of rebellion, the prevailing conditions of suppressed freedom of expression may have fostered radicalization and sufficient

31. Hoffman, *Inside Terrorism*, 41.

32. Morton Deutsch, “A Framework for Thinking About Oppression and Its Change,” *Social Justice Research* 19, no. 1 (2006): 24.

33. *Ibid.*, 29.

34. *Ibid.*, 33.

35. *Ibid.*, 36-37.

36. Price, *Media and Sovereignty: The Global Information Revolution and its Challenges to State Power*, 40.

discontent to encourage violent action. Those that engage in terrorist activity do so with the intent of altering the status quo.

3.3.4 High Terrorism, High Freedom of Expression

Terrorists engage in violence to generate publicity that can be converted to political leverage.³⁷ Their attacks can foster fear that results in pressure on governments to pursue particular courses of action to appease terrorist groups. The ability to generate publicity is highly dependent on the environment of freedom of expression. Countries with high freedom of expression and robust medias are particularly favorable to enhancing publicity for terrorism. In fact, there exists almost a symbiotic relationship between terrorists and the media: terrorists rely on the media to spread accounts of terrorist actions, while the media voraciously cover terrorist actions, which by virtue of being rare and shocking are inherently newsworthy. Terrorism, as the product of rational choices, may simply make more sense in countries where a robust media can maximize the spread of accounts of violent actions.

Additionally, in environments where the allowance for freedom of expression is high, terrorism can be highly inspirational. Terrorist incidences can be “contagious” in the sense that the occurrence of one instance of terrorism is prone to inspire other cases of terrorism. Individual cases of terrorism are oftentimes followed by successive waves of terrorist attacks, which may partly be explained by terrorists’ desire to capitalize on the media sensitivity to terrorism that had already been generated by the prior terrorist incident.³⁸ Oftentimes, subsequent terrorist attacks reflect many of the tactics and strategies utilized in earlier terrorist operations. For example, once Palestinian terrorist groups demonstrated the potency of hostage taking and aircraft hijackings during the 1960s, many other terrorist groups attempted similar operations.³⁹

Terrorists are also highly empowered by access to modern communication technology.

37. Hoffman, *Inside Terrorism*, 173.

38. Lia Brynjar and Katja Skjolberg, “Causes of Terrorism: An Expanded and Updated Review of the Literature,” *Forsvarts Forskningsinstitut (Norwegian Defence Research Establishment)* (2004): 17.

39. *Ibid.*, 17-18.

They leverage modern communication tools to inform and educate potential followers, to engage in recruitment, to solicit support, and to coerce target audiences.⁴⁰ In addition to relying on radio, newspapers, posters, flyers, and television as channels of communication as they had in the past,⁴¹ terrorists have increasingly exploited modern information and communication technologies to great effect.⁴² For instance, groups like al-Qaeda have turned to the Internet to disseminate propaganda for recruitment and fundraising purposes, to shape public opinion, to provide training and instruction in terrorism, and to engage in operational planning for attacks.⁴³

Cases where high freedom of expression correspond with high frequencies of terrorist incidences may be characterized as situations of replication. In cases of replication, high freedom of expression enhances the effectiveness of terrorist actions and also empowers terrorist groups to act.

3.4 Other Factors of Terrorism

To be able to discern the precise relationship between terrorism and freedom of expression requires the isolation of the influence of other systemic factors. Without isolating the effect of other factors, it would be difficult to determine the *ceteris paribus* impact of freedom of expression on the occurrence of terrorism. In the sections below, significant factors that have been identified as potential systemic influencers on the frequency of terrorist incidences are expounded upon, and methods of measuring those factors are also highlighted. For the purpose of this study, we intentionally exclude non-systemic, micro-level factors from consideration, even if they have been identified in existing literature and research as being significant contributors to terrorism. Such excluded factors might include elements like individual social networks or isolated accounts of personal grievances, amongst others, which

40. Hoffman, *Inside Terrorism*, 199.

41. *Ibid.*

42. Cronin, "Behind the Curve: Globalization and International Terrorism," 66.

43. Hoffman, *Inside Terrorism*, 214.

primarily have effect at the individual or organizational levels rather than at the societal level.

3.4.1 Regime Instability

The political stability of states is regarded as one of the most significant factors in influencing the frequency of terrorist incidences. According to Professor Erica Chenoweth, regardless of the regime type, politically unstable regimes are prone to provide the permissive conditions necessary for terrorist movements to develop and thrive.⁴⁴ Unstable regimes are characterized by conditions where the state authorities are either non-existent or weak, and do not possess the capabilities to effectively challenge terrorist movements. Additionally, unstable regimes provide opportunities for terrorist movements to establish physical presences and to engage in financing and logistical operations. Furthermore, populations of unstable regimes often include many potential recruits for terrorist causes.⁴⁵

The Fund for Peace, a non-partisan and independent research and education organization that aims to prevent violent conflict maintains the annual Failed State Index. The Failed State Index is intended to assess the risk factors for regime stability. Assessments of regime stability are made based on a total of twelve social, economic, political, and military indicators, including: “Mounting Demographic Pressures,” “Uneven Economic Development along Group Lines,” “Progressive Deterioration of Public Services,” and “Rise of Factionalized Elites.” The latest index released in 2013 accounts for 178 sovereign states, and numerically rates regime stability, where lower values correspond to greater stability.⁴⁶ The Failed State index, based on its design, provides a pertinent measure for assessing regime stability.

44. Erica Chenoweth, “Instability and Opportunity: The Origins of Terrorism in Weak and Failed States,” in *The Making of a Terrorist*, ed. James J.F. Forest, vol. 3 (Westport, CT: Praeger, 2005), 124.

45. Ray Takeyh and K. Gvosdev Nikolas, “Do Terrorist Networks Need a Home?,” in *Terrorism and Counterterrorism: Understanding the New Security Environment*, ed. Russell D. Howard and Bruce Hoffman (McGraw Hill, 2012), 80-81.

46. Fund for Peace, “The Failed State Index 2013,” Fund for Peace, Accessed 2013 December 17, <http://ffp.statesindex.org/rankings-2013-sortable>.

3.4.2 Regime Type

There has been a prevalent presumption that the regime type influences the severity of terrorism. Specifically, it has been assumed that, based on the democratic peace theory, which posits that democracies do not engage one another in war, that democracy is an effective “antidote to terrorism.” It was based on such a belief that democracy undermines terrorism that ultimately led the U.S. to launch a campaign to spread democracy as a core component of its war on terror in the aftermath of the September 11 attacks. However, the existing empirical evidence is inconclusive on the exact relationship between regime type — particularly democracy — and terrorism.⁴⁷ Nonetheless, a measure of democracy will be included in the present analysis to isolate any potential influence that regime type might have on the frequency of terrorist incidences.

For the purpose of assessing the degrees of democracy for different countries, this study will utilize the Democracy Index maintained by the Economic Intelligence Unit, a subsidiary of The Economist Group. The Economic Intelligence Unit acknowledges that the very definition of democracy remains debatable, and being democratic is not a simple binary condition (i.e., countries are either democratic, or they are not). Rather, countries differ in *degrees* of democracy. The Democracy Index, rather than dwelling on the precise definition of democratic regimes, opts to focus on five dimensions that are commonly associated with democracy, including: “electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture.” Each country is scored on a scale of 0 to 10, where higher values correspond to more democratic societies. The latest Democracy Index, released in 2013, accounts for 167 countries.⁴⁸

47. Brynjar and Skjolberg, “Causes of Terrorism: An Expanded and Updated Review of the Literature,” 34.

48. Economic Intelligence Unit, “Democracy Index 2012: Democracy is at Standstill,” Economic Intelligence Unit, Accessed 2013 December 1, https://www.eiu.com/public/topical_report.aspx?campaignid=DemocracyIndex12.

3.4.3 Corruption

Corruption in societies may be a contributing factor to the severity of terrorism. When ruling regimes appear to be corrupt, such as by disrupting the distribution of social services and by allocating resources and privileges unfairly to select groups within society, elements within society may feel disenfranchised and elect to participate in violent action to compel change.⁴⁹ Those that feel directly wronged by societal injustice as a result of rampant corruption may ultimately become engaged in terrorist activities to air their discontent.⁵⁰ Corruption therefore may be regarded as a contributing factor to the frequency of terrorist incidences.

Jessica Teets and Erica Chenoweth examine whether or not corruption has a motivating effect on terrorism, or whether corruption merely has a facilitative relationship with terrorism. Teets and Chenoweth apply a quantitative analysis to systematically examine the relationship between corruption and terrorism. They ultimately find that greater levels of corruption facilitate more occurrences of terrorist attacks originating from that country. Their findings suggest that corruption allows for greater activity in illicit drug trades, money laundering, and arms imports — activities that can facilitate the implementation of terrorist actions. They do not find that corruption directly motivates additional terrorist activity.⁵¹ Their results support the notion that corruption is related to terrorism in some form.

Similar to the research produced by Teets and Chenoweth, we rely on Transparency International's Corruption Perception Index to provide a measure of corruption. Transparency International, a non-governmental organization based in Berlin that is committed to monitoring corporate and political corruption, produces the annual Corruption Perceptions Index. The Corruption Perceptions Index measures the perceived degrees of public corruption. Its results are based on a combination of surveys and assessments collected from a range of sources. The latest Corruption Perceptions Index measured the perceived degrees

49. Forest, "Terrorism as a Product of Choices and Perceptions," 122.

50. Brynjar and Skjolberg, "Causes of Terrorism: An Expanded and Updated Review of the Literature," 39.

51. Teets and Chenoweth, "To Bribe or to Bomb: Do Corruption and Terrorism Go Together?," 168-169.

of corruption for 177 countries, based on a scale ranging from 0 to 100, where higher values correspond to lower degrees of perceived corruption. The Corruption Perception Index is self-admittedly limited in scope, given that absolute corruption is effectively impossible to measure.⁵² However, for the purpose of assessing the effect of corruption on terrorism, assessing the perception of corruption is appropriate, as it is the *perception* of corruption that instills senses of injustice that may incite terrorist activity. Additionally, the methodology used to produce the Corruption Perception Index was significantly modified in 2012, rendering the results in 2012 and onwards incomparable to prior results. Thus, while 2012 values are available for the Corruption Perception Index at the time of this writing, we have decided not to use it for the purpose of this study.

3.4.4 Political Violence

There exists a strong connection between terrorism and political violence. Terrorist actions are oftentimes an extension of a broader violent campaign, and may arise in situations of power asymmetries between conflicting powers. For example, opposition groups may elect to adopt unconventional and asymmetric tactics when prevailing state forces are militarily superior.⁵³ In international conflicts, state actors may also engage in proxy wars by sponsoring terrorist organizations in striking within the territories of hostile states.⁵⁴ Additionally, armed conflicts may foster ideological motivations for terrorist actions, particularly actions by opposition groups against domestic or foreign actors perceived to be aligned with those in power within a state.⁵⁵ Furthermore, episodes of political violence may also generate social and psychological motivations that contribute to radicalization and the emergence of violent non-state actors. Oftentimes, political violence ravage territories and result in significant human displacement and the subsequent creation of refugee camps that can serve as breed-

52. Transparency International, "Corruption Perceptions Index," Transparency International, Accessed 2013 October 13. <http://www.transparency.org/research/cpi/>.

53. Brynjar and Skjølberg, "Causes of Terrorism: An Expanded and Updated Review of the Literature," 63.

54. *Ibid.*, 67.

55. *Ibid.*, 64.

ing grounds for groups sympathetic to terrorist causes. Extreme cases of political violence may also result in the rise of lawless zones that become ideal bases of operation for terrorist groups.⁵⁶ Existing empirical evidence does indeed indicate a tendency for the frequency of terrorism to rise with escalations of political violence, and to decrease along with the decline in political violence.⁵⁷

Political violence can be measured by the Center for Systemic Peace's Major Episodes of Political Violence (MEPV) data set. The Center for System Peace defines major episodes of political violence as cases of "systemic and sustained use of lethal violence by organized groups that result in at least 500 directly-related deaths over the course of the episode."⁵⁸ Each episode of political violence is rated for societal and systemic impact on a scale from 0–10, where higher values correspond to greater severity in violence. Additionally, the MEPV categorizes episodes of violence as international independence war, international violence, international war, civil violence, civil war, ethnic violence, and ethnic war. The producer of the MEPV acknowledges that the categorizations are to some extent subjective, particularly between civil and ethnic forms of conflict. The producer therefore suggests that the summed magnitudes of different forms of episodes of political violence — including international, civil, and ethnic forms of violence or war — could be used to circumvent any concerns about the methods of categorization.⁵⁹ As there are six forms of political violence that are factored into the summed magnitudes of political violence measure, the theoretical upper limit of the aggregate measure is 60.

For the purpose of this study, we utilize the MEPV measure of summed magnitudes of all major episodes of political violence. We believe the summed magnitudes, which includes domestic and international forms of violence, is appropriate because either intrastate or

56. Brynjar and Skjølberg, "Causes of Terrorism: An Expanded and Updated Review of the Literature," 65-66.

57. Ibid.

58. Monty G. Marshall, "Major Episodes of Political Violence (MEPV) and Conflict Regions, 1946-2012," Center for Systemic Peace, Access 2014 January 24. 2013, 2, <http://www.systemicpeace.org/inscr/MEPVcodebook2012.pdf>.

59. Ibid., 2.

interstate episodes of political violence could be potential contributors to the occurrence of terrorist incidences.

3.4.5 Economic Prosperity and Inequality

The economic condition is potentially a significant contributor to the outbreak of terrorist attacks. In particular, groups that are dissatisfied with the prevailing economic situation, yet unable to undertake action that can materially stimulate economic prosperity, may deem it rational to engage in terrorism.⁶⁰ The purpose of such economically-motivated terrorist attacks may not necessarily be to displace the prevailing authorities, but rather to engage in “agenda setting” by shifting society’s attention toward addressing the perceived causes of the extant economic malaise.⁶¹ Under conditions where economic prosperity is high and appreciated, the frequency of terrorist incidences will expectedly be low. On the other hand, if economic prosperity is low and deemed unsatisfactory by afflicted populations, the frequency of terrorist incidences will rise. For the purpose of this study, we assume that the degree of economic appreciation — or potentially dissatisfaction — may be disaggregated into two components: economic prosperity and economic inequality.

Economic prosperity can be measured using data on the per capita Gross Domestic Product (GDP). Such data is made available by the World Bank. The per capita GDP is simply calculated as the sum of the gross value added of any in-country production, divided by the population count at midyear.⁶² However, a caveat is warranted: per capita GDP is a grossly simplistic measure of economic conditions within a country, and should be interpreted as a broad generalization of economic prosperity.

Economic inequality can be measured by the Gini Coefficient. The Gini coefficient is a measure of the extent to which the distribution of income and consumption expenditures differs from perfectly equal distributions within countries. Based on the World Bank’s calcu-

60. Blomberg, Hess, and Weerapana, “Economic Conditions and Terrorism,” 463.

61. *Ibid.*, 466.

62. World Bank, “GDP per capita (current US\$) — Data — Table,” World Bank, Accessed 2013 December 15, <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>.

lated scale of 0–100, lower values reflect greater income equality, while higher values reflect greater income inequality.⁶³

3.4.6 Literacy

Literacy is widely believed to be closely related with terrorism. Such a belief is premised on the understanding that the ability to receive, interpret, and ultimately understand media is conditional on the literacy skills which are critical to enabling audiences to decipher and understand media content. Media is a particularly powerful factor to be accounted for in our attempt to understand the causes of terrorism, as media influences public opinion and molds worldviews of recipient audiences.⁶⁴ Audiences without the necessary literacy skills to be able to interpret media content from diverse sources would presumably possess either limited or biased worldviews and could thus be more susceptible to becoming involved with terrorism. However, to date, there is little empirical evidence that suggests a clear and direct causal relationship — either positive or negative — between literacy and terrorism. Nonetheless, we include literacy as a control variable in our study to isolate its potential effects on terrorism.

The Central Intelligence Agency’s World Factbook provides a measure of total population literacy for countries around the world. Literacy is broadly understood as a reflection of a country’s population’s ability to read and write at particular ages. The World Factbook merely aggregates each country’s reported measure of total population literacy, and does not attempt to decipher the method by which literacy is specifically measured.⁶⁵ As the data on literacy is simply cross-sectional in nature rather than panel, we make an assumption that literacy across all years remains constant.

63. World Bank, “World Bank: GINI Index,” World Bank, Accessed 2014 January 25. <http://data.worldbank.org/indicator/SI.POV.GINI>.

64. John E. Steinbrick and Jeremy W. Cook, “Media Literacy Skills and the “War on Terrorism”,” *The Clearing House*, no. 6 (2003): 284.

65. Central Intelligence Agency, “The World Factbook: Literacy,” Central Intelligence Agency, Accessed 2014 January 25. <https://www.cia.gov/library/publications/the-world-factbook/fields/2103.html>.

3.4.7 Ethnic, Linguistic, and Religious Diversity

Diversity, rather than being a virtue, can in fact be a significant contributor to the outbreak of terrorist violence within countries. In his article, “The Logic of Ethnic Terrorism,” Professor Daniel Byman focuses on identity-based forms of terrorism. He argues that core elements of identity — including ethnicity,⁶⁶ language,⁶⁷ and religion⁶⁸ — can be significant motivators for terrorism. Identity-based terrorism is often driven by a desire to influence out-groups and hostile governments, as well as a desire to strengthen in-group identity and to encourage in-group mobilization.⁶⁹ The aim of identity-based terrorism may be to affirm distinct identities while challenging contradictory identities that are being imposed by outside communities or by the state at large. For example, Kurdish movements may engage in terrorism as part of an effort to resist being assimilated by the broader Turkish identity.⁷⁰ In cases where harm or repression is believed to originate from an outside group characterized by a separate identity, conflict may arise along battlelines drawn based on elements of identity.⁷¹

Ethnic, linguistic, and religious diversity may be measured based on the analysis provided by Alberto Alesina, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg in their paper, “Fractionalization.”⁷² In it, the term “fractionalization” is used to refer to heterogeneity, which in colloquial terms is nothing more than simply “diversity.” Fractionalization is measured on a scale of 0 to 1, where higher values represent greater diversity. While the “Fractionalization” paper is outdated, having been published in 2002, we can assume that short of significant shifts in identity having occurred in the intervening period, its findings regarding ethnic, linguistic, and religious diversity remain valid even today. The results presented are notable for being significantly more comprehensive than

66. Daniel Byman, “The Logic of Ethnic Terrorism,” *Studies in Conflict and Terrorism* 21, no. 2 (1998): 150.

67. *Ibid.*, 154.

68. *Ibid.*, 151.

69. *Ibid.*, 150, 152.

70. *Ibid.*, 154.

71. *Ibid.*, 155-156.

72. Alberto Alesina et al., “Fractionalization,” *Harvard Institute of Economic Research*, no. 1959 (2002).

any other prior research — having accounted for 190 countries — and despite its recognized limitations, still remains until very recently “one of the most ambitious and widely used” measures of diversity.⁷³ For the purpose of this study, we use the cross-sectional data set on diversity across all years examined.

73. Natalka Patsiurko, John L. Campbell, and John A. Hall, “Measuring cultural diversity: ethnic, linguistic and religious fractionalization in the OECD,” *Ethnic and Racial Studies* 35, no. 2, 196.

Chapter 4

Model and Analysis

4.1 Model

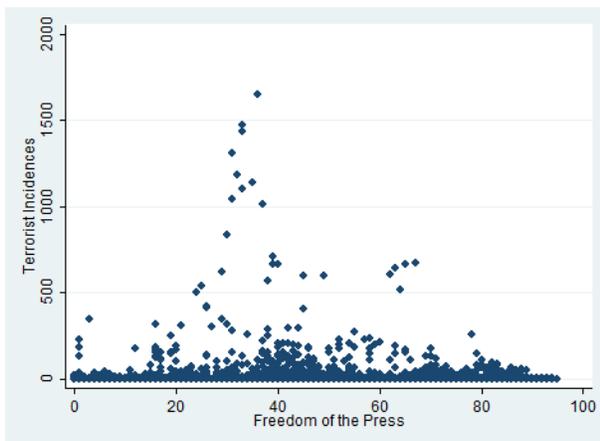
The model we utilize is intended to reveal the relationship between the frequency of terrorist incidences and the condition of freedom of expression, as constituted by the Freedom of the Press, telephone access, mobile phone access, and Internet access. We regard the frequency of terrorist incidences as the dependent variable and the four specified components of freedom of expression as the primary independent variables of interest. The other factors of terrorism are included in the model as control variables to allow us to isolate the *ceteris paribus* effect of freedom of expression on the occurrence of terrorist incidences. The model is applied to panel data of numerous countries around the world across multiple years. A unique observation may be regarded as a particular country in a particular year.

We begin first with a visual examination of the relationship between terrorist incidences and the four components of freedom of expression. Figure 4.1 presents a set of simple scatterplots of the frequency of terrorist incidences against the four components of freedom of expression. The graphical representation suggests that the frequency of terrorist incidences and the components of freedom of expression are not linearly related. Figure 4.1 (a), a scatterplot of terrorist incidences against Freedom of the Press, suggests that terrorist

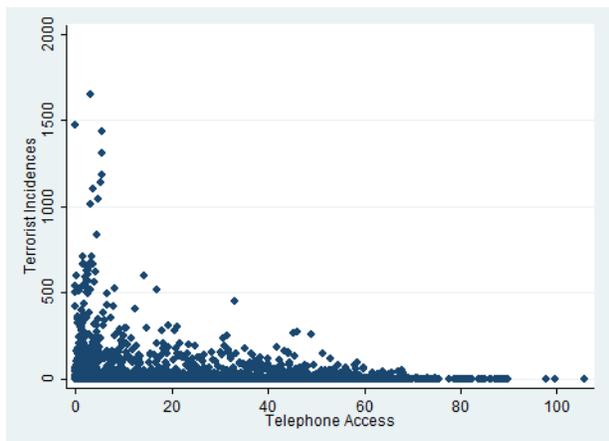
attacks are more frequent in the mid-range of Freedom of the Press, and less frequent in cases of extremely low or high Freedom of the Press. The scatterplots of frequency of terrorist incidences against telephone access, mobile phone access, and Internet access, respectively depicted in Figures 4.1 (b), 4.1 (c), and 4.1 (d) suggest that in general, the frequency of terrorist incidences decline non-linearly as access to communication technologies increase. The graphical representations in Figure 4.1 appear to support a quadratic functional form, which permits for both peaks — as suggested in Figure (a) — and diminishing frequencies — as suggested in Figures (b), (c), and (d).

Figure 4.1: Terrorist Incidences vs. Elements of Freedom of Expression

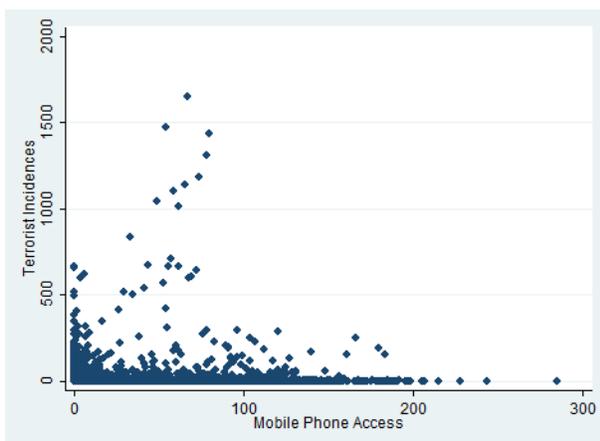
(a) Terrorist Incidences vs. Freedom of the Press



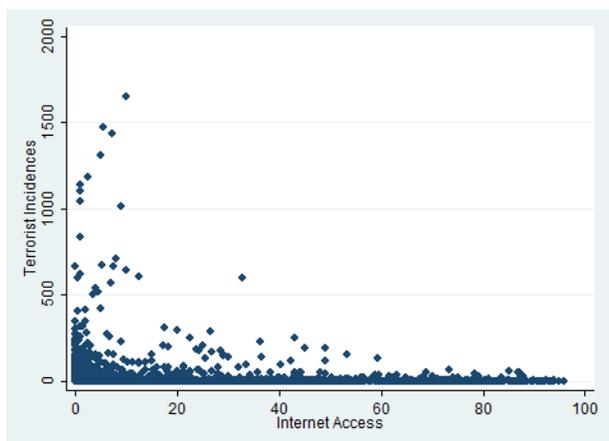
(b) Terrorist Incidences vs. Phone Access



(c) Terrorist Incidences vs. Mobile Phone Access



(d) Terrorist Incidences vs. Internet Access



However, the graphical representations should be examined with caution. There are significant overlaps in the data points, particularly in cases of lower frequencies of terrorist

incidences. Each of the figures in Figure 4.1 reflect heavy concentrations of cases of low terrorist incidences, many of which actually include overlapping plots. Table 4.1 indicates that 67.58% of all observations experience no terrorist incidences at all, and fewer than 2% of all observations experience more than 100 cases of terrorism.

Table 4.1: Summary of Terrorist Incidences by Year

Terrorist Incidences	Frequency	Percentage	Cumulative Percentage
0	7,091	67.58	67.58
1–9	2,143	20.43	88.01
10–19	378	3.60	91.61
20–29	177	1.69	93.30
30–39	124	1.18	94.48
40–49	77	0.73	95.22
50–59	56	0.53	95.75
60–69	51	0.49	96.24
70–79	39	0.37	96.61
80–89	30	0.29	96.89
90–99	20	0.19	97.08
100–199	175	1.67	98.75
200–299	56	0.53	99.29
300–399	28	0.27	99.55
400–499	9	0.09	99.64
500–999	29	0.28	99.91
>999	9	0.09	100
Total	10,492	100	

The use of a quadratic functional form to model the relationship between the frequency of terrorist incidences and freedom of expression is also supported by social science reasoning. We expect that a unit of difference in freedom of expression would not translate into a fixed unit of frequencies of terrorist incidences. The marginal propensity for terrorist incidences to occur may vary depending on how high the absolute measure of freedom of expression is. For instance, a one unit difference in freedom of expression may be much more significant between countries that have very low freedom of expression, whereas a one unit difference in freedom of expression might be much less significant between countries that have very high freedom of expression.

We begin first with a basic linear functional form that depicts the relationship between the occurrence of terrorist incidences and the four specified components of freedom of expression while controlling for other variables, which may be presented as Equation 4.1:

$$\begin{aligned}
 \text{Frequency of Terrorist Incidences}_{it} = & \alpha + \beta_1 * \text{Freedom of the Press}_{it} \\
 & + \beta_2 * \text{Telephone Access}_{it} \\
 & + \beta_3 * \text{Mobile Phone Access}_{it} \\
 & + \beta_4 * \text{Internet Access}_{it} \\
 & + \beta_j * X_{it} + u_{it} \quad (4.1)
 \end{aligned}$$

Where α represents the intercept, β is a measure of the responsiveness of the rate of terrorist incidences to each particular independent variable, X represents a vector of control variables, u represents an error term, and the subscripts i and t respectively denote different countries and different years.

Equation 4.1 can be expanded to a quadratic functional form depicting the relationship between the occurrence of terrorist incidences and freedom of expression as Equation 4.2:

$$\begin{aligned}
 \text{Frequency of Terrorist Incidences}_{it} = & \alpha \\
 & + \beta_1 * \text{Freedom of the Press}_{it} + \beta_2 * \text{Freedom of the Press}_{it}^2 \\
 & + \beta_3 * \text{Telephone Access}_{it} + \beta_4 * \text{Telephone Access}_{it}^2 \\
 & + \beta_5 * \text{Mobile Phone Access}_{it} + \beta_6 * \text{Mobile Phone Access}_{it}^2 \\
 & + \beta_7 * \text{Internet Access}_{it} + \beta_8 * \text{Internet Access}_{it}^2 \\
 & + \beta_j * X_{it} + u_{it} \quad (4.2)
 \end{aligned}$$

4.2 Analysis

We utilize several variations of our basic model that differ in terms of control variables included. For each β coefficient, the null hypothesis is that a particular independent variable has no bearing on the frequency of terrorist incidences. The alternative hypothesis for each β coefficient is stated as a two-way hypothesis, which suggests that a particular variable does have some effect on the frequency of terrorist incidences:

$$H_0 : \beta_j = \text{no influence on frequency of terrorist incidences}$$

$$H_a : \beta_j \neq \text{no influence on the frequency of terrorist incidences}$$

Throughout our analysis, we are concerned with the possibility of multicollinearity, which might cause an overstatement in the standard errors of the calculated coefficient terms that could yield misleading conclusions. Specifically, overstated standard errors may lead us to believe that the results are not statistically significant, when in reality they may be. The risk of multicollinearity may be mitigated by either increasing the number of observations or by excluding particular independent variables from the model that are highly correlated with other independent variables. Because we are unable to expand on the number of observations beyond the data set that has already been collected, the remaining option to address the potential issue of multicollinearity is to consider excluding particular independent variables from the model that are highly correlated with other independent variables.

To address the possibility of multicollinearity in the independent variables, we begin by examining the correlation coefficients of the variables utilized in the proposed model. High correlations may indicate the presence of multicollinearity. The correlation coefficients are summarized on Table 4.2. By examining the correlation coefficients presented in Table 4.2, we find that there are a number of independent variable pairs that have high degrees of correlation and that may be collinear.

Formally, we can test for multicollinearity by examining variance inflation factor (VIF) statistics for each of the variables in the proposed model. The VIF is equivalent to $\frac{1}{1-R_j^2}$, where R_j^2 represents the coefficient of determination of a hypothetical regression of a particular independent variable on the remaining independent variables of the proposed model. The VIF may intuitively be understood as a measure of the degree of multicollinearity of a specific independent variable with the remaining independent variables of the model. Higher VIF values suggest a greater likelihood of multicollinearity. The inclusion of variables with high VIF variables therefore may potentially result in the exaggeration of standard errors, which could lead to inaccurate conclusions. Table 4.3 presents the VIF values for the specified independent variables.

Table 4.3: Variance Inflation Factors (VIF) — All Variables

Variable	VIF	1/VIF
Regime Instability	10.98	0.0911
Internet Access	7.88	0.126976
Corruption	7.37	0.135593
Democracy	7.27	0.137561
Freedom of the Press	5.65	0.176921
Telephone Access	4.66	0.214401
Per Capita GDP	4.23	0.236683
Literacy	2.96	0.337988
Ethnic Diversity	2.69	0.371702
Linguistic Diversity	2.69	0.371912
Mobile Phone Access	2.69	0.372339
Income Inequality	1.58	0.633978
Political Violence	1.31	0.763077
Religious Diversity	1.20	0.830438
Mean VIF	4.51	

A general rule of thumb is to be wary of variables with VIF measures that exceed 10. Table 4.3 reveals that the variable for regime instability has the highest VIF value of the several variables in the proposed model at 10.98, indicating that regime instability may be multicollinear with other variables in the model. Table 4.2 of First Order Correlates further indicates that Regime Instability is highly correlated with a range of other variables, including Freedom of the Press, Telephone Access, Internet Access, Democracy, Corruption,

and Per Capita GDP. We may rationalize that regime instability has a negative relationship with societal factors that are generally considered to be favorable, such as freedom of expression, democracy, and wealth. Regime instability may also have a positive relationship with societal factors that are generally regarded unfavorably, such as corruption. The high VIF and high correlations for regime instability suggests that its qualities are in some manner reflected by other variables of the proposed model. Including regime instability in the model may therefore introduce a degree of multicollinearity that would result in exaggerated standard errors and inaccurate conclusions.

We consider the effect of omitting the regime instability variable by re-calculating the VIF without the regime instability variable included. Table 4.4 presents the VIF values for the stipulated independent variables, with the exclusion of the regime instability variable. We find that excluding regime instability reduces the mean VIF value of the regression from 4.51 to 3.81. The VIF results reported in Table 4.3 and Table 4.4 suggest that regime instability may be a significant contributor to multicollinearity, and its removal may mitigate the risk of arriving at misleading conclusions.

Table 4.4: Variance Inflation Factors — Regime Instability Removed

Variable	VIF	1/VIF
Internet Access	7.86	0.127153
Democracy	6.93	0.144318
Corruption	5.80	0.17245
Freedom of the Press	5.46	0.183203
Telephone Access	4.64	0.215308
Per Capita GDP	4.13	0.241908
Literacy	2.85	0.351484
Linguistic Diversity	2.69	0.371913
Ethnic Diversity	2.64	0.378397
Mobile Phone Access	2.62	0.382329
Income Inequality	1.56	0.641567
Religious Diversity	1.19	0.840939
Political Violence	1.11	0.899728
Mean VIF	3.81	

While the VIF results highlight the potential for multicollinearity as a result of the

regime instability variable, they do not definitively indicate that the inclusion of regime instability would result in misleading conclusions. To directly assess the overall effect of regime instability on the conclusions that may be drawn from our analysis, we calculate regressions that both include and exclude regime instability. If the calculated results from the varied regressions do not dramatically change from including and excluding the regime instability variable — such as switching β coefficient signs from positive to negative or vice versa, or altering conclusions on statistical significance — then regime instability may be included in the final model as doing so would presumably not yield outcomes that would lead to inaccurate conclusions.

The set of regressions that we utilize, which are summarized in Table 4.5, include:

1. A linear model that examines the relationship between the frequency of terrorist incidences, without accounting for any control variables
2. A linear model that examines the relationship between the frequency of terrorist incidences that accounts for all specified control variables
3. A linear model that examines the relationship between the frequency of terrorist incidences that accounts for all specified control variables except for regime instability
4. A quadratic model that examines the relationship between the frequency of terrorist incidences, without accounting for any control variables
5. A quadratic model that examines the relationship between the frequency of terrorist incidences that accounts for all specified control variables
6. A linear model that examines the relationship between the frequency of terrorist incidences that accounts for all specified control variables except for regime instability

An initial examination of the results in Table 4.5 of the various regressions reveals that Freedom of the Press and telephone access are sporadically statistically significant, depending on the model specification. However, mobile phone access and Internet access are consistently statistically significant, regardless of the model specification and regardless of

Table 4.5: Summary of Regression Results

	Dependent Variable: Frequency of Terrorist incidences					
	(1)	(2)	(3)	(4)	(5)	(6)
Freedom of the Press	-0.193** (0.0809)	-0.0921 (0.443)	-0.197 (0.435)	0.443 (0.331)	0.300 (1.202)	0.418 (1.195)
Freedom of the Press ²				-0.00663** (0.00331)	-0.00443 (0.0113)	-0.00637 (0.0111)
Telephone Access	-0.148 (0.120)	-0.563 (0.522)	-0.606 (0.521)	-0.879*** (0.300)	-0.649 (1.383)	-0.737 (1.379)
Telephone Access ²				0.0157*** (0.00477)	0.00549 (0.0208)	0.00689 (0.0207)
Mobile Phone Access	0.261*** (0.0563)	0.530*** (0.167)	0.495*** (0.165)	1.077*** (0.137)	1.787*** (0.455)	1.782*** (0.454)
Mobile Phone Access ²				-0.00463*** (0.000780)	-0.00648*** (0.00235)	-0.00656*** (0.00234)
Internet Access	-0.507*** (0.127)	-1.093** (0.429)	-1.114*** (0.429)	-1.993*** (0.359)	-2.799*** (0.971)	-2.871*** (0.967)
Internet Access ²				0.0158*** (0.00368)	0.0216* (0.0111)	0.0224** (0.0111)
Regime Instability		0.750 (0.588)			0.532 (0.600)	
Democracy		5.865 (5.383)	4.380 (5.259)		4.974 (5.558)	3.722 (5.374)
Corruption		-1.986 (5.247)	1.107 (4.656)		1.146 (5.324)	3.336 (4.716)
Political Violence		69.85*** (3.978)	71.83*** (3.666)		69.95*** (3.970)	71.32*** (3.657)
Per Capita GDP		0.000685 (0.000439)	0.000603 (0.000434)		0.000310 (0.000508)	0.000236 (0.000501)
Income Inequality		-2.539*** (0.576)	-2.460*** (0.573)		-2.361*** (0.592)	-2.315*** (0.589)
Literacy		-0.234 (0.382)	-0.330 (0.375)		-0.228 (0.423)	-0.273 (0.420)
Ethnic Diversity		-0.292 (0.272)	-0.246 (0.270)		-0.254 (0.278)	-0.224 (0.276)
Linguistic Diversity		-0.105 (0.237)	-0.104 (0.237)		-0.141 (0.240)	-0.142 (0.240)
Religious Diversity		0.0540 (0.197)	0.0821 (0.196)		0.0758 (0.202)	0.0938 (0.201)
Constant	27.92*** (4.143)	61.57 (67.64)	115.3** (52.93)	15.21** (7.755)	18.38 (68.85)	52.54 (57.05)
Observations	3158	501	501	3158	501	501
Adjusted R^2	0.017	0.489	0.489	0.034	0.496	0.497

Standard errors in parentheses: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

whether or not regime instability is included in the regression. The statistical significance results do not provide sufficient evidence to conclude that Freedom of the Press and telephone access influence the frequency of terrorist incidences. However, the statistical significance results do indicate that mobile phone access and Internet access influence the frequency of terrorist incidences.

A comparison of Model 2 with Model 3 and Model 5 with Model 6 in Table 4.5 reveals the influence of regime instability on the overall analysis. Of the linear models, Model 2, which includes the regime instability variable, and Model 3, which excludes the regime instability variable, are largely consistent in terms of the directionality of β coefficients and statistical significance. The only result that changes dramatically as a result of the regime instability variable is corruption. With the regime instability variable included, the calculated effect of corruption on the frequency of terrorist incidences is negative, whereas the calculated effect of corruption is positive in the case where the regime instability variable is excluded. In neither case however is corruption statically significant.

Of the quadratic models, Model 5, which includes the regime instability variable, and Model 6, which excludes the regime instability variable, are largely consistent across all variables in terms of directionality of calculated coefficients and stastical significance. Given that regime instability does not appear to significantly alter the calculated results of either the linear models or the quadratic models, it may be optimal to rely on the models that include the regime instability variable. The inclusion of the regime instability does not appear to distort the calculated coefficients or standard errors. Subsequent analysis will therefore be based primarily on models that include regime instability.

We also consider the combined effects of multiple variables, particularly when high correlation between the variables reduce the efficiency of the models:

$$H_0 : \beta_1 = \beta_2 = \beta_3 = \dots = 0$$

$$H_a : \beta_1 = \beta_2 = \beta_3 = \dots \neq 0$$

To test the null hypothesis that none of the stipulated variables have any explanatory power for the dependent variable, we compare the residual sum of squares (RSS) of the restricted model, where the group of variables being tested for statistical significance are excluded from the model, against the residual sum of squares of the unrestricted model, where no variables are excluded from the model. If the tested variables bear little influence on the dependent variable, then the difference in the residual sum of squares of the restricted and the unrestricted models would expectedly be minimal. The measure of joint significance is calculated using the F-statistic:

$$F = \frac{(RSS_{\text{Restricted}} - RSS_{\text{Unrestricted}})/q}{RSS_{\text{Unrestricted}}/(n - k - 1)} \quad (4.3)$$

Where $RSS_{\text{Unrestricted}}$ represents the residual sums of squares for the original unrestricted model, $RSS_{\text{Restricted}}$ represents the residual sums of squares for the restricted model, q represents the number of restrictions imposed, n represents the number of observations, and k represents the total number of independent variables included in the unrestricted model. If the tested variables do not influence the dependent variable, then the F-statistic would be a low value. However, if any of the tested variables do influence the dependent variable, then the F-statistic would be a high value.

The results of a series of joint hypothesis tests that vary the combinations of components of freedom of expression for Models 2 and 5 from Table 4.5 are summarized in Table 4.6. Joint hypothesis test 1 indicates that regardless of the model specification, freedom of expression is statistically significant in its influence on the frequency of terrorist incidences. We also find that in every instance that either mobile phone access or Internet access are included in the test for joint significance, the results are statistically significant. This leads us to conclude that mobile phone access or Internet access do influence the frequency of

terrorist incidences. However, tests of joint significance that include either Freedom of the Press or telephone access, but do not include either mobile phone access or Internet access, are consistently *not* statistically significant. This leads us to conclude that Freedom of the Press and telephone access do *not* influence the frequency of terrorist incidences. Overall, we find evidence that freedom of expression does influence the frequency of terrorist incidences, but the influence is primarily a result of mobile phone access and Internet access, rather than a result of Freedom of the Press or telephone access. Further analysis of the relationship between the frequency of terrorist incidences and freedom of expression will therefore focus primarily on mobile phone access and Internet access.

Table 4.6: Summary of Joint Hypothesis Tests

	Variable Restrictions				Model 2 — Linear		Model 5 — Quadratic	
	Freedom of the Press	Telephone Access	Mobile Phone Access	Internet Access	F-statistic	P-value	F-Statistic	P-value
1	x	x	x	x	3.50***	0.0078	3.13***	0.0019
2	x				0.04	0.8353	0.13	0.8817
3		x			1.16	0.2811	0.20	0.8191
4			x		10.09***	0.0016	10.11***	0.0001
5				x	6.50**	0.0111	5.19***	0.0059
6	x	x			0.59	0.5559	0.18	0.9474
7	x		x		5.08***	0.0065	5.23***	0.0004
8	x			x	3.32**	0.0370	2.67**	0.0316
9		x	x		5.66***	0.0037	5.23***	0.0004
10		x		x	4.59**	0.0105	3.74***	0.0052
11			x	x	5.93***	0.0029	5.49***	0.0003
12	x	x	x		3.79**	0.0105	3.65***	0.0015
13		x	x	x	4.65***	0.0032	4.04***	0.0006
14	x	x		x	3.08**	0.0271	2.54**	0.0199
15	x		x	x	4.00***	0.0079	3.76***	0.0011

The models referred to in the present table are presented in Table 4.5 on page 52.

Each specified component of freedom of expression represents a restriction on the model.

In the case of Model 5, each test includes both the corresponding linear and quadratic components of the model.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

In section 4.1, we discussed the preferability of utilizing a quadratic functional form. Furthermore, our analysis of the potential risk for multicollinearity from the regime instability variable is minimal. Therefore, the primary model that we utilize for the remainder of our analysis is Model 5, a quadratic functional form that includes all specified control variables, including the regime instability variable.

The isolated effects of mobile phone access and Internet access on the frequency of ter-

rorist incidences are revealed with partial derivatives of Model 5:

$$\frac{\partial(\text{Frequency of Terrorist incidences})}{\partial(\text{Mobile Phone Access})} = 1.787 - .01296 * (\text{Mobile Phone Access}) \quad (4.4)$$

$$\frac{\partial(\text{Frequency of Terrorist incidences})}{\partial(\text{Internet Access})} = -2.799 + .0432 * (\text{Internet Access}) \quad (4.5)$$

Equation 4.4 indicates that mobile phone access increases the frequency of terrorist incidences at a diminishing rate. The introduction of mobile phone access to any society on average initially increases the occurrence of terrorist incidences in any given year by 1.787 terrorist events. As the number of mobile phone subscriptions available to each 100 people increases, the average occurrence of terrorist incidences decreases at a rate of .01296 terrorist events per year. A maximization calculation of Equation 4.4 reveals that the occurrence of terrorist incidences is on average increased most significantly elevated when societies have access to 137.89 mobile phone subscriptions for each 100 people, beyond which the rate of terrorist incidence occurrence declines.

Similarly, the partial derivative of Model 5 with respect to Internet access, as presented in Equation 4.5, indicates that the availability of Internet access decreases the frequency of terrorist incidences at a diminishing rate. The introduction of Internet access to any society on average initially decreases the occurrence of terrorist incidences in any given year by 2.799 terrorist events. As the percentage of individual internet users increases the decrease in terrorist incidences declines. In other words, the effect of Internet access on reducing the frequency of terrorist incidences becomes less significant as the overall level of Internet access increases. A minimization calculation of Equation 4.5 reveals that the occurrence of terrorist incidences as a result of the effect of Internet access is on average decreased most significantly when Internet access is at 64.79%.

Chapter 5

Conclusion

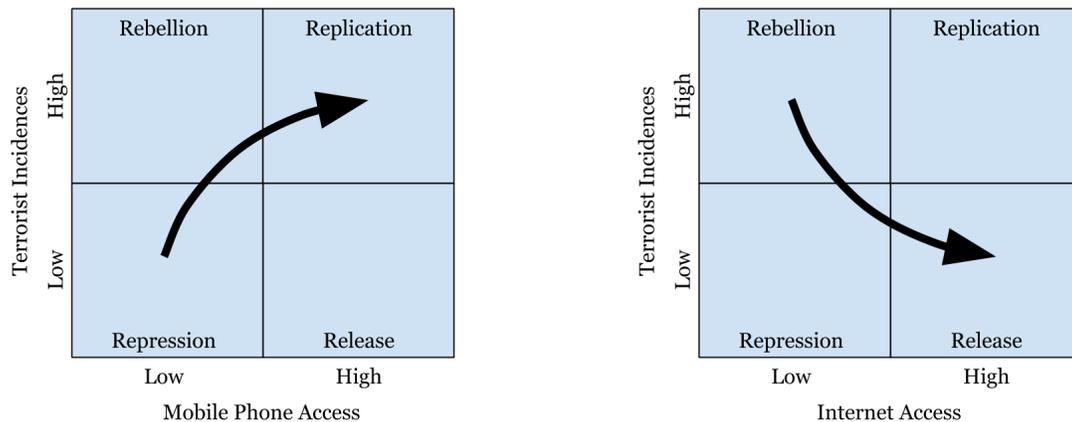
The purpose of this study is to employ empirical methods to examine the relationship between terrorism and freedom of expression. Using standard ordinary least squares econometric methods, we ultimately find that greater mobile phone access tends to increase the frequency of terrorist incidences at a diminishing rate. We also find that greater Internet access tends to decrease the frequency of terrorist incidences at a diminishing rate. On average, the frequency of terrorist incidences is highest when societies have access to 137.89 mobile phone subscriptions for each 100 people. Additionally, the frequency of terrorist incidences is lowest on average when the percentage of people with Internet access is at 64.79%. Based on our results, we cannot conclude that either Freedom of the Press or telephone access have any statistically significant influence on the frequency of terrorist incidences.

We may apply the framework of repression, release, rebellion, and replication, as initially represented in Figure 3.1. By combining our calculated results and the proposed framework, we conclude that increases in mobile phone access tend to shift societies from either a state of repression or rebellion towards a state of replication, where higher allowances for freedom of expression result in greater occurrences of terrorist incidences. Greater levels of Internet access tends to shift societies from either a state of repression or rebellion towards a state of release, where higher allowances for freedom of expression result in fewer occurrences of

terrorist incidences. These conclusions are summarized in graphical form in Figure 5.1.

Figure 5.1: Terrorist incidences vs. Elements of Freedom of Expression — Results

(a) Terrorist incidences vs. Mobile Phone Access (b) Terrorist incidences vs. Internet Access



The existing literature on terrorism and its root causes minimally discusses the relationship between mobile phone access and terrorism. In most cases, discussion of the connection between modern technologies and terrorism is largely anecdotal in nature and typically do not present comprehensive theories of the relationship between access to modern technologies and terrorism.¹ The literature on terrorism that do mention mobile phones do little more than indicate that mobile phones were used in some capacity to orchestrate or implement terrorist attacks. For instance, the National Commission on Terrorist Attacks Upon the United States report on the September 11 attack is replete with details of how the terrorist hijackers utilized phone communications throughout their planning process to bring their attack to fruition.² Accounts of the March 11, 2004 Madrid train bombings reveal that mobile phones were used as remote triggers for explosive devices.³ Similarly, the official House of Commons

1. Brynjar and Skjolberg, “Causes of Terrorism: An Expanded and Updated Review of the Literature,” 45.

2. National Commission on Terrorist Attacks Upon the United States, “The 9/11 Commission Report,” Accessed 2014 April 1. <http://www.9-11commission.gov/report/911Report.pdf>.

3. Fernando Reinares, “The Madrid Bombings and Global Jihadism,” International Institute for Counter-Terrorism, Accessed 2014 April 2. 2010, <http://www.ict.org.il/Articles/tabid/66/Articlsid/816/currentpage/8/Default.aspx>.

report on the July 7, 2005 London bombings provide details of how the various bombers utilized mobile phones to communicate amongst themselves.⁴ In almost all similar accounts of major terrorist incidences, there is some indication that mobile phones were utilized to some extent to coordinate or implement terrorist attacks.

Based on the accounts of how terrorists have used mobile phones, we can surmise that mobile phones and the frequency of terrorist incidences share a positive relationship because mobile phones serve as an operational enabler for terrorists. In a manner, the availability of mobile phones makes terrorism easier. New technologies, such as mobile phones, do not directly cause more terrorism; rather, terrorist groups are often adept — perhaps more so than law enforcement forces that attempt to thwart terrorism — at leveraging new technologies as they arise to serve terrorist agendas more effectively.⁵

There is a comparatively richer body of literature that discusses the relationship between Internet access and terrorism. However, much of the existing literature pre-supposes a positive relationship between Internet access and terrorism. Certainly, there is a bounty of evidence that suggests that the rise of the Internet has been a great boon for terrorism. Terrorist movements, favoring such characteristics of the Internet as its unregulated nature and its potentially broad audience, have increasingly relied on the Internet to engage in such diverse activities as fundraising, propagandizing, data mining, and coordinating terrorist operations.⁶ Prominent terrorist movements like al-Qaeda strongly believe that the Internet is an effective platform to disseminate radicalizing propaganda and to build connections between individuals who are prone to supporting terrorist causes.⁷ Such figures as Anwar al-Awlaki, a senior al-Qaeda official, lauded the potency of the Internet, stating, “The internet

4. House of Commons, “Report of the Official Account of the Bombings in London on 7th July 2005,” Accessed 2014 April 1. 5, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228837/1087.pdf.

5. Brynjar and Skjolberg, “Causes of Terrorism: An Expanded and Updated Review of the Literature,” 46.

6. Gabriel Weimann, “www.terror.net: How Modern Terrorism Uses the Internet,” in *Terrorism and Counterterrorism: Understanding the New Security Environment* (New York, NY: McGraw Hill, 2012), 347.

7. Rick Nelson and Thomas M. Sanderson, “A Threat Transformed: al Qaeda and Associated Movements in 2011,” *Center for Strategic and International Studies* (February 2011): 12.

[sic] has become a great medium for spreading the call of Jihad and following the news of the mujihadeen.”⁸

The results of this study are contrary to the conventional wisdom that greater Internet access leads to more terrorism. This study indicates that to a statistically significant degree, greater Internet access actually reduces the frequency of terrorist incidences. There are a number of possible explanations for why Internet access might reduce the frequency of terrorist incidences, including providing a social release valve through which societies can peacefully voice their discontent in place of engaging in violent outbursts, allowing for the rise of multiple accounts and views that can undermine the credibility of terrorist narratives and thus mitigate the processes of radicalization, and facilitate access to social and economic opportunities that can dampen perceived grievances that often promote terrorism.

Perhaps as notable as what we find to be statistically significant is what we *do not* find to be statistically significant. Our study does not provide sufficient evidence to lead us to conclude that Freedom of the Press and telephone access are statistically significant influencers on the frequency of terrorist incidences. We are especially surprised by the lack of a statistically significant effect of the Freedom of the Press measure on terrorism. This result may be explained by the possibility that qualities that are frequently associated with environments of high freedom of expression are reflected in certain control variables utilized in this study, such as the democracy, or it may very well be that the qualitative nature of the environment of freedom of expression is not a factor significantly related to terrorism.

One important policy implication of these findings relates to the importance of Internet access in challenging terrorism. Our results lend greater support to efforts intended to expand Internet access, a trend that is already well underway around the world and which has demonstrated significant impacts. Though we do find a positive relationship between mobile phone access and terrorism, curtailing mobile phone access for the express purpose of challenging terrorism may not be advisable as it would represent an effort to resist technological

8. Anwar al Awlaki, “44 Ways to Support the Jihad,” Inaccessible as of 2014 April 1. <http://www.anwar-alawlaki.com>.

progress that has broad social and economic benefits.

We acknowledge potential deficiencies that might impair the external validity of our conclusions. One prominent deficiency is the fact that the two primary components that we attempt to relate — terrorism and freedom of expression — are inherently difficult to define, and our attempts to define terrorism and freedom of expression are to a certain extent subjective. The manner in which we define terrorism and freedom of expression may not be universally accepted, and may actually be contrary to certain cultural and societal norms. Additionally, the data sources we utilize for the independent variables are characterized by their respective deficiencies, such as the subjective aspects of the measure of the qualitative characteristics of freedom of expression, the possibility of perception biases in the measure for corruption, and the limited numbers of observations in the measure of income inequality, amongst other potential deficiencies. Furthermore, despite our best efforts to account for significant systemic variables in our model, there inevitably exists the risk of omitted variable bias. Nonetheless, we have made an effort to address the possible deficiencies in the study design and implementation, and we believe that alternative methods would not necessarily result in more reliable outcomes.

This study is an effort to fill a conspicuous void in the existing body of terrorism scholarship. It represents a reasoned attempt at applying empirically driven methods at examining the relationship between terrorism and freedom of expression. While a great deal of research and writing has already been produced on the linkage between terrorism and freedom of expression, until this writing, no attempt has been made to examine the relationship between terrorism and freedom of expression quantitatively. We hope that this study ultimately proves to be beneficial to understanding the underlying risk factors of terrorism.

Appendix A

Data

The Global Terrorism Database’s (GTD) compilation of information relating to worldwide terrorism — our primary dependent variable of interest — only ranges from 1970 to 2012, which necessarily constrains the analyzable period to 1970 and 2012. Depending on what other variables the frequency of terrorist incidences is compared against, the periods available for analysis may be further constrained as a result of listwise deletion, where observations with missing data are systematically excluded from the analysis. Additionally, the sets of countries or territories examined differ across the various data sources. Furthermore, even within the same data source, the sets of countries or territories examined may differ from year to year.

We adopt particular standards in addressing missing data. In general, we assume that the absence of information in the GTD for a country or territory within a particular year reflects the absence of any observable instances of terrorism within that country or territory in that particular year. In practical terms, a country or territory that does not have any reported cases of terrorism in a particular year is simply coded as a 0, rather than as an instance of missing data. For all other data sets, unless a particular observation is explicitly coded as a 0, we assume the absence of data reflects a case of missing data.

Furthermore, given that the various data sources do not share identical naming conven-

tions for all countries and territories, we standardize country names and territories for the purpose of comparability in this study. Notable naming conventions that we adopt in this study include:

- “United Kingdom” is used to reflect a composite of Northern Ireland and Great Britain, which were reported separately in the Global Terrorism Database
- “West Bank and Gaza Strip” is used in place of any instance of “Palestine” or “Palestinian Authority” in the data sets.

A number of transformations are applied to particular data sets to improve their suitability for the purpose of this analysis. The original forms of the data sets are summarized in Table A.1. The transformations applied are summarized in Table A.2. A summary of the data sets with transformations applied is presented in Table A.3.

Table A.1: Summary of Original Data

Variable	Source	Description of Values	Scale
Terrorist Incidences	Global Terrorism Database	Values reflect the number of terrorist incidences experienced within a country in a given year	Unlimited
Freedom of the Press	Freedom of the Press Report by Freedom House	Higher values correspond to lower freedom of expression	0-100
Telephone Access	Fixed Telephone Subscriptions per 100 people, International Telecommunications Union via the United Nations Statistics Division	Higher values correspond to greater access to telephones	Unlimited
Mobile Phone Access	Mobile-cellular telephone subscriptions per 100 people, International Telecommunications Union via the United Nations Statistics Division	Higher values correspond to greater access to mobile phones	Unlimited
Internet Access	Percentage of Individuals Using the Internet, International Telecommunications Union via the United Nations Statistics Division	Higher values correspond to greater access to the Internet	0-100
Regime Instability	Failed State Index by The Fund for Peace	Higher values correspond to higher regime instability	0-120
Democracy	Democracy Index	Higher values correspond to greater democracy	0-10
Corruption	Corruption Perception Index (pre-2012)	Higher values correspond to lower perceived corruption	0-10
Political Violence	Major Episodes of Political Violence, Center for Systemic Peace	Measure of societal and interstate political violence, where higher values correspond to greater severity in political violence	0-60
Economic Prosperity	Per Capita GDP, World Bank	Higher values correspond to greater economic prosperity	Unlimited
Income Inequality	Gini Coefficient, World Bank	Higher values correspond to greater income inequality	0-1
Literacy	Adult Literacy (%), CIA World Factbook	Higher values correspond to higher degrees of literacy	0-100
Ethnic Diversity	“Fractionalization” by Alberto Alesina et al.	Higher values correspond to greater diversity	0-1
Linguistic Diversity	“Fractionalization” by Alberto Alesina et al.	Higher values correspond to greater diversity	0-1
Religious Diversity	“Fractionalization” by Alberto Alesina et al.	Higher values correspond to greater diversity	0-1

Table A.2: Summary of Transformed Data

Variable	Transformation Applied	Description of Values	Scale
Terrorist Incidences	–	Values reflect the number of terrorist incidences experienced within a country in a given year	Unlimited
Freedom of the Press	All values subtracted from 100 to invert the scale.	Higher values correspond to higher Freedom of the Press	0-100
Telephone Access	–	Higher values correspond to greater access to telephones	Unlimited
Mobile Phone Access	–	Higher values correspond to greater access to mobile phones	Unlimited
Internet Access	–	Higher values correspond to greater access to the Internet	0–100
Regime Instability	–	Higher values correspond to higher regime instability	0–120
Democracy	–	Higher values correspond to greater democracy	0–10
Corruption	All values subtracted from 10 to invert the scale.	Higher values correspond to higher perceived corruption	0–10
Political Violence	–	Higher values correspond to greater societal and/or interstate political violence	0–60
Economic Prosperity	–	Higher values correspond to greater economic prosperity	Unlimited
Income Inequality	–	Higher values correspond to greater income inequality	0–1
Literacy	–	Higher values correspond to higher degrees of literacy	0–100
Ethnic Diversity	Original values ranging from 0–1 multiplied by 100	Higher values correspond to greater diversity	0–100
Linguistic Diversity	Original values ranging from 0–1 multiplied by 100	Higher values correspond to greater diversity	0–100
Religious Diversity	Original values ranging from 0–1 multiplied by 100	Higher values correspond to greater diversity	0–100

Table A.3: Summary Statistics of Transformed Data

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
Terrorist Incidences	10,492	11.22	59.87	0	1,649
Freedom of the Press	3,818	53.41	24.52	0	95
Telephone Access	7,606	16.11	18.72	0.00024	105.82
Mobile Phone Access	4,168	37.61	45.74	0.000064	284.34
Internet Access	3,683	17.93	23.93	0.000018	96
Democracy	835	5.51	2.214979	0.86	9.93
Instability	1,462	72.00	23.03	16.80	114.93
Corruption	2,092	5.68	2.27	0	9.6
Political Violence	7,439	0.70	1.78	0	14
Per Capita GDP	7,328	7,304.48	13,902.09	57.64	193,892.30
Income Inequality	6,665	40.59	9.39	23.94	69.12
Literacy	9,030	85.50	18.09	27	100
Ethnic Diversity	9,245	42.81	25.82	0	93.02
Linguistic Diversity	9,245	39.68	27.91	0.80	92.27
Religious Diversity	10,449	44.83	22.48	0.23	82.41

Works Cited

- Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg. "Fractionalization." *Harvard Institute of Economic Research*, no. 1959 (2002).
- Awlaki, Anwar al. "44 Ways to Support the Jihad." Inaccessible as of 2014 April 1. <http://www.anwar-alawlaki.com>.
- Blomberg, S. Brock, Gregory D. Hess, and Akila Weerapana. "Economic Conditions and Terrorism." *European Journal of Political Economy* 20, no. 20 (2004): 463–478.
- Brachman, Jarret M. "Going Viral: Al-Qaeda's Use of Online Social Media." Chap. 5.6 in *Terrorism and Counterterrorism: Understanding the New Security Environment*, 4th, edited by Bruce Hoffman and Russell D. Howard. 361-371: McGraw Hill, 2012.
- Brynjar, Lia, and Katja Skjolberg. "Causes of Terrorism: An Expanded and Updated Review of the Literature." *Forsvarts Forskningsinstitutt (Norwegian Defence Research Establishment)* (2004).
- Burgess, John. "Evaluating the Evaluators: Media Freedom Indexes and What they Measure." Center for International Media Assistance. Accessed 2013 October 18. http://cima.ned.org/sites/default/files/CIMA-Evaluating_the_Evaluators_Report.pdf.
- Byman, Daniel. "The Logic of Ethnic Terrorism." *Studies in Conflict and Terrorism* 21, no. 2 (1998): 149–169.

- Central Intelligence Agency. "The World Factbook: Literacy." Central Intelligence Agency. Accessed 2014 January 25. <https://www.cia.gov/library/publications/the-world-factbook/fields/2103.html>.
- Chenoweth, Erica. "Instability and Opportunity: The Origins of Terrorism in Weak and Failed States." In *The Making of a Terrorist*, edited by James J.F. Forest. Westport, CT: Praeger, 2005.
- Crenshaw, Martha. "The Logic of Terrorism: Terrorist Behavior as a Product of Strategic Choice." In *Terrorism and Counterterrorism*, 4th ed., edited by Bruce Hoffman and Russell D. Howard, 42–53. McGraw Hill, 2012.
- Cronin, Audrey Kurth. "Behind the Curve: Globalization and International Terrorism." In *Terrorism and Counterterrorism: Understanding the New Security Environment*, 4th, edited by Russell D. Howard and Bruce Hoffman, 57–78. McGraw Hill, 2012.
- Cull, Nicholas J. "Public Diplomacy: Taxonomies and Histories." *The Annals of the American Academy of Political and Social Science* 616, no. 31 (2008).
- Deutsch, Morton. "A Framework for Thinking About Oppression and Its Change." *Social Justice Research* 19, no. 1 (2006).
- Doyle, Gillian. *Media Ownership: The Economic and Politics of Convergence and Concentration in the UK and Europe Media*. London: Sage Publications, Inc.
- Economic Intelligence Unit. "Democracy Index 2012: Democracy is at Standstill." Economic Intelligence Unit. Accessed 2013 December 1. https://www.eiu.com/public/topical_report.aspx?campaignid=DemocracyIndex12.
- Forest, James J.F. "Terrorism as a Product of Choices and Perceptions." In *Terrorism and Counterterrorism: Understanding the New Security Environment*, 4th, edited by Russell D. Howard and Bruce Hoffman, 111–139. McGraw Hill, 2012.

- Freedom House. "Freedom of the Press 2013." Freedom House. Accessed 2013 November 18. <http://www.freedomhouse.org/sites/default/files/FOTP%202013%20Booklet%20Final%20Complete%20-%20Web.pdf>.
- Fund for Peace. "The Failed State Index 2013." Fund for Peace. Accessed 2013 December 17. <http://ffp.statesindex.org/rankings-2013-sortable>.
- Greenwald, Glenn. "Why is Boston 'terrorism' but not Aurora, Sandy Hook, Tucson and Columbine? Can an act of violence be called 'terrorism' if the motive is unknown?" The Guardian. Accessed 2013 December 13. 2013. <http://www.theguardian.com/commentisfree/2013/apr/22/boston-marathon-terrorism-aurora-sandy-hook>.
- Harvard Law Review. "Safety Valve Closed: The Removal of Nonviolent Outlets for Dissent and the Onset of Anti-Abortion Violence." *Harvard Law Review* 113, no. 5 (March 2000): 1210–1227.
- Hoffman, Bruce. *Inside Terrorism*. New York, New York: Columbia University Press, 2006.
- House of Commons. "Report of the Official Account of the Bombings in London on 7th July 2005." Accessed 2014 April 1. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228837/1087.pdf.
- Kedzie, Christopher. "Communication and Democracy: Coincident Revolution and the Emergent Dictators." RAND Corporation. Accessed 1 December 2013. http://www.rand.org/pubs/rgs_dissertations/RGSD127.html.
- Marshall, Monty G. "Major Episodes of Political Violence (MEPV) and Conflict Regions, 1946-2012." Center for Systemic Peace. Access 2014 January 24. 2013. <http://www.systemicpeace.org/inscr/MEPVcodebook2012.pdf>.

- Mendel, Toby. "Restricting Freedom of Expression: Standards and Principles: Background Paper for Meetings Hosted by the UN Special Rapporteur on Freedom of Opinion and Expression, March 2010." Center for Law and Democracy. Accessed 2013 November 15. 2010. <http://www.law-democracy.org/wp-content/uploads/2010/07/10.03.Paper-on-Restrictions-on-FOE.pdf>.
- National Commission on Terrorist Attacks Upon the United States. "The 9/11 Commission Report." Accessed 2014 April 1. <http://www.9-11commission.gov/report/911Report.pdf>.
- National Consortium for the Study of Terrorism and Responses to Terrorism (START). "Global Terrorism Database: Codebook." 2013. http://www.start.umd.edu/gtd/downloads/dataset/GTD_Codebook_2013Final.pdf.
- Nelson, Rick, and Thomas M. Sanderson. "A Threat Transformed: al Qaeda and Associated Movements in 2011." *Center for Strategic and International Studies* (February 2011).
- Norris, Pippa. *Digital Divide*. Cambridge, MA: Cambridge University Press, 2001.
- Patsiurko, Natalka, John L. Campbell, and John A. Hall. "Measuring cultural diversity: ethnic, linguistic and religious fractionalization in the OECD." *Ethnic and Racial Studies* 35, no. 2, 195–217.
- Pool, Ithiel de Sola. *Technologies of Freedom*. Cambridge, MA: Harvard University Press, 1983.
- Price, Monroe. *Media and Sovereignty: The Global Information Revolution and its Challenges to State Power*. Cambridge, MA: MIT Press, 2002.
- Rapoport, David. "The Four Waves of Terrorism." In *Attacking Terrorism: Elements of a Grand Strategy*, edited by Audrey Kurth Cronin and James M. Ludes. Washington, DC: Georgetown University Press, 2004.

- Reinares, Fernando. "The Madrid Bombings and Global Jihadism." International Institute for Counter-Terrorism. Accessed 2014 April 2. 2010. <http://www.ict.org.il/Articles/tabid/66/Articlsid/816/currentpage/8/Default.aspx>.
- Ronen, Yaël. "Terrorism and Freedom of Expression." *International Law Forum at the Hebrew University of Jerusalem*, nos. 07-12 (2012).
- Schmid, Alex P. "Frameworks for Conceptualising Terrorism." *Terrorism and Political Violence* 16, no. 2 (2004): 197–221.
- Seib, Philip. "Public Diplomacy, New Media, and Counterterrorism." In *Terrorism and Counterterrorism: Understanding the New Security Environment*, edited by Russell D. Howard and Bruce Hoffman. New York, NY: McGraw Hill, 2012.
- Steinbrick, John E., and Jeremy W. Cook. "Media Literacy Skills and the "War on Terrorism"." *The Clearing House*, no. 6 (2003): 284–288.
- Takeyh, Ray, and K. Gvosdev Nikolas. "Do Terrorist Networks Need a Home?" In *Terrorism and Counterterrorism: Understanding the New Security Environment*, edited by Russell D. Howard and Bruce Hoffman. McGraw Hill, 2012.
- Teets, Jessica, and Erica Chenoweth. "To Bribe or to Bomb: Do Corruption and Terrorism Go Together?" In *Corruption, Global Security, and World Order*, edited by Robert Rotberg. Brookings Institution Press, 2009.
- Transparency International. "Corruption Perceptions Index." Transparency International. Accessed 2013 October 13. <http://www.transparency.org/research/cpi/>.
- United Nations. "The Universal Declaration of Human Rights." United Nations. Accessed 2013 November 15. <http://www.un.org/en/documents/udhr/index.shtml>.

United Nations Data. "UN Data: A World of Information - Fixed Telephone Subscriptions."

United Nations. Accessed 2013 November 25. <http://data.un.org/Data.aspx?d=ITU&f=ind1Code%3aI112>.

———. "UN Data: A World of Information - Mobile-cellular telephone subscriptions." United Nations. Access 2013 October 18. <http://data.un.org/Data.aspx?d=ITU&f=ind1Code%3aI271>.

———. "UN Data: A World of Information - Percentage of individuals using the Internet." United Nations. Accessed 2013 October 18. <http://data.un.org/Data.aspx?q=internet&d=ITU&f=ind1Code%3aI99H>.

United Nations Office of the High Commissioner for Human Rights. "International Covenant on Civil and Political Rights." United Nations Office of the High Commissioner for Human Rights. Accessed 2013 November 15. <http://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx>.

Weimann, Gabriel. "www.terror.net: How Modern Terrorism Uses the Internet." In *Terrorism and Counterterrorism: Understanding the New Security Environment*, 347–360. New York, NY: McGraw Hill, 2012.

Wimmer, Kurt. "Toward a World Rule of Law: Freedom of Expression." *Annals of the American Academy of Political and Social Science* 603 (2006): 202–216.

Wolfsfeld, Gadi. *Media and Political Conflict: News From the Middle East*. New York, NY: Cambridge University Press, 1997.

World Bank. "GDP per capita (current US\$) — Data — Table." World Bank. Accessed 2013 December 15. <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>.

———. "World Bank: GINI Index." World Bank. Accessed 2014 January 25. <http://data.worldbank.org/indicator/SI.POV.GINI>.

Ziring, Lawrence, Robert E. Riggs, and Jack C. Plano. *The United Nations: International Organization and World Politics*. 4th ed. Belmont, CA: Thomas Wadsworth, 2005.