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Grievance Group Index, State Legitimacy Index, External Intervention Index, and Global Terrorism

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2019

Abstract

Grievance Group Index, State Legitimacy Index, External Intervention Index, and Global

Terrorism

by

Hassan Elkatawneh

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

August 2019

Abstract

The purpose of this quantitative cross-sectional study was to obtain a more accurate diagnosis of the factors that incite terrorism through examining the extent to which independent variables (the Group Grievance Index (GGI), the Legitimate State Index (LSI), and the External Intervention Index (EII)) can predict the dependent variable (the level of global terrorism (GTI)) for the period between 2006-2017. The study included data from the 162 member states of the United Nations, covering 99.7% of the world's population. Game theory and the political process theory provided the theoretical frameworks for the study. Multinomial logistic regression analysis was used to assess the effect of the interaction on the relation between GGI, SLI, EII, and GTI. The results of the study showed that the relationship between the level of terrorism and the independent variables varies according to the level of terrorism. Interaction between GGI, SLI, and EII was negatively associated with GTI in countries with low GTI risk with an adjusted odds ratio 0.99, but in the countries with a medium and high level of GTI, the relationship was positive, and the adjusted odds ratio was respectively 1.01 and 1.02. The findings benefit international and national security decision-makers by identifying the nature of the relationship between terrorism and the factors affecting it. As well, the importance of considering the interaction between variables that affect terrorism. The results of the study may serve to bring social change within government cultures in the third world when dealing with minorities and grievance groups. Furthermore, it may motivate third world nations to achieve legitimate representation within all social strata and push the international community to reduce interference in the affairs of other sovereign nations.

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Dedication

This dissertation is dedicated to the person who was with me: the mother, the father, the sister, the friend, the whole world. To the spring of tenderness. To the pure, good hand that whenever she touches my head, I feel safe. To whom I breathe love, and my heart beats in her heart. To who was and still is the joy and love, happiness.

To the soul of my ***mother*** my love.

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Table of Contents

Chapter 1: Introduction to the Study

An interest in terrorism has attracted the attention of politicians, leaders, and officials from many countries across the globe. However, there is no agreed-upon definition of terrorism at either the scientific or international level (Yeşiltaş & Kardaş, 2018). Yeşiltaş and Kardaş (2018) explained that this is due to the ideological factors related to the term itself, as well as the differing cultural and intellectual structures present within society. There have been varying interpretations of the motives behind terrorism, among which are those who believe that competition and international conflict help to nurture terrorism, as well as those who believe terrorism is a naturally occurring phenomenon influenced by political, economic, and ideological factors (Caruso & Locatelli, 2014; Crothers, 2014; Pauwels & De Waele, 2014; Sullivan & Karreth, 2014; Yeşiltaş & Kardaş, 2018). Although terrorism has long been a threat to the safety and security of human societies, its use has become substantial during the modern post-World War I era (Becker, 2015). The early years of the 21st century saw a marked increase in terrorist operations, with the events of September 11, 2001, as being among the most tragic in the United States. Although the events of September 11, 2001 are a milestone in the history of terrorism, they also represent a shift in the nature and patterns of terrorist activity and extremist ideas (Goepner, 2016). The aim of the study was to examine the impact of the interactions between the grievance group, state legitimacy, and external intervention on global terrorism level. The effects of the grievance group, state legitimacy, and external intervention on global terrorism level may be different if the interaction between the independent variables is excluded from the study. The importance

of this study was to obtain a more accurate diagnosis of the factors that incite terrorism, and find appropriate ways to combat terrorism and achieve global security. Not only will this help to add to the existing field of knowledge on terrorism, but it will also aid in reaching an effective formula that will help predict terrorist threats.

Within this chapter, the research problem is discussed, and the knowledge gap related to this discipline is identified. The research methodology is outlined to achieve a more accurate understanding of terrorism. Moreover, the theoretical basis, concepts, and hypotheses that have led to the emergence of the present research questions are explained.

Background

In 2005, U.S. Secretary of State Condoleezza Rice spoke of the concept of spreading creative chaos in the Middle East as a principle for President Bush's plan for a new Middle East (Khashanah, 2014). Rice admitted that the U.S. invasion of Iraq and Afghanistan was to spread democracy (Byman, 2014). Anderson (2016) defined creative chaos as a political or humanitarian situation that is expected to be comfortable after a phase of deliberate chaos. Rice's recognition of the administration's true motives came late, but it provided an explanation for the current fragmentation of countries, especially in Iraq, Syria, Yemen, and Libya, under the themes of democracy and human rights. As a result of the U.S. policy in the Middle East, the world has seen wars, failed states, displacements, and sectarian divisions (Anderson, 2016).

Mitkov (2015) focused on examining the nature of the relationship between democratization and the threat of war and terrorism. In the democratization and war theory, Mansfield and Snyder argued that during the process of democratization, the risk

of civil war increases (as cited in Mitkov, 2015), while Bapat and Zeigler (2016) stated

that the policy of the United States and its allies in Iraq is the key factor in feeding the

causes of extremism and terrorism. Yeşiltaş and Karda (2018) argued that the U.S.

policies promoting democracy had a role in spreading liberal concepts, which led to a

loss of economic control by creating a deeper relationship between power and capital, as

well as increasing the spread of political corruption. Yeşiltaş and Karda also asserted that

the Shiite-Sunni conflict has played a role in the emergence of tensions within Iraqi

society. Additionally, Yeşiltaş and Karda observed that the conflict deepened during the

period of Maliki's Shiite rule, which ruled out the Sunnis due to distrust and led to

growing feelings of relative deprivation and hatred in Iraqi society.

This state of affairs corresponds to Gore's theory of grievances, in which relative

deprivation works as an instigator of insurgency and increases the threat of terrorism (as

cited in Mitkov, 2015). Ghatak, Gold, and Prins (2017) argued that racial discrimination

has an impact on the spread of domestic terrorism and that such discrimination is a source

of the grievances against the state. Furthermore, Ghatak et al. asserted that as a result of

the inflamed situation in Iraq, there is violent resistance by the Sunnis in many areas of

the country, against both the Baghdad government and the presence of the West. This

relates to Hoffler's theory, which states that if a particular group has the ability to

organize a rebellion, they can exploit the opportunity and escalate the violence into civil

war (as cited in Mitkov, 2015). Sectarian violence in Iraq could be a result of discontent

with the U.S. presence, as well as sectarian discrimination and political corruption.

The concept of creative chaos, the implementation of which Rice acknowledged

in the Middle East region, has spread to the Syrian scene. When the Arab Spring took

place in 2010, the spread of chaos and terrorism sparked a global discussion of ISIS and the various criminal acts carried out in Iraq and Syria. The chaos began with the protests that the Assad regime faced with iron and fire, and it was only a few years ago that the emir of al-Qaeda in Iraq announced the birth of ISIS—specifically, on April 8, 2013. This was followed by the official announcement of the establishment of the Islamic State in the territory of Iraq and Syria, led by Abu Bakr al-Baghdadi, on June 29, 2014 (Pettinger, 2016). Pettinger (2016) observed that the Middle East and North Africa are exposed to fourth-generation warfare, where terrorist groups take advantage of the region's chaos and instability. Pettinger defined fourth-generation warfare as conflict characterized by decentralization and the use of modern technological and psychological warfare to force the enemy to abandon its policies and strategic objectives.

Anderson (2016) argued that the U.S. interventions in the Middle East and North Africa have had an impact on the spread of waves of hostility to the United States. Anderson stated that while the United States has supported minorities in Iraq, Syria, and Kosovo, it did not support them in Saudi Arabia, Bahrain, and Kuwait. Anderson also claimed that while the U.S. has contributed to the weakening of some dictatorships in Iraq, Syria, Libya, and Yemen, it has helped to strengthen other dictatorships in Saudi Arabia, Egypt, and Bahrain, despite human rights abuses in those countries. U.S. policy in dealing with these complex issues in the Middle East and North Africa has had an impact on the overall situation that dominates the Arab region. Therefore, the impact of external intervention on the spread of terrorism has been considered.

Scholars have examined what leads to external interventions in vulnerable countries from superpowers such as the United States, Russia, and the European Union,

as well as interventions from regional players such as Turkey, Israel, Egypt, Iran, and Saudi Arabia. It may be helpful to consider U.S. Secretary of State Condoleezza Rice's remarks about the concept of creative chaos aimed at spreading democracy, starting in Afghanistan and Iraq. According to Khashanah (2014), the U.S. support for the Taliban and Al-Qaeda fighters against the Russians, and the exploitation of sectarianism in the recruitment of many young Muslims in the Russian-Afghan War, played a role in the spread of ideological wars and extremist ideologies. Khashanah wrote, "The U.S. war on Iraq has helped recruit a lot of Muslim youth to fight U.S. forces in Iraq" (p. 9). The failure of Arab and Islamic countries to support Iraq and Afghanistan spread the sense of injustice among young people, which helped to engage many young Muslims into recruitment by ISIS. Anderson (2016) emphasized that the policy of the United States, and the West in general, did not pay much attention to the issue of democracy and its spread in developing countries as much as it gave attention to stability that preserved its interests, which confirmed the link between the United States and its Western allies with many of the totalitarian dictatorships.

On the other hand, Gibbs (2015) stated that terrorism is the result of conflict over legitimacy, concluding that the decline in legitimacy results in a higher number of terrorist attacks. Gibbs also concluded that countries with low legitimacy have levels of terrorist attacks three times higher than those with high legitimacy. Gibbs stressed that countries with weak legitimacy usually resort to the use of violence and repression to exclude political opposition groups, and they may suffer from high levels of terrorism. Byman (2014) stated that restrictions on Muslims in East Asian countries, such as China, Chechnya, Myanmar, Kazakhstan, and Uzbekistan, have led to the displacement of

thousands of young people to the Islamic State of Iraq and al-Sham and their recruitment by ISIS.

Ghatak et al. (2017) argued that the institutional democracies in Europe and North America are less vulnerable to domestic terrorism. However, these countries may face domestic terrorism if there are large collective grievances in the form of state patronage. Gibbs (2015) presented an example of the local terrorism that the United Kingdom suffered by Irish nationalist groups. It is usually low legitimacy that ignites disputes between the state and the opposition over state legitimacy, which perpetuates the cycle of violence. This supports Hoover's theory that if a particular group has the ability to organize a rebellion, it can exploit the opportunity and escalate the violence into a civil war (as cited in Mitkov, 2015). Sousa (2015) believed that political opportunity arises when state legitimacy is low. The grievance groups exploit it to compete for legitimacy and authority, which attracts the external interventions that seek suitable opportunities to exploit the situation. Conflicts may be exacerbated if the objectives of external interventions are biased rather than neutral. Sousa added that the process of intervention is determined by evaluating the cost of the conflict and its benefits, following the disclosure of potential risk preferences and estimating the chances of winning or losing the battle. Khashanah (2014) argued that Western intervention has contributed to the creation of chaos in the Arab region, leading to the destruction of entire countries and the displacement of millions of refugees.

The knowledge gap in the literature lies in the way in which factors influencing terrorism are addressed and evaluated. Scholars have examined the factors that influence terrorism separately from other influencing factors, which may lead to inaccurate results.

Researchers have outlined the factors that influence the spread of global terrorism. The outcomes of external interventions are often different from the declared objectives if these interventions are biased, as well as when other conditions are available, such as low legitimacy or increased grievances of the groups. Hence, researchers should examine the impact of these factors on global terrorism, both individually and in their interaction with each other.

Therefore, the aim of this study was to address this knowledge gap by considering the interaction between the factors affecting the level of global terrorism. This would be the first step in predicting the level of terrorism in the near future. This study may provide more accurate results in the process of determining the factors conducive to the spread of global terrorism. I may also provide an accurate scale to predict the global terrorism risk and thus to work to limit the spread of terrorist operations and ensure sustainable peace and development.

Problem Statement

Terrorism is no longer a phenomenon pertaining to state policy conditions; it has become a global spectacle that affects most parts of the world in varying degrees. After World War I, many terrorist events occurred internationally (Sousa, 2015). Sousa (2015) stated that terrorist activity attracted increased attention from both developed and developing countries during the last decade of the 20th century and the beginning of the 21st century. Yeşiltaş and Kardaş (2018) stated that over the past 70 years, the Middle East had witnessed many different wars, alliances, and rivalries. This has prompted the presence of global political powers in the Middle East both to participate in conflict management and to exert their political and economic will. Interpretations of what has led

to the growth of terrorism vary. Although some state that competition between states for energy resources and international conflicts contribute to increases in terrorist activity, others claim that terrorism is a natural phenomenon related to political, religious, and ideological factors that can occur in any society (Yeşiltaş & Kardaş, 2018).

Syria, Iraq, Yemen, and Libya are four countries that share a set of common characteristics; they speak the same language, follow the same religion, and are located in the same geographical region. Rydqvist and Holmquist (2016) argued that a set of commonalities distinguish these four countries from their neighbors. Some examples of these commonalities include the ruling regime's lack of legitimacy, the presence of grievance groups, and a viable hostility towards Western countries. These commonalities make the four countries vulnerable to external interventions. Yeşiltaş and Kardaş (2018) argued that after the Arab Spring, the Arab regimes that were hostile to Israel and the West became targets of multiple international interventions, including that of Syria, Iraq, and Libya. Dombrowski and Reich (2015) argued that regional and Western forces used political and military techniques to change the political structure of these countries. Dombrowski and Reich added that Syria, Iraq, and Libya had become the center of conflict for the key players in the region, whereby each key player attempted to achieve their own goals. Pettinger (2016) argued that Western interventions had exacerbated the social and political unrest in these countries, which led to the rise of terrorism in the West. The rising terrorist phenomenon has prompted the use of military force. Bapat and Zeigle's (year) argument can be seen in Syria, where the Russians, the United States, Turks, and Iranians have violated the sovereignty of the Syrian state. Furthermore, this can also be seen in Iraq, where the United States, Iran, and Turkey have revoked

sovereignty from the Iraqi state. The warring forces in Libya are instruments of conflict in foreign countries such as Egypt, the United Arab Emirates, Qatar, and the countries included in the North Atlantic Treaty Organization (NATO; Yeşiltaş & Kardaş, 2018). The situation in Yemen is a proxy war between Saudi Arabia and Iran, where Saudi Arabia has violated Yemeni sovereignty and has seized control over Yemen's shipping ports (Yeşiltaş & Kardaş, 2018).

Russian Foreign Minister Sergei Lavrov stated that foreign intervention in the Middle East has led to the spread of extremism and terrorism in the region (Mediel, 2016). Mitkov (2015) concluded that the grievances in Libya, Yemen, and Syria have led to the decentralized subordination of extremists seeking revenge form their own regimes. Ghatak et al. (2017) argued that, in the case of small subgroups, grievances remain a necessary factor for the emergence of political violence. For example, during the 1960s and 1970s in Northern Ireland, economic discrimination against Catholics led the Irish Republican Army to attack areas of the United Kingdom. Gibbs (2015) argued that illegitimate regimes have negative implications for security and stability. Illegitimacy could lead to terrorist activity against representatives of those regimes, and, in some cases, a terrorist group will pursue strategies to strengthen their legitimacy at the expense of the ruling regime.

The previously mentioned studies have dealt with three main variables (grievance groups, state legitimacy, and external interventions) that play a role in the spread of global terrorism, but little is known about the interaction between these factors (Anderson, 2016; Bapat & Zeigler, 2016; Byman, 2014; Ghatak et al., 2017; Gibbs, 2015; Khashanah, 2014; Mitkov, 2015; Sousa, 2015; Yeşiltaş & Kardaş, 2018). Although

scholars have researched the impact of grievance groups, state legitimacy, and external interventions on global terrorism, the potential impact of the interaction between these independent variables, and their combined impact on global terrorism when they exist simultaneously and in the same place, is unknown. The problem addressed in this study was the need to look at the variables in a holistic manner, to calculate the interaction between the three main variables, and to examine the impact of this interaction on the global terrorism.

In this study, I focused on determining how interactions between the Group Grievance Index (GGI), the Legitimate State Index (LSI), and the External Intervention Index (EII) affect global terrorism. The GGI refers to the state of discontent among groups of grievances due to a lack of equality, as this sense of injustice generates a sense of grievance. The SLI evaluates the degree of representation of the state and its openness to its citizens. Finally, the EII refers to the process whereby a state interferes in the internal or external affairs of another state in order to force them to act in a certain way. The Global Terrorism Index (GTI) is defined as any action against a state that would provoke panic or terror amongst certain persons, groups of persons, or the public. The extent to which these three independent variables related to the dependent variable was determined by studying a multinomial logistic regression and measuring the adjusted odds ratio value. This was done in order to learn the degree to which any changes in the independent variables might impact the dependent variable and to examine how any changes in the interaction between the independent variables may impact the independent variable. This study was significant as it has provided a more accurate method of

determining the relation between the GGI, LSI, and EII with the level of the Global

Terrorism.

Purpose of the Study

The purpose of this quantitative study was to examine the extent to which

independent variables (the group grievance, state legitimacy, and external intervention)

can predict the dependent variable (the level of global terrorism) for the period between

2006-2017. The aim of this study was to identify the extent to which the interaction

between the independent variables can assist in predicting the independent variable. I

used the GGI, the LSI, and the EII as independent variables, and I used the GTI as a

dependent variable. I studied the effect of the interaction between independent variables

on the dependent variable to show the rationality of game theory and the political process

theory when applied to the study of terrorism.

Research Questions

Research Question 1: How is the grievance group related to the level of global

terrorism?

$H_0$1: The grievance group variable is negatively related to the level of global

terrorism.

H_a1: The grievance group variable is positively related to the level of global

terrorism.

Research Question 2: How is the state legitimacy related to the level of global

terrorism?

$H_0$2: The state legitimacy variable is negatively related to the level of global

terrorism.

*H*a2: The state legitimacy variable is positively related to the level of global terrorism.

Research Question 3: How is the external intervention related to the level of global terrorism?

$H_0$3: The external intervention variable is negatively related to the level of global terrorism.

*H*a3: The external intervention variable is positively related to the level of global terrorism.

Research Question 4: How is the interaction between the group grievance, state legitimacy, and external intervention variables related to the level of global terrorism?

$H_0$4: The interaction between the group grievance, state legitimacy, and external intervention variables is negatively related to the level of global terrorism.

*H*a4: The interaction between the group grievance, state legitimacy, and external intervention variables is positively related to the level of global terrorism.

The three independent variables were the group grievance, the state legitimacy, and the external interventions. The dependent variable was the level of the global terrorism.

Theoretical Framework for the Study

Sabatier and Weible (2014) argued that political process theory is one of the fundamental philosophies that explains the rationale behind a social movement and its developmental stages. Sabatier and Weible stressed that the presence of a political opportunity for change leads to an attempt to change the existing political structure. The presence of grievance groups under regimes that are not legitimate are political

opportunities to produce social movements demanding change. Sabatier and Weible added that for such movements to be effective, they must possess the necessary resources to bring about change. Hence, Sabatier and Weible explained the importance of external interventions as resources to those social movements, such as the external support provided by the United States, Europe, and the Gulf states to the Free Syrian Army (FSA) in Syria.

Sullivan and Karreth (2014) argued that an internal armed conflict is a complex political, economic, and social crisis primarily linked to regional or international conflict. The conflict involved may aim to change the balance of power or create a new world order. Sullivan and Karreth also explained that conflict could develop into a war waged by the state with the support of its allies against local and foreign armed groups who have the support of nearby countries.

Game theory is the mathematical analysis of a conflict used to indicate the best possible options for making decisions under the given circumstances (von Neumann & Morgenstern, 1944). Game theory has been applied to various fields, including economics, politics, sociology, and military sciences (Tien, Hien, Andy, Tung, & Sumner, 2018). I used game theory in the political and military operations present amongst the conflicting parties being evaluated. This application was performed through the interpretation of the parties' practices during and after military operations in Syria. Furthermore, I analyzed the internal conflict in Syria, while I demonstrated the roles of the main players in the Syrian Civil war. I also explained the role of external intervention in supporting the grievance groups that are struggling under the illegitimate regime in Syria.

Nature of the Study

The aim of this cross-sectional analysis was to examine the interactive relation of the three independent variables (the group grievance, state legitimacy, and external intervention) with the level of terrorism activities. I conducted a multinomial regression analysis with secondary data over a time span of 12 years (2006–2017). This study was performed to evaluate the extent of the impact in light of variable interactions. The extent of the effect of the three independent variables on the dependent variable was determined by studying the multinomial regression and measuring the adjusted odds value. I established the degree to which any change in the independent variables affects the dependent variable and prompted an examination of the impact that any change in the interaction between the independent variables has on the independent variable.

The secondary data were obtained from reliable academic institutions that possess a high degree of credibility and validity. The survey study method leads to the production of higher external validity, thereby reducing the disadvantage of nonexperimental studies in providing lower levels of internal validity.

The data were obtained from reliable sources, namely the Fund for Peace (FFP) and the Institute of Economics and Peace (IEP). I analyzed the available data pertinent to the 162 member states of the United Nations during the period between 2006-2017. The following three independent variables were used within this study: the FFP's developed the GGI, LSI, and external intervention index. These variables are a part of 12 overarching conflict risk indicators known as the Fragile State Index (FSI). The FSI is based on the Conflict Assessment System Tool (CAST). CAST methodology uses qualitative and quantitative research methods to produce quantifiable indicators, in which

data collection relies on public data sources. Although decision makers and specialists use the CAST framework to address conflicts in the field, it is also used for local and international studies. The CAST framework was designed to measure vulnerability before, during, and after conflicts. The index has been reviewed by both independent scholars and experts from academic institutions, governments, and the private sector. This gives the index high credibility, reliability, and validity (FFP, 2018).

The dependent variable used in this study was the GTI, which consists of terrorist activity data. GTI data are issued by the IEP, which is a research institution that specializes in the development of peace analysis scales. The IEP analyzes the economic costs and risks of violence at regional and international levels. The data published by the IEP are used by many governmental agencies, academic research institutions, and international institutions (such as the World Bank, the Commonwealth Secretariat, and the United Nations). Its adoption by these institutions reflects the reliability and validity of GTI data (IEP, 2018).

<div align="center">**Definitions**</div>

The study has adopted the following key terms:

The Global Terrorism Index (GTI): Reflects the global trends and patterns of terrorism (IEP, 2018).

Terrorism: Defined by the *International Encyclopedia of the Social and Behavioral Sciences* (2015) as "trying to spread panic and panic for political purposes" (p. #). Similarly, terrorism is defined by the IEP (2018) as "the actual use or threat of unlawful force and violence by a non-state party to achieve a political, economic, religious or social objective through fear, coercion or intimidation" (p. #). Further, the

United Nations International Law Commission defined terrorism as "any criminal activity directed at a particular state aimed at creating a state of terror in the minds of the State or any of its authorities or particular groups" (International Law and Justice. (n.d.))

The Group Grievances Index (GGI): This term focuses on divisions among different social groups, particularly in terms of their political characteristics, services, resources, or participation in political processes. According to Basedau et al. (2017), a grievance is a self-determined sense that independence is lacking within a group, wherein homogeneous groups feel they need to take their future into their own hands and identify the political choices they deem appropriate as solutions. Christensen (2018) defined grievance as a state of discontent due to a lack of equality with others. Christensen underscored that a sense of injustice among some groups may generate grievances.

The State Legitimacy Index (SLI): This index calculates the population's level of trust in state institutions and assesses the effects caused by an absence of trust through monitoring the opinions expressed by the public during social movements. Moreover, elections, political changes, and the degree of a population's representation in elected governments are evaluated through the SLI (FFP, 2018).

Legitimacy: The *International Encyclopedia of the Social and Behavioral Sciences* (2016) defined state legitimacy as the basis upon which the governing body depends for its exercise of power. Hazenberg (2015) defined state legitimacy as the degree of representation that the state has in its relationship with its citizens. The term legitimacy originates from the Latin word legitimacy, which was used by the Romans to convey a sense of conformity with the law (Schoon, 2016).

The External Intervention Index (EII): The EII measures the effects of external economic, political, and security interventions in terms of state performance.

External intervention: The term intervention means to be a mediator in settling a dispute or intervene by force (or threat of force) in the internal affairs of other countries (*International Encyclopedia of the Social and Behavioral Sciences*, 2016). Schaub defined interference as a state's involvement in the internal or external affairs of another state without any legal basis, whereby their involvement obliges the other state to follow the directions of the intervening state (Stevenson, 2014).

Research Assumptions

This cross-sectional study was founded on the premise that the interaction between independent variables may get different consequences than if the variables were studied on an individual basis. However, studying the impact of the independent variables separately cannot produce a realistic study or accurate results and concluding recommendations. Studying these factors individually may produce unrealistic results because other factors may change their effects and impact on terrorism.

Terrorism, and the factors influencing it, have been studied in the literature. Howver, no improvements in fighting terrorism have been made. Each country has its own nature of the vulnerability, and the concept behind this research was to study the interaction between independent factors and their relation to the dependent factors. This study was limited to evaluating the relation of grievance groups, the state legitimacy, and external intervention on global terrorism as the first step for future studies.

The study was based on the assumption that the relation of the interactions between group grievances, state legitimacy, and external intervention to the level of the global terrorism differs from the relationship of the same variables when examined separately. Li, Ashkanasy, and Ahlstrom (2014) argued that the disparity in the level of terrorism is observable in countries that share the same geopolitical characteristics. Constantiou and Kallinikos (2015) stated that political decisions have both declared and undeclared goals and that political opportunity plays a role in shaping political decisions. The theoretical framework of both game theory and political process theory share the exploitation of political opportunity. This results in political decisions that have different objectives when compared to the objectives behind the decisions of those who have no political opportunity. Hence, I analyzed the relationship between the interaction of the three established variables: group grievances, state legitimacy, and external interventions with the level of global terrorism.

Scope and Delimitation

The logical basis for selecting the variables and concepts of this study was related to the comprehensiveness of the measurement tools. An assessment instrument measures a set of factors that evaluate pressure trends (The Fund for Peace, 2018). Each index examines a range of logical global media data search terms to determine the problem relevancy of each indicator. For example, when examining the GGI, it was found that group grievances contain set criteria that involve the pressure trends of each country being evaluated, which could be used to measure sectarian violence, divisions, postconflict treatment, equality, justice, wealth distribution, poverty, unemployment, and freedom of religion. The rationality of selecting the group grievances, state legitimacy,

and external intervention variables was bceause these variables represent the internal primary pressure measurement tools. I did not rule out the effect of other factors, but the limited scope of the study requires the use of only three independent variables and one dependent variable.

Limitations

The limitation of this research was the short study period, as a longer study period would possilby yield more accurate study. The study period was limited to 12 years due to the difficulty of retrieving data before this point. Because secondary data were used, the data could not be manipulated. This resulted in weaker internal validity of causal inferences. However, the use of secondary provided a higher external research validity and reduced the data collections threats and determinants. The secondary data were obtained from reliable academic institutions that possess a high degree of credibility and validity (The Fund for Peace, and the Institute of Economics and Peace). As this study included 99.7% of the world's population, it did not rule out any country or population. The secondary data used could not attain reliable results due to the lack of data available to calculate the study's indicators. In addition, the data were collected to answer different questions from the current research questions. As these data were originally designed to measure the fragility of the state, the three indicators are part of 12 indicators to calculate the fragility of the state.

Research Significance

I sought to fill the gap in knowledge identified by the problem statement. I showed that terrorism is the result of multiple internal and external factors. Moreover, I determined the extent to which the independent variables (group grievance, state

legitimacy, and external intervention) affect the dependent variable (GTI). I investigated the interactions among the independent variables and their relation to the level of global terrorism. Differences in terrorism levels between countries are primarily due to the variation in factors that incite terrorism (Fortna, 2015). Therefore, the impact of factors may differ from one country to another. I sought to demonstrate the different effects of these factors when studied separately, as well as whether they can be combined simultaneously with other factors in the same region and time period. This approach may pave the way for a new and more accurate terrorism research methodology that will assist in the planning of public security and sustainable development. This research approach could also help future studies to improve the predictability of terrorist threats.

Fighting terrorism is an international responsibility. The process of evading responsibility for terrorism and blaming individuals, institutions, or ideologies have not helped solve the problem. Rather, this evasion of responsibility has exacerbated terrorism (Coggins, 2015). Despite the billions of dollars spent on fighting terrorism, terrorism is worsening, and civilian casualties are increasing (Fortna, 2015). It is the moral responsibility of academic researchers to conduct terrorism studies, investigate the causes of terrorism, and determine solutions for avoiding future terrorist activity. This study may serve to bring social change within government cultures when dealing with minorities and grievance groups. It may motivate countries to achieve legitimate representation within all social strata and push the international community to reduce interference in the affairs of other sovereign nations. This study may help to achieve higher levels of global security and sustainable peace.

Summary

Within this chapter, the literature gap regarding the factors that affect the increasing level of international terrorism was presented. The purpose of this study was to examine the interaction impact of the group grievances, state legitimacy, and external intervention have on global terrorism. I used the game theory and the political process theory as the theoretical foundation for which terrorism is linked. The quantitative, cross-sectional methodology was selected for this study, and I used the multinomial logistic regression analysis to evaluate the extent to which the interaction between the independent variables relate to the dependent variable. I assumed that the independent variables have a negative relation to the global terrorism level. I also assumed that the interaction between independent variables has a negative relation to the global terrorism level. These hypotheses have been studied through multinomial logistic regression analysis models. This study was grounded in reliable data sources with high-level secondary data from 162 United Nations member states from the period spanning 2006-2017.

In Chapter 1, I presented a brief overview of global terrorism and the history of terrorism within the context of the current literary discourse. Chapter 2 includes the theoretical framework of the study and a review of previous literature related to the subject of the study.

Chapter 2: Literature Review

Introduction

The purpose of this study was to calculate the interaction between the three main variables (group grievance, state legitimacy, and external intervention) and to examine the impact of this interaction on the relation to the global terrorism level. In addition, the purpose of this quantitative study was to define the relationships and interactions between group grievance, state legitimacy, and external intervention. This evaluation has been performed according to the terrorism levels of 162 United Nations members, which covers 99.7% of the global population. I investigated the statistical relationship of the variables between the years 2006–2017 by using the GGI, the LSI, and the EII as independent variables. The GTI was used as a dependent variable for this study. I aimed to study independent variables and their interactions and how the interactive relationship of independent variables is related to the dependent variable.

Terrorism has recently acquired an international dimension, as conventional armed conflict has ended, the cold war has ended, and communist regimes have collapsed. According to the Global Terrorism Database, more than 61,000 terrorist incidents were recorded, killing at least 140,000 people between 2000 and 2014 (IEP, 2015). Gibbs (2015) argued that one of the reasons why a person is a terrorist or a in terrorist group is that such a person or group cannot bring about a change by legitimate means. Dam-de Jong (2015) stated that people choose terrorism when they try to correct what they see as a social, political, or historical mistake. Dam-de Jong added that during the period of unrest in Northern Ireland, from 1968 to 1998, Catholic and Protestant groups launched a campaign of violence against one another in Northern Ireland and

England in pursuit of political hegemony. Shajkovci and Yayla (2016) stressed that the inability of a group of peoples to obtain their independence and their right to self-determination had led national liberation movements to carry out certain operations outside the borders. Shajkovci and Yayla added that marginalizing and suppressing minorities and banning their activities generate angry reactions that are exploited by terrorist groups. Ghatak et al. (2017) stated that different forms of deprivation could push people into terrorism, especially poverty, lack of education, or lack of political freedom. Ghatak et al. added that the Bright Path Group carried out a year-long campaign of violence against the Peruvian government in the 1980s and early 1990s in an attempt to create a Marxist state.

On the other hand, Sousa (2015) claimed that there is one force that controls the world, which has had many effects on various aspects of political, economic, social, and cultural life worldwide. Sousa believed that the use of terrorism is a substitute for conventional warfare, as a more effective recipe that less costly to obtain political gains and concessions on the international scale. Vlajnić (2016) believed that external intervention plays a role in spreading dissatisfaction among groups opposed to external intervention and thus resisting this intervention in various ways. Fawcett (2017) believed that the ethnic conflicts in different regions, which take an armed character, employ terrorist tactics at the international level against the interests of certain minorities such as ethnicities (Iraq's model).

Fawcett (2017) confirmed the reasons for the emergence of ISIS due to the decision of former U.S. President George W. Bush and Vice President Dick Cheney to wage an unnecessary war in Iraq: "Bush's decision to root out the Baath Party has driven

the Sunnis out of the army and bureaucratic jobs" (p. 139), adding that the two most senior military commanders in ISIS were senior Iraqi army officers under Saddam Hussein.

Yeşiltaş and Karda (2018) believed that external intervention in Iraq, for example, has destroyed existing regimes without offering an alternative or offering an unacceptable alternative to the people. Yeşiltaş and Karda added that it is a reckless and irresponsible policy that led to dire consequences. Yeşiltaş and Karda stated that the U.S. intervention in Iraq caused a growth of the terrorist threat as a result of weak state institutions. As for Libya, Mitkov (2015) found that it had been wiped out of existence as a state, and there are only rival armed factions and fighting on behalf of foreign countries. Mitkov claimed that in the absence of a nonviolent mechanism to resolve political and social conflicts, political violence - whether by ruling regimes or nonruling groups - remains the most effective way of resolving these differences. Marginalization of laws, constitutions, and ballot boxes are accessed and stay in political power through fraudulent elections. Pettinger (2016) argued that the failure of the efforts of a peaceful political settlement of the crises on the international and regional scene leads to a sense of frustration among the peoples and in favor of extremist trends.

Mamoon, Javed, and Rana (2017) believed that the power struggle is one of the most critical factors that help to spread terrorism. Mamood et al. stated that groups that lack power resort to terrorism to weaken the state. On the other hand, Ünver (2017) outlined that the extremist groups are exploiting the lack of legitimacy of the state as a pretext to recruit more young people into their extremist group. Gibbs (2015) pointed to the situation in Syria and Assad's legitimacy decline that led to the spread of radical

groups, in addition to recruiting many young people among those groups. Yeşiltaş and Kardaş (2018) stressed that the lack of legitimacy of the state plays a role in recruiting youth in extremist groups. Yeşiltaş and Kardaş emphasized that the legitimacy of the Assad regime must be supported to eliminate extremist groups in Syria.

This chapter provides a list of databases and search engines used in this study for retrieving the academic resources cited. I address the search strategy implemented in terms of the key search terms and phrases used. A description of the time frame chosen for this study is given, and the references used in the first chapter, which was used in the current and subsequent chapters, are explained. I also present a brief overview of the current discourse on terrorism and underscore the gap in knowledge that justifies the importance of this study. The underlying theoretical framework of the study is presented in this chapter. The discussion of the game theory and the political process theory are organized as follows: the theories and their sources are named, the basis of the theoretical structure is outlined, the main hypotheses of the study is discussed, and the hypotheses compatible with the study are theoretically applied. An analysis of how these theories have been applied to previous studies is included to justify the rationale behind applying these theories to the current research. I clarify the relationship between the theories and the present study, as well as how the research questions relate to the challenges presented by these theories. I compare how group grievance, state legitimacy, external intervention, and terrorism have been employed in previous studies. I outline the literature related to the key variables and concepts established and descriptions of the studies related to the interest of this study, both in terms of the research questions and methodology. I provide a comparative study of the strengths and weaknesses of the methodologies explored in

the existing literature, and I used the literature to justify the use of the chosen variables within the present study. I provide a synthesis of the literature pertaining to the key concepts of the common variables as they relate to the research questions. Finally, this chapter provides a summary of the main relevant literature and describes how I attempted to cover the research gaps present in the existing literature and describe the transitional processes that link together the literature selection with the overarching methodology and research design of this study.

Literature Search Strategy

To formulate an integrated understanding of the concepts and phenomena (group grievance, state legitimacy, external intervention, and terrorism) under study, it was first necessary to access database search engines to find information from reliable academic sources. The most important database search engines used in this study included EBSCO Publishing, EBSCO's Military & ProQuest, SAGE Journals, Sagepub, ScholarWorks, Wiley Online Library, Taylor & Francis, Google Scholar, and Google Books. The literature search strategy used in this study was based on three steps. In the first step, search for main keywords such as *terrorism, external interventions, grievance groups*, and *state legitimacy* were used to access the most recent literature on these topics. In the second step, I searched for secondary terms derived from the main keywords to reach a deeper understanding of the phenomenon under study. These secondary terms included *terror, revolution, violence, minorities, frustration, poverty, protests, vandalism, Jihadi, attack, separatists, Taliban, extremism, nationalist, recruitment, fundamentalism, Syria, Iraq, Yemen, Libya, Al Qaeda, ISIS, ISIL, al Nusra, Boko Haram, INLAA, dictatorship, Afghanistan, Iran, Pakistan political violence*, and *societal violence*. In the third step, I

used compound words when searching for keywords in addition to the use of tools that link them together. I used Not-or-AND to narrow the search scope and reduce the number of results. The following were used in the third stage search: *armed revolutionary, transnational terrorism, environmental terrorist, eco terrorism, religious terrorism, suicide attack, chemical weapon, biological weapon, suicide bomber, civil war, intervention, intrastate conflict, war outcomes, foreign military intervention, game theory, mediation, Western country industrialized sanctions, foreign policy measures, effectiveness of political measures, authoritarian rule, democracy promotion, democratization society, state relations, population political opinion, external aid, military aid*, and *economic aid.*

To ensure the study was both comprehensive and current, the scope of the search strategy was based on literature published within the last 5 years. The search included varying types of literature, including peer-reviewed articles, academic books, dissertations, and reports published by international institutions such as the United Nations, the Fund for Peace, and the Institute for Economics and Peace.

Theoretical Foundation

Game Theory

One of the factors that I examined was the external intervention and its impact on terrorism. It was important to know the theoretical underpinning for which these interventions are based. It was necessary to understand the dynamics of the intervention and its causes, which can be evaluated through the application of game theory and the studies that have used it in the past. There are several definitions of game theory, but von Neumann and Morgenstern (1944) defined it as a set of mathematical processes aimed at

finding a solution to a particular situation. According to game theory, the individual

makes an honest attempt at ensuring minimum of success for him or herself. Although

the success of the individual depends on his or her method of treatment, his or her actions

cannot fully determine the outcome of the event; he or she simply influences it (von

Neumann & Morgenstern, 1944). Debnath, Bandyopadhyay, Roy, and Kar (2018)

defined game theory as a way to study decision making in conflict situations. Sawyer,

Cunningham, and Reed (2017) believed that this theory is concerned with situations

where the behavior of each party depends on upon their ability to predict what the other

party will do.

Merutiu (2015) determined game theory to be one of the most rational examples

of interactive decision making, as interactive decision making takes into account the

action and reaction of all game participants. Moreover, Merutiu stated that game theory is

not descriptive; rather, it is a normative theory based on rationality. Draege (2016)

believed that game theory is a method of formulating strategies by analyzing rational

choices to try and achieve maximize profits or advantages. McCormack and Pascoe

(2017) argued that game theory assumes that every player seeks to control or to survive

and that the players' behaviors are not an emotional response to the context of the

surrounding situation. Game theory aims to rationalize the choice between the different

alternatives that arise from these conflicting positions and to address all conflicts of

interest, be it political conflict in general or disputes related to peace and war.

Little (2017) believed that the arms race and the exchange of political squabbles

are primary characteristics that accompany conflict between two or more parties within a

geopolitical entity. Furthermore, Sawyer et al. (2017) stated that military conflict belongs

to the concept of cold war when responding to two basic conditions: first, that its goal is to show military capability, and second, when its purpose is aimed at being a conflict of influence, as it has occurred in both Syria and Yemen. Draege (2016) claimed that since the breakup of the Soviet Union, major wars have been characterized by civil confrontations. Draege applied game theory to the current Syrian situation through the assignment of the following levels:

- Local players: The actual military confrontation between two or more parties, which may be states, armed militias, the regular military force, or popular army.

- Regional players: Countries directly linked to the local players through shared cultures or ideologies.

- Central players: The world's great powers (the United States, Russia, Germany, France, and England). These players may share interests or compete for influence amongst one or all parties from the first and second levels.

Little (2017) practically applied game theory to international conflicts in the following three scenarios:

- Competitive or zero-sum struggles: Conflicts in which the interests of the conflict parties are totally at odds, meaning that one party will have an absolute win over the other.

- Cooperative conflicts: Conflicts in which the interests of the parties are not fully involved. Interests overlap in a way that allows for compromise and concessions to be reached that distribute the gains between all conflicting parties. Little (2017) believed that the cooperative conflict model is almost applicable to the U.S.-

Russian conflict in Syria in terms of bargaining, concessions, and military arrangements being reached on the battlefield.

- Destructive conflicts: Conflicts in which each party is intent on destroying the other. This type of conflict has seemed to retreat within the modern era.

Letnyakov (2016) argued that a long history of conflict in the Balkans and Central Asia, as well as the more recent war in Iraq, points to the role of main players in the termination of war, where they have been pushed to exert their influence on regional allies in quelling war. Letnyakov added that the primary role of regional players is to stop the financial and military supplies of their local allies, forcing them to accept a temporary or sustainable settlement and end the confrontation. Kaufulu (2017) proposed that as the Russian and U.S. sides do not have an need to strike a deal with Syria, both sides continue to achieve a range of interests by prolonging the conflict, some of which include assembling and eradicating jihadists, exhausting regional rivals, and reviving arms markets.

Draege (2016) postulated that Washington has reaped benefit from the work completed by three axes and three polarizations in preserving power balance within the Greater Middle East during the Cold War and throughout the events of September 11, 2001. Some examples of this balance include India in the face of Pakistan, Iran in the face of Iraq, and Israel in the face of the countries of the Arabian Peninsula. Draege added that the balance of these three polarizations has allowed the United States to pass its regional interests, as they have ensured that the military capabilities of the three poles is being used to confront one another and not to confront U.S. interests.

Hahn (2014) stated that the main interests that the United States have in the Middle East are the protection of oil against rival poles, China in particular, and the ensured security of allies such as the Gulf States and Israel. Draege (2016) believed that U.S. involvement in drawing and reshaping the regional power balance stems from an interest in securing and establishing hegemony over the region. Little (2017) posited that the nature of the U.S.-Russian conflict in the Middle East is that of a nonzero game, wherein the motives of both sides are not to impose an absolute loss on the other and that one of the parties does not expect maximum gain. I stopped reviewing here due to time constraints. Please go through the rest of your chapter and look for the patterns I pointed out to you. I will now look at Chapter 3.

Kaufulu (2017) suggests that the real opponent of the United States in the current war on terrorism is not the Islamic State of Iraq and Syria (ISIS), but the existing power balances of the Middle East; an invisible and unpredictable adversary. Hahn (2014) argues that the length of the war is not limited to U.S. air strikes. Furthermore, Americans are not required to carry out routine combat missions to destroy specific and demilitarized targets, or even occupy land according to an assumed timetable. Rather, their aim is to create an equipoise of power based on the grounds of American interest.

Embracing the application of game theory within this study was a rational method of understanding the forms and causes of external intervention. Game theory involves the study of rational decision-making processes, especially during international situations dominated by conflict or cooperation. Moreover, game theory was used by specialists in strategic decision-making processes in an attempt to choose between alternative decisions necessitated by the nature of conflicting positions. Game theory also indicates the best

possible options that lead to the desirable results under the given circumstance. Since external intervention requires rational decision-making to maximize profit and minimize loss, game theory is capable of addressing all conflicts of interest as a strategic game. In addition, game theory is an analytic tool that can be applied to all forms of political conflict related to the causes of peace and war. Thus, this study implemented the application of game theory to external intervention through the following analysis:

- First, the reasons for intervention should be provided. Game theory assumes that there are reasons for the parties to play or compete, and a lack of cause will terminate the game. Causes of conflict are often incompatible goals or interests between two or more parties.

- Second, the nature of the goals should be determined as game theory sees the objectives of intervention as the key element associated with the intention of intervention.

- Third, the availability of information. The importance of information availability arises in the process of choosing the appropriate alternatives in the game, including information about the nature of the opponent and the strategies adopted by the opponent in addition to the expected results for each option and decision.

- Fourth, the game theory assumes that each party has a range of options, one of which is chosen in a rational way. Rational choices are those that are expected to be high-profit, low-cost, and low-damage. Since the behavior of one party is not isolated from the behavior of another, selecting an alternative can affect the other party's choice in either a positive or negative way. The alternative selection is

based on the nature of the party's goals that are determined in advance and worked towards. Thus, the players' goals direct them towards particular options based on the foundation of the game.

- Fifth, the game, from the transition stage of planning to implementation, includes all actions and reactions adopted by players in order to maximize benefits and reduce losses.

- Sixth, rationality. Game theory assumes that each player will select the option that enables them to control or to survive. The behavior of the player is not an emotional response as long as it is based on the calculation of the profits and losses of all the alternatives before it, and the player has made their selection after having weighed the profits against the damages.

Game theory aims to demonstrate how the best decisions can be made through interactive modes, where the game theory on the first place is aiming to maximizing the benefits. As such, game theory is based on determining rational playing behaviors, but it does not address what individuals actually do when acting in a paradoxical or irrational way. The proponents of game theory have used rational behavior on the basis that it is the most capable behavior type in making the theory favorable for academic interpretation.

Political Process Theory

Political process theory (PPT), also known as the structure of political opportunities theory emerged in the 1970s as an attempt to explain protest activities and social movements from the lens of political sociology. PPT reflects the external environment surrounding social movements, and its basic premise is that external factors

either promote or prevent the mobilization of social movements. The key academic figures behind PPT are Peter Eisinger, Charles Tilly, David Snow, Sidney Tarrow, Douglas McAdam, and David Meyer (Sen & Avci, 2016). Shadmehr (2014) stated that PPT is the basic framework for social movements and mobilizes action to achieve change. This theory includes five basic elements that determine the success or failure of social movements: political opportunity, mobilization of resources and structures, framing processes, cycles of protest, and protest means (Sen & Avci, 2016).

Carty (2015) points out that the social movement's exterior environment is the structure of political opportunity. Carty also states that political opportunity cannot be discussed in isolation from its social context, as societal factors determine the environment of social movements and their ability to carry out protest activities. Petričušić, Čehulić, and Čepo (2017) argue that social movements consist of organized networks of grievance groups that are ready to carry out protest actions to achieve social and political change. Alsoudi (2015) underscores that opportunity describes the relationship between popular interest and the current situation of the relevant region, suggesting that force, repression (facilitation), and opportunity (threat) provide the platform for collective action. Furthermore, Alsoudi adds that political authorities and allies may provide differing political responses to the challenges posed by social movements. In contrast, Tremblay, Martin, Macaulay, and Pluye (2017) believe that the political opportunities are not identical for all movements, and that they differ from one movement to the next. Moreover, though political opportunities do not have the same importance as social movements, they can vary according to the circumstances of the

political environment. Niakooee (2016) argues that there is a correlation between the characteristics of a political system and the levels, forms, consequences of protest, and political opportunities. Niakooee explains that in repressive political systems the levels of opposition are rising, which leads to alters the form of opposition from peaceful opposition to violent opposition, and that leads to high-cost results and thus creating political opportunities. Niakooee adds that political opportunities are usually exploited in the product of revolutions or civil wars, which may change the characteristics of a political system or form a new political system.

As a professor of international relations, Paul Wilkinson believes that the best definition of social movement is a deliberate collective effort that promotes change by any means without excluding violence, illegal methods, or revolution (Sen & Avci, 2016). Charles Tilly, a professor of sociology and political science, has clearly defined social movement as a series of interactions between power holders and those who considered themselves the spokespeople of an informal popular base. When leaders of social movements make public demands for change, whether they be for the distribution or exercise of power, their demands are generally supported by popular demonstrations (Sen & Avci, 2016).

According to Tang (2017), any collective action is determined by two sets of factors: internal factors, such as group interests, group forms, and group readiness for effective action, and external factor, such as the support and facilities provided by the local force and other groups, the current situation of the region, the involvement of external parties in negotiations and political settlements, or military action.

Asseburg and Wimmen (2016) argue that political opportunity is the key to winning the political game in the Middle East, which is subject to the changes and developments managed by the central players while regional countries fund their actions. Sen and Avci (2016) believe that PPT depends on two essential elements: political opportunity and the empowerment of resources. Sen and Avci add that political opportunity is formed in the absence of a non-violent mechanism to resolve political and social conflicts where political violence, whether by ruling regimes or non-ruling groups, remains the most effective way of resolving differences. Clements (2015) suggests opponents may easily target civilian groups to reach their political goals. This is seen in terrorist operations much like those carried out by the Turkman Labor Party in Turkey, and by the Irish National Liberation Army in the United Kingdom. Shadmehr (2014) believes that other factors exist that lead to the creation of political opportunity, including economic and social marginalization, as well as identity and ideology crises. Shadmehr asserts that through the provision of resources and organizational capabilities that help armed action, other parties are able to alter the power balance and, thus, obtain political gain.

The convergence between game theory and PPT has proved the justification for their use in the interpretation of the research problem and research questions, where both theories were based on the political opportunity. In addition, the exchange of interests between social movements and political entities leads game theory and PPT to meet when interpreting the empowerment of opposition movements and armed militias as seen in Syria, Iraq, Yemen, and Libya. Furthermore, the convergence between game theory and

PPT has explained the mechanism of the engagement between external intervention and PPT, as well as the mechanism of engagement between social movement and game theory. As such, game theory and PPT can be combined to create a single, new theory called the political process game theory. At the end of this study, this new theory has been used as a suggestion for the platform of future studies.

The theoretical framework in previous studies has relied on game theory to analyze terrorist operations and anti-terrorism policies. However, this study diverges from this process of evaluation and the ways in which theoretical frameworks are traditionally approached; this study has relied on game theory to explain the rationality of external interventions and the interpretation of the political and military game. Furthermore, this research examined the impact of external interventions in creating chaos and terrorism, also examined its effects through interaction with other factors.

Conceptual Framework

Global Terrorism

Identifying and classifying definitions is one of the most difficult and complex issues faced by researchers and international policy-makers, as it involves the overlapping of concepts associated with the term being defined. The word "terrorism" originates from the Latin word "*terrere*," meaning to frighten. Caruso and Locatelli (2014) argue that while the term terrorism was used widely, there is no single agreed upon definition of the concept at either the academic or international level. Caruso and Locatelli attribute this to the different ideological factors associated with the term, as well

as to the different cultural and intellectual structures connected to it. McNamara (2017) believes that terrorism is not a modern phenomenon, and that it has ancient roots that show terrorist acts dating back hundreds of years ago. In the first century A.D., the Old Testament (or the Torah) depicts a group of fanatics who terrorize the rich Jews who cooperated with the Roman occupier of the Eastern Mediterranean. During the Roman era, it was difficult to distinguish between political crimes and terrorism (Schillinger, 2014). According to Schillinger, the world came to know terrorism following the Roman era as a means used by the feudal lords in controlling their people and slaves. DeValve (2017) stated that at the beginning of the seventeenth century, European countries began to dominate world's seas. Abrahms (2016) believes that with the increased volume of ships transporting goods through the east-west trade route, the phenomenon of piracy emerged. Since that time, piracy was considered a form of terrorism, and it has persisted into the twenty-first century. Thus, the practice of terrorism has been carried out in different forms throughout the course of history depending on the circumstances and parties involved (Abrahms, 2016). Elbakidze and Jin (2015) referred to terrorism as a social phenomenon that evolves as societies evolve through both scientific and technological developments. As such, what constitutes an act of terrorism from the viewpoint of one state or society does not necessarily reflect the definition of terrorism as assigned by another state or society.

Jalata (2016) defines terrorism as a possible basis for a set of certain acts intended to cause terror and fear. Abrahms (2016) also defines terrorism as the use of unusual threat or unusual violence to achieve political ends. Furthermore, Abrahms states that acts

of terrorism are usually symbolic and used to achieve a psychological impact rather than a physical impact. In 1937, terrorism was cited in the Geneva Convention regarding the prevention and suppression of terrorism on the basis that terrorism is the act of terror directed against the state. The Geneva Convention has identified specific crimes as terrorism. For example, in Geneva Convention at the Conference for the Repression of Terrorism, article 1 defined terrorism as "acts against a state that would provoke panic and horror among certain persons, groups of people, or the public" (Geneva Convention, 1937).

Group Grievances

Christensen (2018) defines the term "grievance" as a state of discontent due to a lack of equality with others. Christensen adds that a sense of injustice amongst some groups may generate a sense of grievance. According to Basedau et al. (2017) grievance is the self-determined sense that independence is lacking within a group, wherein homogeneous groups feel they need to take their future into their own hands and identify the political choices they deem appropriate as solutions. Some of these political choices include forming their own governments without external influence, defining governance, and integrating with, or disengaging from, a neighboring political unit. Basedau et al. also state that some countries are reluctant to grant these groups the right to self-determination, which generates a sense of lost independence and injustice amongst them. Buhaug, Cederman, and Gleditsch (2014) believe that when groups are persecuted, oppressed, or discriminated against, a strong sense of grievance is generated. Boylan (2016) suggests that this type of grievance leads to feelings of non-belonging and a

constant concern over targeting, thus leading violent groups to fight for independence and self-determination. Dowd (2015) claims that these types of conflict may have historical roots that affect the group's relationship with the rest of the community, much like the ethnic prejudices experienced by some groups in the past.

Yin (2017) argues that one of the most important factors that contributes to the emergence of grievance is persecution, which arises when resources are used to empower one group at the expense of weakening and marginalizing another. Further, Yin remarks that the most common form of persecution is the form that is reinforced by the power of the law, such as the persecution of groups according to their skin color and the confiscation of rights belonging to other groups (as it happened in the United States in the 1960s). Cunningham and Sawyer (2017) determine that persecution may be indirect, stating that persecution could result from a psychological attack, a power monopoly, or the imposition of restrictions by force.

According to the Guidelines on International Protection No. 11 (2016) persecution is the distinction between one individual or group and another individual or group for racial, religious, or sexual reasons. Mirahmadi, Ziad, Farooq, and Lamb (2016) argue that discrimination based upon one's religious, ethnic, or sexual background is a behavior that leads to the creation of extremism, militancy, and intolerance. Mirahmadi et al. stress that discrimination plays a crucial role in the emergence of grievance groups. Examples of religious persecution throughout the world include persecution against Muslims in China, Myanmar (Burma), Sri Lanka, India, and elsewhere by Buddhist

extremists, as well as persecution against Christians in some African countries, the Middle East, and South Asia.

Sampson (2016) states that racial discrimination is when the choices made by individuals or groups are based on certain characteristics, including skin color, religion, or race, and do not reflect on the basis of equal rights. Sampson also notes that discrimination leads to disparities in behavior, the treatment of individuals and groups, and a sense of grievance. In addition, Sampson claims that intolerance is one of the reasons for the emergence of group grievances, stating that discrimination can be based on religious, doctrinal, political, sectarian, or racial intolerance.

According to the CAST, the GGI is calculated based on four factors:

- Post-conflict response: in terms of reconciliation, fact-finding, reintegration, reconstruction, compensation for victims, trial of war criminals, justice, and amnesty.

- Equality: the effectiveness and justice of the distribution of resources.

- Sectarian violence: by monitoring justice and vigilance and tracking reports of mass violence and racially motivated crimes.

- Divisions: where groups of hatred, tolerance, and oppression are investigated, as well as the history of violence against a group or grievance group. The relationship between groups, tribes, and ethnic groups are examined to investigate the freedom of belief, the practice of religious rights, and the reports of violence that are religious in nature.

State Legitimacy

Hazenberg (2015) argues that state legitimacy refers to the degree of representation of the state and its relationship and openness with its citizens. The International Encyclopedia of the Social and Behavioral Sciences defines legitimacy as the basis upon which the governing body depends for its exercise of power. This is based on the right of the government to exercise power, and the governed people accept this right (International Encyclopedia of the Social and Behavioral Sciences, 2015). The term legitimacy originates from the Latin word "legitimus," which was used by the Romans to convey a sense of conformity with the law (Schoon, 2016). John Locke was the first scholar to use the concept of legitimacy as a basis for analyzing the phenomenon of power (Hashi, 2017). Vuolo (2014) considers the form of legal legitimacy practiced in Western democracies to be the finest model of constitutional or institutional legitimacy. According to the International Encyclopedia of the Social and Behavioral Sciences (2015), the concept of legitimacy has evolved in modern times to reflect the selection and acceptance of governing rulers within the political system. Thus, the elements of choice and satisfaction have emerged as fundamental aspects of the concept of legitimacy. While several definitions of legitimacy exist, three trends can be identified (International Encyclopedia of the Social and Behavioral Sciences, 2015):

- Legal orientation: legitimacy is defined as the "rule of law," meaning that the general authority submits to the limitations of the law. The law extends to the regulations (the constitution) and the unofficial (the customary); customary rules

are those that a group has practiced for a long period of time and that have become binding.

- Religious orientation (divine law): Sharia is defined as the "implementation of the provisions of religion (divine law)." The essence of this law type is that the system is applied to, and adheres to, the rules of religion, and that religion must be understood as the truth.

- Social and political orientation: legitimacy is defined as "the acceptance by the majority of society of the political system and their voluntary submission to them; believing that it seeks to achieve the objectives of the group, expresses its values and expectations, and accords with its conception of authority and its practices."

The LSI calculates the population's level of trust in state institutions and assesses the effects of an absence of trust by monitoring the opinions expressed during social movements. Moreover, elections, political changes, and the degree of the population's representation in elected governments are also evaluated. The SLI takes into account the openness and transparency of the ruling elites in sharing their principles and accountability, the extent to which ruling authorities accept others' opinions, and the levels of corruption, oppression, exploitation, and marginalization present within the governing authority. The index also calculates the ability of the state to carry out the basic functions that indicate the people's confidence in the state. The SLI was calculated by assessing the population's confidence in the political process, political opposition, transparency and openness, integrity in the political process, and political violence.

External Intervention

The definition of external intervention and the assessment of its legality has been, and still is, a subject of legislative controversy and doubt. This controversy has been greatly influenced by international events and developments, especially in the post-Cold War era. Within the discourse, the term "intervention" means to intervene in settling a dispute, or to intervene by force or threat of force in the internal affairs of other countries (International Encyclopedia of the Social and Behavioral Sciences, 2016). German Schaub, a leading jurist of international law, defines interference as a state's involvement in the internal or external affairs of another state without any legal basis, where the involvement obliges the other state to follow the directions of the intervening state (Sellers, 2014). According to Heraclides (2014), intervention is a state act whereby the state interferes in the internal and external affairs of another state in order to force them to implement or withhold an act. Heraclides also notes that the intervening state behaves in this way as an authority figure and attempts to impose its will to exert various forms of political, economic, psychological, and military pressure. German jurist Lassa Francis Lawrence Oppenheim describes intervention as a state or group of states intervening in a state relationship without their consent, or a state's interference in the internal affairs of another state without its consent (Heraclides, 2014).

Through the literary summary provided regarding external intervention, along with the research presented that describes the forms and objectives of external intervention, an identification of the instruments that measure external intervention is clearly necessary. The External Intervention Index measures the effects of external

economic, political, and security interventions in terms of state performance. The index

focuses on measuring the extent of external interference and the independence of the state

in its administration, balance of power when resolving intra-state conflicts, solving

economic problems, and measuring the degree of state dependence in dealing with

foreign aid, loans and donations, development projects, economic dependency,

humanitarian conditions, and peace processes.

In the past, researchers have dealt with the study of terrorism by examining

various independent variables and excluding interactions between the variables that

influence terrorism. therefore, independent variables must not be studied without

considering the effects that the surrounding variables may have. To clarify the meaning

of the above statement I have asked the following question: Why water does not burn,

even though it consists of two elements that help ignite? Simply, because the properties

of individual atoms change completely when they combine into molecules. Hence,

studying the impact of the independent variables separately, cannot produce a realistic

study, as the results and concluding recommendations may be not accurate.

The logical basis for selecting variables and concepts of this study was related to

the measuring a set of factors that evaluate pressure trends within each country. Each

index examines a range of logical global media data search terms to determine the

relevancy level of the problems for each of these indicators. For example, when

examining the Group Grievances Index, it was found that group grievances contain a set

criteria that include the pressure trends of each country, which could be used measure

sectarian violence, divisions, post-conflict treatment, equality, justice, wealth distribution,

poverty, unemployment, and freedom of religion. The rationality of choosing the independent variables was that the independent variables represent the measurement tools of internal pressure, such as grievances and state legitimacy, as well as external factors such as external intervention. The researcher did not rule out the effect of other factors, but the limited project scope requires the use of only three independent variables to study the both the independent variables and the effect of interaction between the independent variables and the dependent variable.

Literature Review

Introduction

At the turn of the twentieth century, the phenomenon of global terrorism has increasingly grasped the attention of both developed and developing countries (Butcher, 2016). Napiorkowski (2017) confirms that every day the number of terrorist groups increases, especially in the Middle East, with terrorist operations spreading to the heart of European and American regions.

The difference in scholarly opinion has not been limited the definition of terrorism itself; there have also been disparities amongst scholars in determining what constitutes as a terrorist act. Romagnoli (2016) argues that motives behind terrorist acts can be different due to the varying types of terrorist activity and their origins (i.e., individual, group, or state). Romagnoli stresses that terrorist acts at the individual or group level are an automatic reaction to external agents, and that terrorism is the expression of those factors. Conversely, Rothenberger and Müller (2015) state that terrorist activity is fueled by societal motives, which provide a conducive environment

for the growth of terrorism. Rothenberger and Müller identify societal motives to be situations of poverty, unemployment, high illiteracy, poor social justice, repression, coercion, oppression, and corruption. Thomsen, Obaidi, Sheehy-Skeffington, Kteily, and Sidanius (2014) claim that the motives of terrorism are political, which encompass the demonization of opponents, plotting coups on national governments, the assassination of leaders, sedition among the peoples, the occupation of nations. It is not possible to separate the views of Rothenberger and Müller and Thomsen et al., as each condition outlined by these scholars generate anger, hatred, and the spread of violence, all of which have the capacity to lead to terrorism.

Goepner (2016) argues that terrorist acts are intended to emphasize the attitudes and behaviors of a group that is more of a target than the direct victim of the act. As mentioned, there has been a disparity amongst scholars in determining what constitutes as an act of terror. In his paper titled "What is terrorism? Concepts, definitions, and classifications," Locatelli (2014) argues that terrorism is a process composed of three elements: the use (or threat) of violence, emotional reactions caused by extreme victim fear, and the effects of violence (or the threat of violence) and fear on society.

In 2017, Walsh wrote a paper titled, "Moral panics by design: The case of terrorism." In this work, Walsh claims that terrorism is the tactical use of violence to spread fear and panic amongst the majority of the population. In his paper titled, "Elections and the Timing of Terrorist Attacks," Aksoy (2014) goes on to consider that terrorist acts intend or threaten to use violence to create anxiety and achieve their political

agenda. In combining these definitions of terrorism (Aksoy, 2014; Locatelli, 2014; Walsh, 2017), three basic characteristics of terrorism emerge:

- The use of violence or threats.

- The implementation of systematic and organized attacks.

- An attempt to achieve political agendas.

Haverkamp (2014) argues that attempts to define what constitutes as terrorist acts do not generally go beyond the parameters highlighted by international law, which defines legality and illegality in terms of the use of violence. Scholars have attempted to distinguish between resistance and terrorism, especially in the light of the recent emphasis on the right to self-determination and the right to resistance as affirmed by the Charter of the United Nations on this right.

A number of scholars specializing in political science have made impactful contributions that have clearly spoken to the motivations and causes behind terrorism. Researchers have studied the causes of terrorism by examining its surrounding variables, including external interventions, the legitimacy of the state, and grievances groups. Some studies have provided a direct reference to these factors, while others have merely been mentioned as a mediating factor, which will be addressed in the following three sections.

Foreign Intervention and Terrorism in the Literature

This section addresses the existing studies that deal with foreign intervention and its impact on terrorism. Ritter (2015) argues that external intervention has been a reality that has governed international relations throughout all of history. However, the nature of

this intervention its tools have evolved over time in accordance with several changing factors. In the forefront of these factors lies the structure of the international system, the nature of power balance, the objectives of the intervening powers, the nature of the interests in the intervening countries, the nature of existing international institutions, and the roles played by these international institutions in the global system (Ritter, 2015). Vlajnić (2016) states that there has always been interference in the use of external intervention tools. Like most concepts in social sciences, there is no specific definition of external intervention, and multiple trends in the existing definitions of the concept can be noted. Some academics have a narrow view of the concept and limit its definition to direct military intervention. Others, however, have a broad team of research trends that allow for the concept to expand to all forms of intervention, whatever its tools may be. According to the objectives of the intervention, Vlajnić states that external intervention can be classified as humanitarian intervention, intervention to achieve economic objectives and gains, or intervention to achieve political and security objectives. Vlajnić adds that the problem with classifying an intervention according to its objectives is that often, objectives other than the actual reason behind the intervention are determined as the cause. In regard to the intervention tools, Stevenson (2014) referrers to two types of intervention tools, each which can take several forms: military intervention and non-military intervention. Stevenson adds that military intervention may be direct, individual, collective, or indirect. Direct intervention involves the provision of arms and military support for one of the parties included in the conflict, while indirect intervention is the provision of military support to a third party in an attempt to intervene in or influence the conflict (Stevenson, 2014). In terms of non-military intervention, Stephenson notes that

this covers a range of intervention actions, and that this form of intervention is more versatile than other forms of direct or indirect military intervention. Stephenson stresses that direct non-military intervention may be individual or collective, such as economic sanctions that may be imposed individually or collectively. Stephenson also states that indirect non-military interventions usually arise in support cases for internal revolutions, coups, and separatist movements. Moreover, the nature of the intervening party may be a state or one of its security services department, a regional institution, an international institution, or two or more states.

In the efforts of counter-terrorism, the Security Council Resolution 1373 (threats to international peace and security as a result of terrorist acts), which reflects its effectiveness through its commitment to all countries, must be recalled. Toukan (2017) argues that Resolution 1373 had a direct impact on states by limiting their sovereignty. Regens, Mould, Sartorius, and O'Dell (2016) argue that the provisions of Resolution 1373 and its implementation provide an opportunity for the intervention and imposition of sanctions, including the freezing of assets and the restriction of freedoms, especially freedom of movements. This could compel countries to report the measures taken to implement this resolution. Regens et al. also state that the manifestations resulting from resolution 1373 impact not only the state, but also the justification of public freedom reductions, which are not limited developing countries, but have now extended their reach into developed countries. Finch (2016) believes that Resolution 1373 guarantees coercive measures against states and groups that sponsor terrorism, who are influenced by the United States-dominated unipolar international order, and who have been

characterized by universality and the commitment to all states. Finch goes on to state that Resolution 1373 gives countries the right to interfere in the affairs of other countries under the pretext of combating terrorism.

Rajah (2014) states that there is no doubt that attempts to define terrorism have been limited to the pattern of international relations in the past, which are different from what is known today, especially following the events of September 11, 2001. Goepner (2016) believes that the events of September 11, 2001 had an impact on the influence of terrorism as viewed by the United States, which then launched its own definition of terrorism on as "the deliberate use or threat of violence to achieve political, religious, or ideological goals through intimidation, coercion, or panic." (USA Patriot Act, 2001).

Shaffer (2017) argues that terrorism has spoken and unspoken reasons at all levels, including the state and society. Of the unspoken reasons, political motives include the domination over others, interfering in the affairs of others, and the use of force against weaker countries. Shaffer also refers to the economic reasons behind terrorism, which include a lack of economic system balance, the exploitation of wealth in developing countries by foreign countries, and the imposition of regulations and laws that do not serve the interests of the weaker population. Furthermore, Shaffer outlined the social causes of terrorism as the violation of human rights, deprivation, political corruption, and racial discrimination.

Rahmanovic (2017) argues that external intervention during a crisis has political and legal criteria that are agreed upon by experts and specialists regarding the rules of international law, which states that "intervention is aimed at balancing the means and

results." In other words, if the intervention occurred without taking into consideration the rule of balance, it would replace a bad situation with a situation that was no less bad, or even perhaps more dangerous. In the same vein, in his research entitled, "Civil war determinants," Hassan (2016) argues that U.S. intervention in Iraq lacked the use of balance as indicated by international law, adding that this is echoed in other countries such as Afghanistan, Libya, and Syria.

Fawcett (2017) argues that the plan to invade Iraq was limited to the destruction of the existing regime without rebuilding the state. Fawcett referred to Colin Powell's confessions on Iraq, as Powell admitted that "the Foreign Ministry had prepared a detailed and deliberate plan to rebuild Iraq after the invasion to avoid chaos, while the Department of Defense ignored the Foreign Ministry's plan and refused to apply it." (Fawcett2017). Historian Michael Doyle examined the Libyan case as a model of intervention limited by the goal of overthrowing the regime. This stripped the remaining elements of the intervention rules such as state rebuilding and providing security and safety to the people (Doyle, 2016).

In Syria, Kaufulu (2017) argues that the intervention took another approach but was irrelevant to the rule of balance between the means and results. Kaufulu adds that in the shadow of external intervention in Syria, many foreign armed militias have entered the country. While these militias do not belong to the Syrian homeland, their interests are linked to external forces, whether under the guise of American intervention or the cloak of the Iranian regime (Kaufulu, 2017). Sawyer et al. (2017) argued that intervention in Syria was linked to interest strategies far beyond the powers of the Syrian people. Sawyer

et al. added that interventions in Syria and Iraq have a powerful impact in weakening political and social entities, exposing them to the threat of civil war.

In his study entitled, "The impact of the Arab Spring on the political future of the Muslim Brotherhood in the Middle East," Alsoudi (2015) argues that the Middle East is facing inside attempts to divide and fragment, using the "counter-terrorism" slogan to interfere in the affairs of the Middle East countries. Krieg (2016), in his study titled "Externalizing the burden of war: the Obama Doctrine and U.S. foreign policy in the Middle East," stresses that the international coalition led by the United States failed to eliminate terrorism. Krieg concludes that the measures used to fight terrorism were wrong, as they did not deal with the root of the problem. Rather, the measures implemented have increased the spread of chaos and the collapse of the state in Iraq and Syria.

Merutiu (2015) argues that terrorism has been functionally contained by the state itself in the context of the game of nations, which confirms that terrorism is ultimately the reaction of one country against another. Merutiu adds that terrorism has become a pressure factor exerted by the central powers against smaller countries. Krieg (2016) stresses that the international dimension of the Syrian conflict has shifted from ambiguity to public knowledge following the United States international coalition's launch against ISIS and the Russian military's intervention. Merutiu (2016) argues that major power interventions parallel with regional interventions, which become pawns from the moment they form an armed opposition. This extended to the regional forces of the Syrian neighborhood, and

contributed to feeding the conflict through financial, military, and political support amongst both parties.

Draege (2016) believes that the predominant feature of contemporary international relations is a zero-sum game between the central powers of the modern world order. Examples of this can be seen through the occurrence of the Russian-Georgian war, the Ukrainian crisis, and the Libyan crisis. Krieg (2016) believes that there has been a shift in the interaction between the central powers on the basis of recognition of contradictory and common interests. Krieg adds that the issue is no longer about winning, as much as searching for minimal losses, suggesting that the nature of international relations will turn into a non-zero-sum game. Sawyer et al. (2017) argue that shifting the international system from unilateral hegemony to a multi-polar power balance system could affect the results of the game. Krieg (2016) gives the Syrian crisis as an example of such international conflict, supporting that the current nature of international conflict is that of a zero-sum game, and that each party involved wants to achieve full victory. Kaufulu (2017) argues that the five regional actors, which are Egypt, Saudi Arabia, Iran, Turkey, and Israel, all have conflicting interests. Further, this conflict of interest in the Middle East draws the attention of the central powers to the international system and increases the opportunity for the regional regime's continued intervention by the central powers. Thus, the number of parties in the Middle Eastern political game increases and complicates the ability to achieve peace.

Grievance Groups and Terrorism in the Literature

This section addressed studies that examined grievance groups and their impact on terrorism. In a speech in May 2017, Ben Emmerson, the United Nations Special

Rapporteur on Human Rights and Counter-Terrorism, pointed out that some countries have abused the use of counter-terrorism strategies to curb political dissent, suppress opposition, and silence calls for reform by peaceful critics (United Nations News, 2017). Emmerson adds that anti-terrorism measures that violate basic human rights have proved ineffective and even harmful to human societies in the past. Speckhard, Shajkovci, and Yayla (2016) believe that when authoritarianism holds control over the ruling powers and practices (especially when they are diverse), some populations resort to violence and terrorism against the other less powerful groups in order to push them out of their territory. Speckhard et al. suggests that the current Palestinian events under Israeli occupation (i.e., the displacement and construction of land settlements) fall under the same system of tyranny. Speckhard et al. highlight additional examples of tyranny, including situations of Serbian occupation in Bosnia, Herzegovina, and Kosovo.

Yates, Ford, and Kuglics (2014) see the racial discrimination policy enacted by the South African government, which took power in 1948, as one of the most distinguishable racial discrimination crimes of the twentieth century. Yates et al. state that in South Africa, each ethnic group within the two main groups (White minorities and the Aborigines) had to develop independently in accordance with their capabilities and characteristics in separate geographic regions. Yates et al. also point out that the white minority attempted to retain privileges that allowed them to develop and grow, which resulted in huge economic, social, and political disparities between the two groups.

Laruelle, (2017) argues that repression is the seeds of extremism and terrorism. According to the researcher, official security information indicates that citizens of the

Central Asian Republics and the Muslim regions of Russia are the most significant ISIS

tributary fighters, as they are affiliated with al-Qaeda. Uzbekistan is at the forefront of

those states that have followed repression policies against political Islam and the religious

identity of the country (Laruelle, 2017). As such, Uzbek authorities have not hesitated to

use violence against religious people, plunge individuals into prison, and or suppress its

opponents. The researcher also states that during the 2005 Andijan events, Uzbek security

and army forces killed over 1,000 people. Another example of repression policy

implementation can be seen in Tajikistan, wherein Tajik authorities have banned the use

of Arabic names, hijabs, and beards under the pretext of combating Islamic extremism. In

light of these examples, the researcher claims that all of these conditions, such as

pressure, repression, and prohibition, along with worsening social and economic

conditions and the corruption of the authority, work together to produce thousands of

fighters under the ISIS banner. Further, the researcher states that some groups subjected

to injustice and oppression have used the encouragement of local authorities to migrate in

search of a better life outside their country. These groups spread throughout the globe as

dormant cells that become active from time to time, declaring their activity to be acts of

terrorism (Laruelle, 2017).

Crothers (2014) states that any act of terrorism cannot be separated from its

causes and motives. Thus, researching the cause of terrorism must involve an

interrogation of various aspects of terrorism, including the violent acts of political

systems in dealing with opponents and minorities. Crothers provides examples of state

violence such as the Nazi regime in Germany, the Paul Knott regime in Cambodia, the

regime of the United States during the civil war, and the ideological terrorism practiced by the nihilists and anarchists in France, Italy, and other European countries during the nineteenth century (Crothers, 2014).

Through his research titled, "Is terrorism becoming an effective strategy to achieve political aims?" Özcan (2018) proposes that the methods and practices of terrorism have become an overtly secret, organized, and spontaneous tool, and encompass the violence of the authorities or the violence of opposition groups. This violence is manifested in the targeting of tourist sites and the assassination of a public, political, intellectual, or religious figures with the aim of paralyzing surrounding economic activities and creating a state of chaos. Furthermore, armed confrontations may occur between security forces and armed groups during these acts of violence, threatening the safety of civilians (Özcan, 2018).

Maskaliunaite (2015) argues that the first signs of impending terrorism and violence occur when a group of people feel their rights are being degraded by another group. This becomes an issue when the group epitomizes oppression as a characteristic of its banner out of their sense of injustice, thus forming blind loyalties to extremist groups. Maskaliunaite continues to state that the Shiite tide in the Arab region led Sunni Muslims to feel threatened, resulting in the occurrence of proxy wars in Syria, Iraq, Iran, and Yemen. Del Villar and Glasberg, (2015) believe that colonialism has dealt with minorities by using them as bridges and justification for intervention in the colonized countries. Maskaliunaite argues that while the colonists exploited human rights in their efforts to colonize other countries, they also spread the notions of freedom and

democracy, freed marginalized slaves, and taught enlightenment to the colonized states. Del Villar and Glasberg also state that the colonists justified their interventions by claiming that their intention was to protect minority groups from the injustices of the majority.

Alsoudi (2015) believes that external intervention provides greater opportunity for social movements to achieve their desired goals by providing the necessary empowerment resources. In reviewing the Syrian situation, Alsoudi asserts that empowerment tools play a key role in the Syrian civil war and the survival of its social movements. Contrastingly, Shadmehr (2014) argues that common goals amongst popular movements and the local and regional forces are the reason that these movements have access to empowerment resources. Pilati (2015) believes that empowerment resources vary according to the desired outcomes of the empowerment resources provider. Draege (2016) uses the Syrian position as evidence that empowerment resources are only used within a political game, as some parties seek to obtain pressure tools during political maneuvers or military operations. Pilati (2015) surmises that political opportunity and common goals are the key to converging ground players. In regard to the correlation between game theory and PPT proposed in the previous section, Basedau et al. (2017) state that minorities are usually engaged under the cloak of the strongest in order to achieve their interests, whatever the outcome may be, such as the involvement of the Christian minority in Syria under the guise of the Syrian regime.

Asseburg and Wimmen (2016) provide the Libyan occupation as exemplary evidence of how political processes concentrated in the form of political blocs,

maneuvers, and parties can support the legitimate government and other forces that back

their opposition. Dam-de Jong (2015) stated supporting such social movements could

lead to chaos. Thus, the misuse of empowerment resources can lead to chaos, much like

that which is seen in Syria through the turning of the Nusra Front from the Syrian

opposition group into the hands of those engaged under the terrorist organization ISIS.

Dam-de Jong (2015) also discusses incidents in which the U.S. military has admitted to

the accidental exchange of U.S. equipment and weapons to the hands of terrorist militias.

Dam-de Jong believes that these "mistakes" may have been intentional acts in an attempt

to change the reality of the conflict. Simpson (2014) also questions the trade deals made

in Syria, Iraq, and Libya waged by warlords and regional powers, such as selling oil and

buying weapons, which he underscores would not have happened without the approval of

the central powers.

State Legitimacy and Terrorism in the Literature

This section analyzed the studies that examined state legitimacy and its impact on

terrorism. In his book titled, "Counter-Terrorism for Emergency Responders," Burke

(2018) views terrorism as a pattern of violent communication or coercive persuasion.

Burke stresses the need to analyze the spatial and temporal background of any terrorist

activity in order to understand the context from which terrorist groups emerge and

operate. Burke believes that the political tyranny of dictatorial regimes results in several

serious phenomena, including sectarian violence, lack of social and security stability, lack

of social justice, widespread corruption, suppression of opposition, repression, and

discrimination against minorities. Ünver (2017) argues that dictatorship regimes use

oppression and the practice of violence under the pretense of fighting religious extremism. Moreover, Ünver states that the religious terrorist organizations practice acts of terrorism under the guise of fighting political tyranny and dictatorships in the name of legitimizing God's law throughout the land. Bamidele (2015) argues that it is clear that both terrorists and tyrannical regimes benefit from the existence of the other, and that both groups use the other to frighten and easily control people. Debrauwere-Miller (2015) argues that the most important features of political tyranny are the oblique understanding of power, the monopoly of power and its material and moral privileges, the rejection the political partnership principles and power devolution, and the rejection of peaceful transition and a constitutional power alternation. Debrauwere-Miller also emphasizes the positive correlation between political tyranny in the illegitimate state and terrorism; as political tyranny intensifies, the greater the risk for terrorism becomes.

Collins and Pujol (2016) argue that illegitimate regime stability is only a facade, and that these regimes often exercise official violence and the pursuit of opponents to prevent threatening the privileges of the ruling elite and its allies of the beneficiaries. Further, Collins and Pujol (2016) state that even if the authority has succeeded in achieving stability, it is only an ostensibly authoritarian stability that conceals an existing boiling point. Haverkamp (2014) argues that illegitimate regime stability does not result from the regime's efforts to strengthen its legitimacy and effectiveness, but rather occurs as a result of zero-sum conflict between the regime and its opposing forces that demand change within the country. Johnson and Smaker (2014) maintain that legitimate political systems have the power to govern without the use of oppression or coercion. They add

that the legitimacy is the most humane alternative to the rules of physical and moral coercion, which are generally used to conduct the process of governance and control its general movement.

Jackson (2014) states that rebellion movements appear to clash with the state of police in the same zero-sum equation. He claims that these movements have emerged in some European, Latin American, African, and Asian countries through various forms, some of which target civilians and are described as "terrorism" by the regime, states, and other organizations. Armborst (2014) positions that the political violence in the modern democratic state is monopolized by the state, wherein it is used to achieve the security of citizens and to prosecute crime, outlaws, thieves, and criminals. In absolute regimes, state bodies that monopolize violence are used primarily to protect the ruling regime, as well as to prosecute and eliminate dissidents (Armborst, 2014).

Mamood et al. (2017) argue that illegitimate regimes abolish political and non-political freedoms, democracy, and equality, while they also devote patronage, marginalize opportunities, nullify dialogue, and discard human rights and justice. As such, illegitimate regimes have a one-sided focus on authorities that deprive people of legislative and executive councils (Mamood et al., 2014). Therefore, the people and their political concerns, social groups, and civil organizations are silenced, as the illegitimate regime refuses to hear their demands and or have an open dialogue with them. As a result, only *intifada,* or violence, is capable of meeting these demands.

Schoon (2015) claims that the difficulties facing the fight against terrorism are two-fold. First, the regimes that ignited the emergence of terrorism are now fighting it

and ignoring the main reasons for its existence instead seeking out its the marginal causes. Second, the popular masses have been deceived by the illegitimate regimes and are thus not fully convinced that the fight against terrorism a state priority. Schoon also suggests that some people still believe that terrorists belong to religious organizations that seek the good in people, support religion, and confront the tyrannical regimes of the colonial West.

In his book titled, "Max Weber, Democracy and Modernization," Chalcraft (2001) summarizes Weber's discussion on the three ideal models of legitimacy as follows:

- Traditional legitimacy: the prevailing power that customs, traditions, and norms have within society that determine the ruler's right to rule.
- Rational legal legitimacy: the people's belief that there are political institutions that develop appropriate procedures and rules that are acceptable to the rulers and the governed body.
- Inspirational leadership: this type of governance is linked to the successful admiration of the governing body.

Similarly, in his book "How Do You Solve a Problem Like Legitimacy," Sandby-Thomas (2014) reviews the requirements in which David Easton bases the determination of legitimacy in the following way:

- Personal legitimacy: wherein the personality of the ruler plays a key role in achieving the legitimacy of the system based on the strength of their personality and the effectiveness of their achievements.

- Ideological legitimacy: wherein the ruler acquires the legitimacy through an ideological approach and the use of intellectual and doctrinal approaches over the masses.

- Structural legitimacy: wherein the political regime is secured through the building of political structures and state institutions.

Deutsch (1968) states that institutional legitimacy is based on three pillars in his book titled, "the Conspiracy against Hitler in the Twilight War":

- Constitutional basis: wherein the legitimacy of authority is achieved in accordance with the country's constitutional and legitimate principles.

- Achievement basis: wherein the legitimacy of the political regime is achieved through society achievements and public interest.

- Representative basis: wherein the legitimacy of the regime is based upon the conviction of the people that those in power represent them and have reached power through legitimate means only.

Pauwels and De Waele (2014) argue that the religious ideology and the political ideology could be added to the pillars of legitimacy, as it has become one of the only sources of legitimacy for some regimes within the developing world. Pauwels and De Waele also claim that in during the past fourteen decades, national ideologies in Arabian regions have been a source of legitimacy for several regimes. Even in countries that have

not adopted national ideologies, a commitment to national issues and the preservation of stability has been declared. Some general tendencies that attempt to define the legitimacy of the state include legitimacy derived from the force of law, ideological affiliation, the power of customs and traditions, leadership qualities, and, finally, rational legitimacy. Authoritarian regimes derive their legitimacy from coercive force used to impose illegal legitimacy.

Terrorism and Theoretical Frameworks in the Literature

This section discussed the theoretical frameworks used in previous studies to explain of the spread of the terrorism. Throughout his research titled, "Theories of Violent Conflict," Demmers (2017) relies on conflict theory for his interpretation of the spread of terrorism. He believes that class conflict occurs at the stage of a society's development when contradictions between social forces begin to float to the surface during competition for ownership of the production means. Demmers argues posits that resource inequality leads to conflicts of interest and class, which ultimately lead to political violence exemplified through proletarian revolution against the bourgeois class. Demmers also argues that conflict can be both internal or external at the individual, group, or state levels. Conflict theory helps to explain several aspects of social life, such as conflicts of interest, war, and revolution, which have the capacity to spread notions of insurgency (Demmers, 2017).

Bartolucci and Gallo (2015) use functional theory when interpreting the spread of the terrorism in their research titled, "Terrorism, System Thinking and Critical Discourse Analysis." They believe that revolution occurs when the entire political echelon is

inconsistent with the surrounding community. This happens when society has suffered from multiple cases of functional deficit. Bartolucci and Gallo determine that in the event of a government or political system's inability to carry out its functions, they are exposed to multiple pressures for reform and change from the public. This pressure begins as popular protest, which can escalade to civil war, as is seen happening in present-day Syria. If the distribution of power in the international system has been disrupted, the behavior of the major states associated with the dichotomy will create a climate of international instability.

Botha (2014) has relied upon relative deprivation theory throughout his study titled "Political Socialization and Terrorist Radicalization Among Individuals Who Joined al-Shabaab in Kenya," which interprets and analyses the spread of terrorism. Botha argues that the social pressures and hardships associated with displacement, land transfer, political marginalization, hunger, poverty, frustration, and discontent create a sense of deprivation amongst the populous. These pressures are said to be the direct instigator of violence against the occupying powers or the tyrannical government within an independent State. Botha also believes that societal violence is a legacy of historical injustice reflecting the lack of fairness in terms of shared wealth and power amongst minorities. As many still live below the poverty line, Botha suggests poverty to be a factor that encourages a lack of respect for the law. Moreover, Botha understands violence to be a product of the oppression people are subjected to. As a result of pressure, turmoil, and frustration, many often retaliate against their community instead of the those who subdue them.

Schmid and Muldoon (2015) apply the political theory of conflict to their research titled, "Perceived threat, social identification, and psychological well☐being: The effects of political conflict exposure." Schmid and Muldoon describe how politics can be an arena of competition amongst different groups, through which the possession of power, wealth, and social status is sought. The outcome of this rivalry depends upon the resources available for each group. Schmid and Muldoon combine violence and other forms of unrest in society, arguing that popular crowds and labor strikes are some of the political conflicts directed by the parties that have an advantage. Schmid and Muldoon also define violence as a product of the political agendas of both the parties and power groups.

In their book, "Terror and the Postcolonial," Boehmer and Morton (2015) adopt comparative history theory to interpret the spread of terrorism. The researchers argue that revolutions are not confined to the motives of the participants, but also depend on the nature of relations and interactions between the states and groups within the community. Boehmer and Morton believe that the cause of revolution is derived directly from the transmission of cold war and armed revolution legacies. As such, revolution is caused by the legacy left behind by direct wars, cold wars, and ethnic genocide. Boehmer and Morton argue that political turmoil, whether or not it creates isolated groups or state apparatus, is rooted in the history and structure of societies. These histories can be read on their own, as well as under different designations including the dynamics of fear, protest, and political repression. Boehmer and Morton view terrorist movements as part of a political legacy that may evolve into contemporary terrorism. These researchers

understand terrorism to be a result of historical events, seeing acts of terrorism as a continuation of all-out wars and revolutions.

Pisoiu (2015), in her research titled, "Subcultural Theory Applied to Jihadi and Right-Wing Radicalization in Germany," implements subcultural theory in her interpretation of the spread of terrorism. She states that there is a subculture of violence characterized by a positive acceptance of violence, which encourages the emergence of violent behavior. Pisoiu believes that while violence is part of the culture that prevails within society, it is not necessary for members of this subculture to express violence in all situations. In this way, violence is thought to be part of the lifestyle associated with these communities, wherein violence is not viewed as immoral and individuals do not feel guilty about their aggressive behaviors. According to Pisoiu's interpretation of the Subcultural Theory, terrorists belong to families characterized by low income, social, and educational levels. Thus, Pisoiu asserts that terrorists usually originate from crowded, remote, or random neighborhoods that suffer from a lack of services as a result of their low socio-economic status, and where the inhabitants are characterized by violent behaviors of bullying and intolerance.

Baylis, Smith, and Owens (2017) lead their investigation of the spread of terrorism by applying the constructivist theory of international relations to their research entitled, "The Globalization of World Politics." From this study, these researchers argue that intense ethnic struggles in various corners of the world are characterized through conflicting identities and self-realization, as well as through the competition for gaining a key role in global politics as an independent actor. Baylis et al. argue that structural

approaches focus on the influence of ideas, whereas liberal approaches focus on the realistic influence of material strength. As such, the researchers believe that the main strength of terrorist organizations lies in the national and international discourse directed at society, as these provide terrorist organizations with an active role within an unstable international system. Terrorists invest in the religious and cultural identities of common individuals in order to create and redefine their group's identity. In doing so, they are able to identify their group's identity by contrasting themselves against that of others within and outside of their society.

In his research entitled, "Advancing Collaboration Theory: Models, Typologies, and Evidence," Stevens (2015) adopts the psychological theory in his examination of the spread of the terrorism. He argues that biological agents are the only important factors in determining violent behavior. Stevens justifies his hypothesis by stating that people who engage in violent behavior portray certain biological characteristics. Stevens' investigation of terrorism is linked to neurophysiological theory, which indicates a relationship between violence and the brain. His research reveals that there are specific areas in the brain that are directly related to violence, and that alerting these areas triggers violent behaviors in individuals.

Criticism of the Literature

There is no doubt that the research regarding the phenomenon of terrorism is broad and sophisticated. Hence, it is important to evaluate the methodologies used in the previous literature to arrive at a convincing understanding of the phenomenon itself.

Therefore, the methodological pitfalls of previously conducted research must be discussed. These shortcomings in the discourse are summarized as follows:

- Flattening of the concepts: one of the main problems cited by researchers is the flatness of project scope. In other words, the existing research does not take into account the depth of ideas presented across all theories. One of the most prominent manifestations of concept flattening is the shortening of theories associated with other relevant concepts, such as summarizing the realistic perspectives in the two main concepts of "power" and "interest." Thus, the concepts become analytical tools that are based on the set of hypotheses presented by each theory instead of an abstract concept subject to personal interpretation.

- The problem of abstraction: in general, the issue of abstracting theoretical ideas is that the possibility of evoking empirical evidence to support and explain a theory's claims is removed. This means that any methodology that presents analytical assumptions that cannot be inferred from the evidence may not be a viewed as a valid methodology. The methodologies present within the reviewed literature ignore emphasis on the basic analytical assumptions linked to real evidence regarding the phenomenon of terrorism.

- Inclusiveness: the previously conducted literature assumes that the interpretation of terrorism and violence can be limited to a specific theoretical framework. However, there are several determinants and factors that influence the evolution of terrorist ideology, and the attitudes of some terrorist groups may not fall within the traditional framework of these established theories.

Synthesis of the Literature

From conducting a literature review on the existing discourse, it was found that the interpretations and motives leading to the evolution and growth of terrorism are greatly varied. While some proponents of the literature indicated that cases of competition and international conflict helped in aiding the growth of the phenomenon, others stated that terrorism is a naturally occurring phenomenon that can appear in any society affected by political, economic, social, religious, or ideological turmoil. The following are some points to help understand terrorism more clearly and to illustrate its causes:

- First, terrorism is a global phenomenon present within both ancient and modern societies. It has no religion or homeland, and its forms and methods change across the variables of time and place. However, terrorism is always connected to the human being despite creed, religion, or ideology.

- Second, failure to define the concept and reality of terrorism allows for a widening circle of accusation. Accusation may encompass anyone who dissents from authority, governments, or regimes, those who claim their people have not achieved justice or freedom, and those who achieve their purpose through the oppression of their people.

- Third, Muslims are always accused of being terrorists, despite many acts of terrorism being practiced by individuals who identify with other religions. This has developed an erroneous concept of the Islamic religion and has pushed some

individuals and groups to adopt violence due to this sense of injustice and
oppression.

- Fourth, authoritarian regimes now use the term "terrorism" in an indiscriminate manner and without any scrutiny or assessment of its consequences; anyone who interferes within these regimes may be accused of terrorism, leading to their self-condemnation without the knowledge of the consequences associated with criminal conviction and extortion.

- Fifth, as the root causes of terrorism are currently being ignored, the United States international coalition is unlikely to be capable of eliminating terrorism due to its maltreatment.

Rationale Behind Variables Selection

In order to better diagnose the phenomenon of terrorism, it was necessary to define the factors in which the phenomenon was able to grow and flourish. Some of these factors include oppression, persecution, tyranny, and repression, as well external interventions that violate sovereignty and independence, the overthrow of national governments, and the occupation and oppression of other countries and their people. These actions are completed to bring about strife among communities and an alliance based on racism in order to generate anger and hatred. Through these actions, an environment that breeds terrorism is created.

Summary and Conclusions

The literature review has given a brief account of terrorism, showing that it is not a new phenomenon. It has been demonstrated that terrorism is not limited to the problem

itself but goes beyond the process of diagnosing the phenomenon. The process of diagnosing terrorism is forever evolving, as it shown throughout the varying types of literature reviewed. Though it has been noted that the understanding of terrorism has been linked to its changing definition throughout time, the discourse agrees to define terrorism through the diagnosis of incentives and objectives of the phenomenon of terrorism.

In regard to the factors that influence terrorism, there have been many studies conducted that have succeeded in approaching the factors that incite terrorism. While it has been assumed that internal validity exists in these studies, the validity construct cannot be achieved if the factors are studied individually. Accordingly, this study was amid to investigate the interactions of the factors under study. Three factors were selected from the research included in the literature review so that their interaction with one another could be studied. This study was amid to act as an introduction for future studies in the discipline, as it may help in the development of a mathematical formula that predicts terrorist threats. To achieve the study objective, the researcher has examined the relation of the three factors, the Group Grievance Indicator, the State Legitimacy Indicator, and the External Intervention Indicator to the level of global terrorism. This has been done through the necessary statistical analysis process, which it has been outlined in the chapter 3. In addition, chapter 3 provides a description of the design quantitative research design and justification of the design choice, and threats to validity.

Chapter 3: Research Method

Introduction

The purpose of this quantitative study was to examine the relationships and interactions between group grievance, state legitimacy, and external intervention in relation to the terrorism levels of 162 United Nation members. I examined the statistical relationship between the variables using data pertinent to the 162 member states of the United Nations over a time span of 11 years (2006–2017) by using the GGI, the LSI, and the EII as independent variables. The GTI was used as the study's dependent variable. I aimed to examine how the independent variables interactively related to the dependent variable.

In this chapter, I address the research methodology of this study in terms of the research design and its relevance to the research questions and hypotheses. Furthermore, justification for the testing selected in this study will be provided. I address the data collection method used, as well as its relevance to the selected variables and the nature of the study. The data recruitment process is explained, and the statistical software package used for the process of data entry and cleaning is described. I also address the study community, data size, and time frame that this project encompasses. I provide further information on the data sources, data validity, reliability, reputation, and the data gathering procedures used. The statistical analysis plan, the extraction of the results, and the method of interpretation are discussed within this chapter. Moreover, I analyze all threats to the validity of the study approach and results. I address the ethical procedures related to the use of the study materials and recruitment, their process plan, data collection, data processing, and the relevant requirements in the final version of the

dissertation. In the last section of this chapter, I summarize the design and methodology of the inquiry method.

Research Design and Rationale

In this cross-sectional study, I analyzed whether or not the three independent variables (the group grievance, state legitimacy, and external intervention) were significant predictors of the level of the GTI. I analyzed the relationship in a multinomial logistic regression model. The result of this study can be used to predict the level of the dependent variable through the application of the actual values of the set of independent variables. To estimate the adjusted odds value, the following three independent variables were used: group grievances, state legitimacy, and external interference. The dependent variable selected for this study was the GTI. The GTI referred to the ranking of the state on a scale that evaluates the index and the severity of terrorism. The GTI ranges from 0 to 10, with 0 being the least severe form of terrorist activity and 10 being the most severe form of terrorist activity.

Methodology

In this cross-sectional study, I analyzed the interactive effect of the three independent variables (the group grievance, state legitimacy, and external intervention) on the level of terrorist activities.

Data and Information

The data that were used in the present study were driven from publications dating between 2006–2017. The independent variables were selected from the data that was published by the Fund for Peace on fragile states, and the dependent variable was derived from the Institute of Economics and Peace. These institutions permit, without prior

permission, the use of their published data for academic, humanitarian, and noncommercial use. For further confirmation, permission was obtained from these institutions to use the data published in this study.

There were 162 countries that participated in this study, which covers 99.7% of the global population. To determine the effect of independent variables on the dependent variable, the value of the multinomial logistic regression for each independent variable was derived in addition to the value of the adjusted odds value for the intersection of the independent variables.

Instrumentation and Operationalization of Constructs

Founded in 1957, the Fund for Peace (FFP) is an educational research institution specializing in the diagnosis and resolution of conflicts related to weak or failed states, as well as the political response to such conflicts with an emphasis on achieving sustainable security. The FFP works to prevent conflicts and limit the conditions that lead to them to attain sustainable global security. The FFP has sought to develop strategies and measurement tools for addressing the security challenges that vulnerable and fragile states face (FFP, 2018). One of the tools, the CAST, was created to measure the vulnerability of countries to collapse. The CAST instrument was developed in the 1990s and it was used by politicians, professionals, civil society, and field practitioners as a framework for understanding and measuring the drivers of conflict. The CAST instrument used quantitative and qualitative data and relied on collecting hundreds of thousands of public data from various sources. The system used social science research methodology and relied on secondary quantitative data and expert qualitative data and analysis. The CAST instrument analyzed key trends to measure and predict political

risks, as well as the effectiveness of an intervention. The CAST instrument is also used to measure a country's annual failure index. The massive data are processed electronically to obtain a final result index. CAST scale indicators are assessed a scale from 1 to 10, with 1 being *the most stable* and 10 being the *most at-risk of collapse and violence* (FFP, 2018).

The data used for the production of the indicators in the CAST instrument include:

- Content analysis: analyzed content through the use of logical expressions in searches containing articles and reports from nearly 10,000 global sources, ultimately determining the suitability of sources for subindicator use.

- Quantitative data: The CAST instrument relied on the use of quantitative data that already exists and are published by international statistical institutions. The measurement tool deals with raw data through a comparative analysis of trends in the quantitative analysis of each country, comparing and measuring their compatibility with content analysis in order to adopt it.

- Qualitative review: Analysis is conducted separately for each country by researchers specializing in social science research. The evaluation is based on the main events of that year and is compared to the events of each country within the previous year. This analysis helps to reduce the technical errors produced through any other analysis process.

The data are then triangulated through the application of rules that ensure the integration of data sets in a way that enhance the strengths of the different approaches. The methodological rigor of the CAST instrument helped to reach the depth of analysis,

minimize errors, gain internal and external validity, and heighten reliability. There are 12 indicators of conflict risk produced by the FFP:

- Security apparatus

- Factionalized elites

- Group grievance

- Economic decline

- Uneven economic development

- Human flight and brain drain

- State legitimacy

- Public services

- Human rights and rule of law

- Demographic pressures

- Refugees and internally displaced persons

- External intervention

I selected three indicators from the 12 that are listed above, group grievance, state legitimacy, and external intervention, to study the impact of their interaction on the GTI. I adopted the three indices (GGI, LSI, External Intervention Index) to measure the three independent variables. Where the GGI was used to measure the group grievance, the LSI was used to measure the state legitimacy, and the External Intervention Index was used to measure the external interventions.

Group Grievance Index

The GGI focuses on the divisions of social or political characteristics among groups in terms of their degree of access to services and their integration of political processes and representation in political assemblies (FFP, 2018). History may also play a role in the relationship amongst groups, as historical events can have an impact on the mutually perceived images of one group to another (Fortna, 2015). Gaibulloev, Piazza, and Sandler (2017) argued that grievances may be the result of the political practices of dominant groups and state authorities who are against the political independence or self-determination of certain groups. Further, oppressive practices, inequitable distribution of resources, and acquisitions of power and wealth may also cause grievances. The GGI index measures the oppression of various groups within the society, as well as their sense of persecution, exclusion, and marginalization within the state (FFP, 2018). When state security may be affected, it can measure the extent to which there is tension or an invitation for violence between groups. The index measures the state's ability to deal with ethnic, regional, political, or religious threats. The GGI provides measures of the following concepts:

- Postconflict response

- Equality

- Divisions

- Communal violence

State Legitimacy Index

The indicator measures the extent to which the government fairly represents all segments of the population and the extent to which the government is open about its

relations with its citizens. The SLI measures the extent of citizen trust in state institutions and the implications of their absence. The SLI also examines popular movements such as demonstrations, civil disobedience, and armed conflict, and it measures human rights situations and the rules of law within the state. The SLI measures the level of democracy present within the state, including the integrity of elections, the extent to which the government represent their electoral rules, and the exclusion of opposition groups. The index also measures indicators of corruption, transparency, integrity, accountability, and exploitation marginalization. The SLI reflects the readiness of the state to exercise its basic functions satisfaction within the sector of public services. The SLI reflects the following factors:

- Confidence in the political process

- Political opposition

- Transparency

- Openness and fairness within the political process

- Political violence

External Intervention Index

The indicator measures the intervention of other countries in the internal and external policies of the state and its imposition of its laws and regulations. The EII also measures the impact of foreign intervention on the independence of political decision making within the state. In terms of security, the EII measures the impact of military interventions in the security of the state, while also evaluating its impact on the state of security, stability conflict, and the emergence of violence. The EII focuses on the impact

of external factors on the economic performance of the state, especially in regard to foreign interference in internal affairs and imposing economic policies by other governments and nonstate actors. It also measures the impact of external intervention on economic independence, economic stability, control of the state's financial resources, the pressure from foreign loans and aid, and the dependence of the state economy on outside parties. The EII reflects the following factors:

- Political intervention

- Forced intervention

- Economic intervention

The Global Terrorism Index

Issued by the Institute for Economics and Peace, Sydney, the GTI is the newest, most comprehensive index terrorism in the world. Since 2000, the index has measured terrorism in 162 countries globally, and it has evaluated the following subindicators: loss of life, injuries, loss of public and private property, and the physiological effects of terrorism. The GTI provides a summary of all terrorist patterns worldwide, including its data on nearly 150,000 cases of terrorism. The GTI (2017) defined terrorism as "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" (p. 6). To calculate the terrorism index of a given country in any given year, four factors are taken into consideration:

- The total number of terrorist acts

- The total deaths caused by terrorist acts

- The total injuries caused by terrorist acts

- The total value of property damage caused by terrorist acts

The weight of the event is calculated by averaging its psychological effects over a 5-year span. For example, a weight value equal to 0.5 is given for each injury caused by the act of terrorism, a weight value equal to 1 is given for each act of terrorism, a weight value equal to 2 is given for the total value of property damage caused by the act of terrorism, and a weight value equal to 3 is given for each fatality caused by the act of terrorism.

The GTI ranks all countries on a scale from 0 to 10, wherein 0 is indicative of *no effects from terrorism* and 10 is indicative of the *most severe impact from terrorism.* Countries are ranked in descending order, with the highest score representing the countries most affected by terrorism.

In terms of the reliability of the CAST instrument, it has been peer-reviewed by many studies, including experts, independent scientists, educational and governmental institutions, and the agents in the private sector. The CAST methodology also has been evaluated through its application to different studies. The CAST methodology was created by the FFP. Founded in 1957, the FFP was developed as an independent, nonpartisan, nonprofit organization. The FFP works in over 60 countries and cooperates with government institutions, regional and international institutions, the military, nongovernmental organizations, academic institutions, civil society networks, academics, journalists, and the private sector. The FFP is an institution that specializes in building networks and early warning systems for complex environments, and they work with many local and international partners. The CAST methodology was developed in 1990 in

cooperation with the United States Army Peacekeeping Institute, and it was first used in

1996 by *the Parameters*; a peer-reviewed journal. From that point forward, CAST

methodology became the subject of various studies. Table 1 shows the definitions and

measures of indexes that has been used in the study.

Table 1

Definitions and Measures of the Indices

Index	Definitions	Measures
Group Grievance Index	The Group Grievance Index considers the divisions of social or political characteristics among groups in terms of their degree of access to services and their integration of political processes and representation in political assemblies. As well, the index considers the oppression of various groups within the society, as well as their sense of persecution, exclusion, and marginalization within the state.	• Post-conflict response. • Equality. • Divisions. • Communal violence.
State Legitimacy Index	The State Legitimacy Index considers the openness and the representativeness of government and its relationship with its citizenry.	• Confidence in the political process. • Political opposition. • Transparency. • Openness and fairness within the political process. • Political violence.
External Intervention Index	The External Intervention Indicator considers the influence of external parties on the political decision, the economic and security performance of a particular country.	• Political intervention. • Forced intervention. • Economic intervention.
The Global Terrorism Index	The Global Terrorism Index provides a summary of all terrorist patterns worldwide, including its data on nearly 150,000 cases of terrorism.	• The total number of terrorist acts. • The total deaths caused by terrorist acts. • The total injuries caused by terrorist acts. • The total value of property damage caused by terrorist acts.

Note. Information was collected from the FFP, and the Institute for Economics and Peace.

I stopped reviewing here due to time constraints. Please go through the rest of your

chapter and look for the patterns I pointed out to you. I will now look at Chapter 4.

Instrument Validity and Reliability

The validity of the research tool refers to the accuracy in which a research device is able to measure the relevant data. Pertaining to validity of the CAST methodology, the study has been approached from different angles. Validity also refers to the degree in which the search tools provide the researcher with relevant information pertinent to the research problem. To evaluate the validity of the CAST methodology, face validity, construct validity, criterion-related validity, and formative validity must first be evaluated:

- Face validity: the research tool adopted various methods for collecting the data, including as quantitative data, qualitative data, and as analysis conducted by the experts and specialists of each country. The data were divided into groups to ensure that they were addressed appropriately and classified according to the views of the specialist stakeholders in the risk assessment field.

- Construct validity: it is intended to measure the required scale for the CAST instrument. For example, measuring grievances groups must actually measure the grievances. If there is a failure to measure the grievance groups, the construct of the scale will not be valid and the results will be incorrect. The construct validity of the CAST instrument can only be ascertained through the uses and contributions of measurements in previous studies. Research institutions such as the United Nations Development Program, the Army War College Carlisle Barracks, the Journal of Developing Societies, Defense Research, and Development Toronto refer to the construct validity of the CAST instrument as measuring what should be measured.

- Criterion-related validity: Use of this tool by numerous international institutions, academics, governments, and the private sector indicate that it is capable of predicting differences. The results are consistent with the other approaches that evaluate terrorism, leading to the adoption of the CAST instrument by many institutions.

- Formative validity: The CAST instrument has been successful in determining the extent to countries are at risk for conflict. As such, it has been accredited by national and international research institutions from varying disciplines for its use in measuring the conflict risk of vulnerable countries.

As the GTI has been published by the Institute for Peace and Economics, it has gained high reliability. It should also be noted that it is based on the Global Terrorism Monitoring Database. Located at the University of Maryland, the Global Terrorism Monitoring Database collects and monitors terrorist data under the auspices of the United Nations to study the impact and consequences of terrorism. To evaluate index validity, it is necessary to again examine face validity, construct validity, criterion-related validity, and formative validity.

- Face validity: the index has a high face validity because it collects data related to terrorist activity from a reliable database. The data represent a real reflection of the effects of terrorism on the international community.

- Construct validity: because of its derivative global terrorism database, the GTI gained a construct validity that contains data for over than 150,000 incidents of terrorism. Further, construct validity derives from the GTI's definition of

terrorism, which denotes any use of unlawful force by non-governmental actors with the goal of achieving a political, economic, religious, or social objective as terrorism.

- Criterion-related validity: as the absence of terrorism at any given year does not indicate the lack of terrorist threat, the GTI must adopt a five-year base to become more accurate in predicting terrorism and achieve criterion-related validity.

- Formative validity: established through the use of terrorism index results to help re-formulate counter-terrorism strategies and help redirect the pursuit the peace.

Data Analysis Plan

In regard to the analysis, this study has used the Statistical Package of Social Sciences (SPSS) programming for data analysis and interpretation. then data have been entered into SPSS, and a search for outlier data have followed so that it may be excluded from this study.

In order to answer the research questions and test the hypotheses, a multinomial logistic regression analysis was performed. The study examined the relationships between the dependent and independent variables, as well as the extent to which the independent variables interact. The multinomial logistic regression model was based upon the assumption of a linear relationship between the dependent variable and a number of independent variables.

The test results were interpreted by constructing a statistical model that represents how the independent variables related to the dependent variable, and by finding the

adjusted odds ratio of the independent variables and the adjusted odds ratio for the

independent variable interactions. The best way to do this is to implement the method of

least squares to minimize the sum of the squared residuals among the actual and

estimated observations.

Research Questions and Hypotheses

Research Question 1: How is the grievance group related to the level of global terrorism?

> Ho-1: The grievance group variable is negatively related to the level of global
>
> terrorism.

> Ha-1: The grievance group variable is positively related to the level of global

terrorism.

Research Question 2: How is the state legitimacy related to the level of global terrorism?

> Ho-2: The state legitimacy variable is negatively related to the level of global
>
> terrorism.

> Ha-2: The state legitimacy variable is positively related to the level of global

terrorism.

Research Question 3: How is the external intervention related to the level of global

terrorism?

> Ho-3: The external intervention variable is negatively related to the level of global
>
> terrorism.

Ha-3: The external intervention variable is positively related to the level of global

terrorism.

Research Question 4: How is the interaction between the group grievance, state

legitimacy, and external intervention variables related to the level of global terrorism?

Ho-4: The interaction between the group grievance, state legitimacy, and external

intervention variables is negatively related to the level of global terrorism.

Ha-4: The interaction between the group grievance, state legitimacy, and external

intervention variables is positively related to the level of global terrorism.

The test aimed to build a standard testable model by creating a model for

interpreting terrorism, examining the model using the data available, and using models to

predict, analyze, and make appropriate decisions. The study's application aimed to

examine multinomial logistic regression models and test the relationship between all

independent and dependent variables. By entering these variables into SPSS, the

following outputs have been obtained:

- Examining the multinomial logistic regression models' assumptions whereby

  linearity, constant variance, normality, independence, and multicollinearity must

  be considered.

- The fit of the model where R^2 measures the percentage of the total change in y,

  which is interpreted by the estimated equation where the value of R^2 is

  proportionate to the quality of the model. The closer R^2 is to 1, the more likely the

regression equation is to explain the relationship between y and x, and the closer

it is to 0, the closer the estimated relationship is to the randomized interpretation.

- Probability of the estimated model "Prob (F-statistic)."

- Self-correlation test for errors "(DW)."

- Standard trade-off: Standard Akaike, Standard Shwarz.

Threats to Research Validity

Internal validity is generally related to the ability of the researchers to repeat

experiments and scientific discoveries. This study followed the quantitative non-

experimental approach as the selected variables cannot be manipulated. Because of this,

the study does not have a high internal validity. However, high external validity of this

study was derived from the validity of the data collection tools used in terms of regularity

and the extent to which the scale results are understood. In addition to the accuracy of the

results, it is possible for another researcher to replicate and generalize the data as the

study's degree of compatibility is high. The study also gained a high external validity

from its degree of generalization, as the nature of the study survey covers 99.7% of the

global population.

Ethical Procedures

The study obtained a review by the Institutional Review Board (IRB), in order to

ensure that no ethical violations occur. The research gathered in this study was composed

of previously published data, and thus, the researcher did not employ any human

participants. The study used secondary data from reputable sources on the internet, and

the data obtained are not anonymous or confidential. As such, the study complied with all

necessary data approvals and intellectual property restrictions. It should also be noted that no data used in this study have been processed or modified by the researcher, except the dependent variable which has ranked into four levels, to overcome the non-normality distribution.

Form A, Form B, and the approval letter to use the data were sent to the Institutional Review Board (IRB). The Institutional Review Board confirms that the doctoral capstone entitled, "The Interaction Between the Grievance Group Index, LSI, and External Intervention Index and Its Impact on Global Terrorism," meets Walden University's ethical standards. While the IRB sees this project will serve as a Walden doctoral capstone, the Walden IRB will oversee researcher capstone data analysis and results reporting. Based on the previous IRB statement the IRB issued this approval number 04-25-19-0401597.

Summary and Conclusions

In this chapter, the researcher presented the research methodology selected for the present study, the research design, and the rationale behind the selection of the multiple regression model analysis. Furthermore, this chapter discussed the nature of the study, the size of the sample, and the timeframe in which the researcher has pulled relevant data. The study covered 162 countries, which equates to 99.7 per cent of the global population, and it analyzes the data published between 2006–2017. The researcher has identified the source data and that have been used in this study and has determined that the data was derived from the FFP publications on fragile states, and the dependent variable (the GTI) was derived from the Institute of Economics and Peace. This chapter described the

procedures and instruments used to produce the selected variables. Moreover, the study evaluated face validity, construct validity, criterion-related validity, and formative validity in order to confirm the reliability of the data used. In terms of data analysis, the study provided the necessary data processes through the use of SPSS, which has been used to determine the multinomial logistic regression analysis model. The validity of the statistical procedures, which showed external validity and high reliability, was supported by the fact that internal validity has not been achieved, since the test is non-experimental, and the data cannot be manipulated. Finally, this chapter presented the procedures set in place to avoid any ethical threats imposed by this study. The nature of secondary data analysis ensured no threats to the human participants involved, and that all necessary approvals were obtained for using the secondary data sources cited within this study. The processes outlined within this chapter has been used to extract and present the test results in the next chapter. Chapter 4 has presented the research findings, and data analysis, and described the systematic application of research methods.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to examine the extent to which

independent variables (the group grievance, state legitimacy, and external intervention)

can predict the dependent variable (the level of global terrorism) by answering the

following four questions, and to test their related hypotheses:

Research Question 1: How is the grievance group related to the level of global

terrorism?

$H_0 1$: The grievance group variable is negatively related to the level of global

terrorism.

$H_a 1$: The grievance group variable is positively related to the level of global

terrorism.

Research Question 2: How is the state legitimacy related to the level of global

terrorism?

$H_0 2$: The state legitimacy variable is negatively related to the level of global

terrorism.

$H_a 2$: The state legitimacy variable is positively related to the level of global

terrorism.

Research Question 3: How is the external intervention related to the level of

global terrorism?

$H_0 3$: The external intervention variable is negatively related to the level of global

terrorism.

*H*a3: The external intervention variable is positively related to the level of global terrorism.

Research Question 4: How is the interaction between the group grievance, state legitimacy, and external intervention variables related to the level of global terrorism?

$H_0$4: The interaction between the group grievance, state legitimacy, and external intervention variables is negatively related to the level of global terrorism.

*H*a4: The interaction between the group grievance, state legitimacy, and external intervention variables is positively related to the level of global terrorism.

In this chapter, I describe the timeframe of the data used, as well as the rates of recruitment and deletion. I present any discrepancies in data collection from the plan presented in the previous chapter. The results are presented by reporting descriptive statistics and evaluating statistical assumptions as appropriate for the study. I report the results of statistical analysis, organized by research questions and hypotheses. Tables and figures were created to illustrate the results. I also summarize the answers to the research questions, provided transitional materials to Chapter 5.

Data Collection

I relied on secondary data obtained from data published to the public on the Internet from reliable academic institutions that possess a high degree of credibility. I intended to use the data for 162 countries to participate in the current study, which covers 99.7% of the global population. I was able to access data covering 159 countries. Some of the data for three other countries were incomplete, namely the State of Southern Sudan, the West Bank, and Kosovo.

The data consisted of three independent variables and one dependent variable. The independent variable was retrieved from the FFP yearly reports. The dependent variables were retrieved from Institute for Peace and Economics yearly reports. The Institute for Peace provides data for the Fragile States Index data from 2006-2018 to about 178 countries.

The secondary data were obtained from published sources and consisted of reports and publications of the FFP and the Institute for Peace and Economics. The GTI included nearly 162 countries, and the fragile states index had nearly 178 countries. I matched the published data in the fragile states index with the GTI and ignored the rest of the countries that did not appear in the GTI as the GTI covers 99.7% of the world population.

Data Recruitment and Treatment

For the three independent variables, the data were derived from the Peace Fund and included in three separate lists. The calculation of each variable was calculated separately, and a new list was created for each independent variable containing the mean of each independent variable for the period between 2006 and 2017. Regarding the dependent variable, the global terrorism rate, I calculated the arithmetic means and the creation of a new list of the arithmetic mean for the period between 2006 and 2017. The study included the name of the country against the numeric values of its independent and dependent variables. Three countries were removed from the list because of incomplete data: the State of Southern Sudan, the West Bank, and Kosovo. The number of countries participating in the study was 159 countries.

The cross-sectional secondary data design was chosen. A cross-sectional design can only measure differences between a variety of people, topics, or phenomena rather than the process of change. As such, researchers using this design can use a relatively negative approach to make causation based on results (Sedgwick, 2014). The cross-sectional secondary data design was chosen because the cross-sectional design generally uses the survey data collection techniques to collect data, they are relatively inexpensive, and their implementation takes little time. The cross-sectional secondary data design can use data from a large number of participants or subjects, and unlike observational studies, they are not geographically restricted (Sedgwick, 2014).

The disadvantages of the cross-sectional secondary data design are that the design of the cross-sectional studies provides only a snapshot of the analysis, so there is always the possibility that the study will have different results if another time frame is chosen. The results are fixed and time-bound; therefore, they do not give any reference to a series of events or reveal historical or temporal contexts (Sedgwick, 2014).

My intention was to perform a multiple linear regression, but because of the nonnormality of the data distribution of the dependent variable, the dependent variable was transformed to a categorical data. The statistical test also changed to multinomial regression to overcome the nonnormality of the dependent variable. Other procedures to overcome the nonnormality of the dependent variable, such as the log transformations, removing the outliers, square root, standard mean centered transformation, and box-cox transformation was followed, but the result was not good because of dependent variable had 20 observations that hold the zero value. The GTI was categorized into four groups: no GTI, low GTI, average GTI, and high GTI based on the average GTI scores.

Reporting Results

Descriptive Statistics

Across all of the countries in the dataset, the median GTI was 1.48 with a range of

9.52 (Table 2). The median averages of the GGI, LSI, and EII were 6.25, 7.03, and 6.06

respectively. The pattern of the average GTI shows right skewness, which suggests that

there were a few countries in the study population with disproportionately high GTI

(Figure 1). The GTI was categorized into four groups: no GTI, low GTI, average GTI,

and high GTI based on the average GTI scores (Table 3). Over 60% of the countries in

the dataset had low GTI index while 5% of the countries in the sample population had

high GTI. The case processing summary table shows that there were 159 observation in

all categories of the GTI, and the marginal percentage of each level of the GTI was

follows: 12.6% for no impact level of GTI, 60.4% for low impact level of GTI, 22% for

the medium impact level of GTI, and 5% of the high impact level of GTI (see Table 4).

Table 2
The Mean Distribution of the Average Scores of GTI, GGI, SLI and EII

Variable (*N*=159)	Mean (*SD*)	Median	Range
Average score of GTI	2.28 (2.24)	1.48	9.52
Average score of GGI	6.13 (1.96)	6.25	8.65
Average score of SLI	6.32 (2.42)	7.03	9.11
Average score of EII	5.77 (2.23)	6.06	8.89
Average score of the interaction of GGI-SLI-EII	286.83 (214.68)	266.45	852.25

Table 3:
Categorization of GTI

Categories of GTI	Frequency	Percentage (%)
Zero Index Group (value of 0)	20	12.6
Low GTI Group (Range 0-3.33)	96	60.4
Average GTI Group (Range 3.34-6.66)	35	22.0
HIgh GTI Group (Range 6.67 - 10)	8	5.0

Table 4
Case Processing Summary

		N	Marginal Percentage
Risk_of_Terrorism	NO IMPACT	20	12.6%
	lOW IMPACT	96	60.4%
	MEDIUM IMPACT	35	22.0%
	HIGH IMPACT	8	5.0%
Valid		159	100.0%
Missing		0	
Total		159	
Subpopulation		150[a]	

a. The dependent variable has only one value observed in 144 (96.0%) subpopulations.
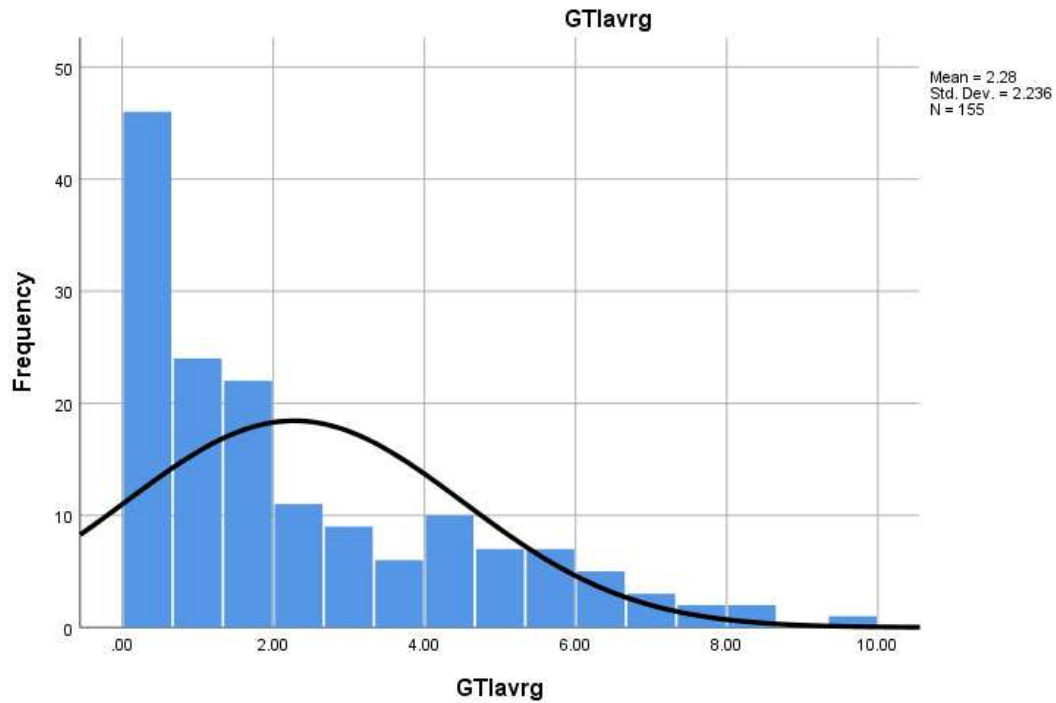
Figure 1. Frequency distribution of GTI.

Model Assumptions

Assumption #1: The dependent variable is measured at the nominal level.

Assumption #2: All independent variable are continuous variables.

Assumption #3: The observations are independence, and the dependent variable is mutually exclusive and exhaustive categories.

Assumption #4: There are no strong multicollinearity among the independent variables. The multicollinearity test in Table 5 indicates the coefficients table that the variable importance in projection (VIP) values for all factors did not exceed 10 for all independent variables.

Assumption #5: The relationship between the independent and dependent variables is linear, where the relation between the dependent variable and the dependent variable as showing in the scatterplot can be modelled by a straight line (see Figure 2).

Assumption #6: There are no outliers in the models, as showing in Figures 3,4, and 5. There are no outliers or a high leverage values among the independent variables.

Table 5
Coefficients[a]

| | | Collinearity Statistics | |
Model		Tolerance	VIF
1	GGI_Average	.389	2.573
	SLI_Average	.245	4.087
	EII_Average	.296	3.381

Note a. Dependent Variable: GTI category
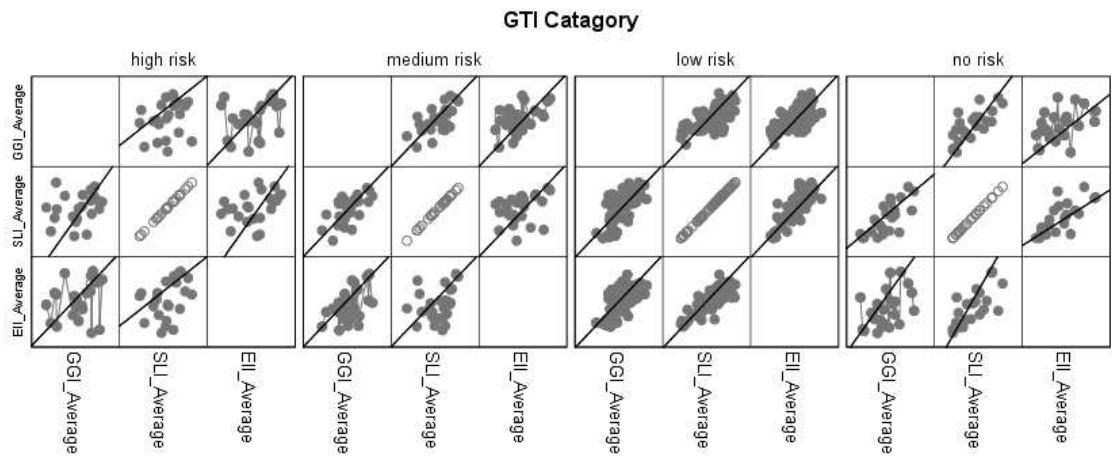
Figure 2. Scatterplot of GGI, SLI, and EII.
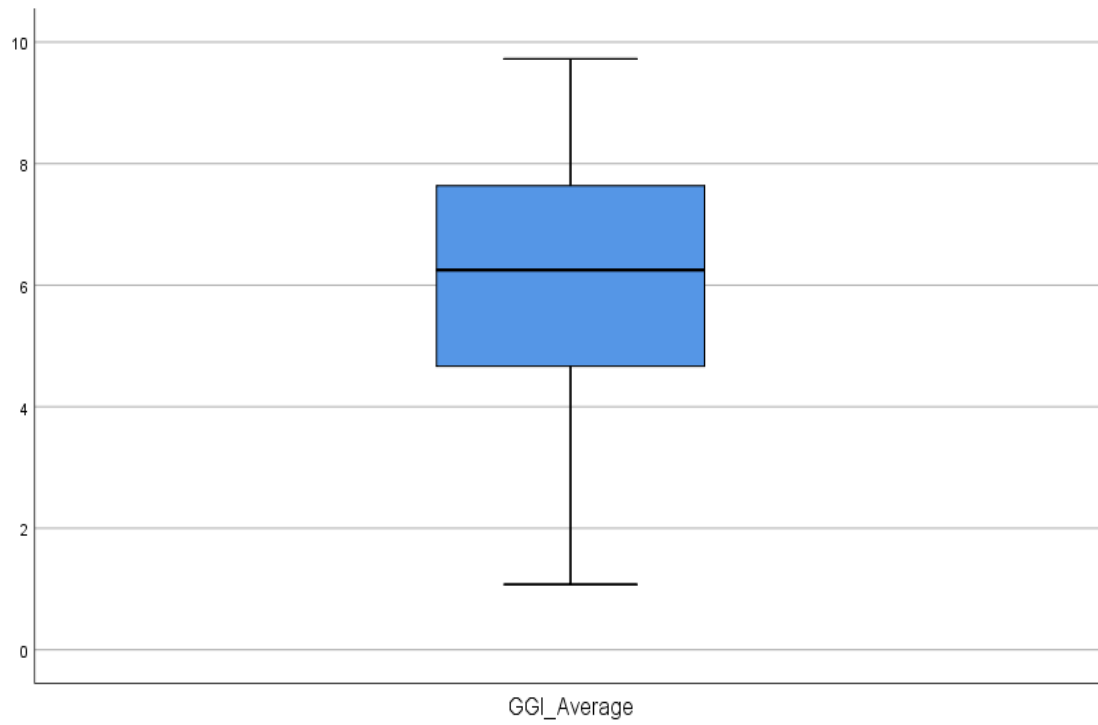
Figure 3. GGI boxplot.
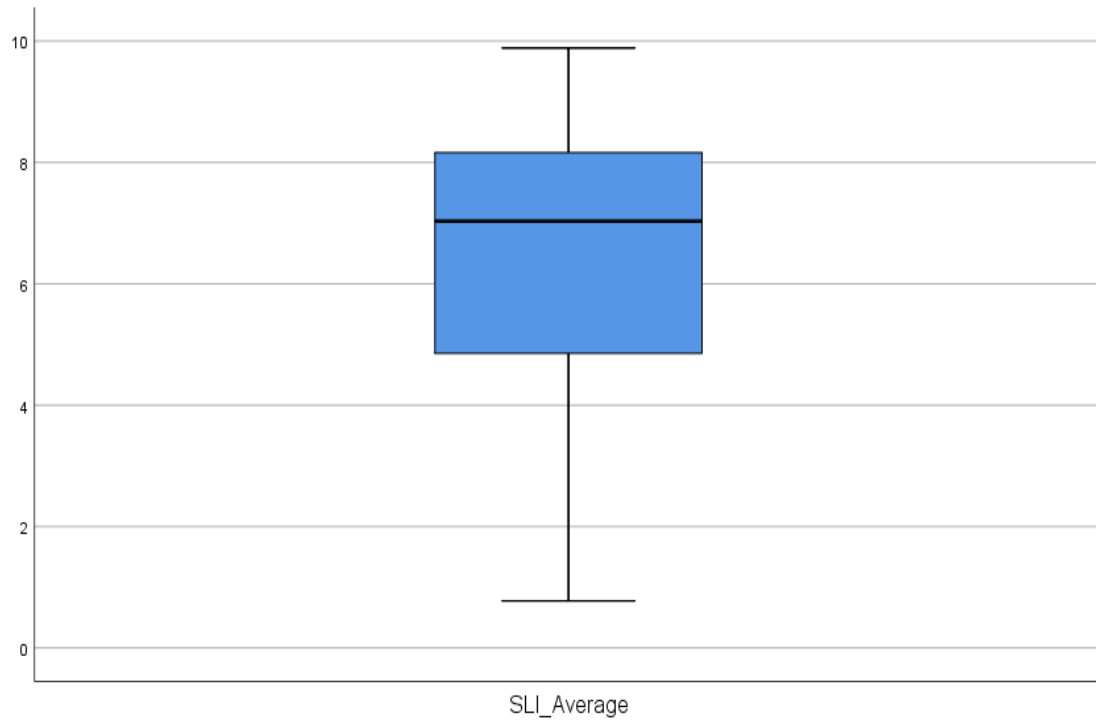
Figure 4. SLI boxplot.
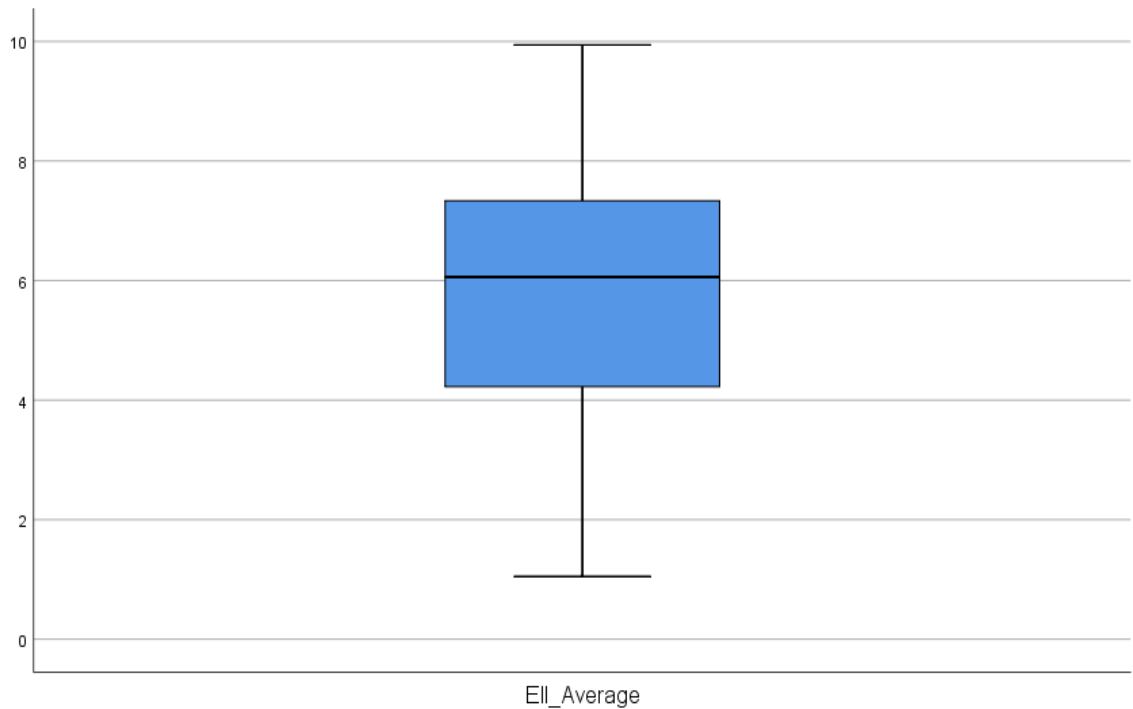
Figure 5. EII Boxplot

Research Questions and Null Hypotheses

Research Questions 1

In the first research question, I investigated the relation between the group grievance (GGI) and the levels of the GTI. The model fitting information table showed that the model fit was significant: $\square 2\ (3) = 76.665$, $p <.001$, which means that rejecting the null hypothesis that the model predicts only 69.2% more accurately than the null model (see Table 6). The lack of significance in the goodness of fit model indicated the good fit of the model (see Table 7). The value of the Nagelkerke in the *R*-square table was .436, which indicated a better fit of the effect size of the observations (see Table 8). The likelihood ratio table indicated that the independent variable GGI contributed meaningfully to the full effect (see Table 9). The classification table shows that the model

is 69.2% accurate (see Table 10). Accordingly, I rejected the null hypothesis where the

model accurately can predict only 69.2%, as the predictor (GGI) in this model explained

0.436 of the variation in the dependent variable (GTI levels). I stopped reviewing here.

Please go through the rest of your chapter and look for the patterns I pointed out to you. I

will now look at Chapter 5.

Table 6
Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	325.264			
Final	248.599	76.665	3	.000

Table 7
Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	366.371	444	.997
Deviance	240.281	444	1.000

Table 8
Pseudo R-Square

Cox and Snell	.383
Nagelkerke	.436
McFadden	.230

Table 9
Likelihood Ratio Tests

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	349.584	100.985	3	.000

| GGI Average | 325.264 | 76.665 | 3 | .000 |

The chi-square statistic is the difference in -2 log-likelihoods
between the final model and a reduced model. The reduced model
is formed by omitting an effect from the final model. The null
hypothesis is that all parameters of that effect are 0.

Table 10
Classification

	Predicted				
Observed	No Impact	Low Impact	Medium Impact	High Impact	Percent Correct
No Impact	0	20	0	0	0.0%
Low Impact	0	88	8	0	91.7%
Medium Impact	0	14	21	0	60.0%
High Impact	0	2	5	1	12.5%
Overall Percentage	0.0%	78.0%	21.4%	0.6%	69.2%

The multinomial logit estimates for a one unit increase in GGI Average score for

Low Impact of GTI relative to no impact of GTI given the other variables in the model

are held constant. If a subject were to increase GGI average by one point, the multinomial

log-odds of the low impact level of GTI to No impact level of GTI would be expected to

increase by 0.265 unit while holding all other variables in the model constant (see Table

11). While the odds or "relative risk" ratio refers for a one unit increase in GGI score in

Low Impact of GTI relative to No Impact of GTI level given that the other variables in

the model are held constant. If GGI score increase by one unit, the relative risk for Low

Impact of GTI to No Impact of GTI would be expected to increase by a factor of 1.304

given the other variables in the model are held constant. So, given a one unit increase in

GGI, the relative risk of being in the Low Impact GTI group would be 1.304 times more

likely when the other variables in the model are held constant. More generally, we can

say that if a GGI score, we would expect to be more likely to be in the Low Impact GTI over No Impact GTI. We are 95% confident that the "true" population multinomial odds ratio lies between the .982 and 1.731 limits of the interval for Low Impact of GTI relative to the No Impact of GTI (see Table 11).

The multinomial logit estimates for a one unit increase in GGI Average score for Medium Impact of GTI relative to No Impact of GTI given the other variables in the model are held constant. If a subject were to increase GGI average by one point, the multinomial log-odds of Medium impact level of GTI to No impact level of GTI would be expected to increase by 1.275 unit while holding all other variables in the model constant (see Table 11). While the odds or "relative risk" ratio refers for a one unit increase in GGI score for Medium Impact of GTI relative to No Impact of GTI level given that the other variables in the model are held constant. If GGI score increase by one unit, the relative risk for Medium Impact of GTI to No Impact of GTI would be expected to increase by a factor of 3.580 given the other variables in the model are held constant. So, given a one unit increase in GGI, the relative risk of being in the Medium Impact GTI group would be 3.580 times more likely when the other variables in the model are held constant. More generally, we can say that if a GGI score, we would expect that the increase in the GGI by one score likely to be in the Medium Impact GTI 3.58 times over No Impact GTI. We are 95% confident that the "true" population multinomial odds ratio lies between the 2.239 and 5.724 limits of the interval for Medium Impact of GTI relative to the No Impact of GTI (see Table 11).

The Multinomial logit estimate for a one unit increase in GGI Average score for High Impact of GTI relative to No Impact of GTI given the other variables in the model is held constant. If a subject were to increase GGI average by one point, the multinomial log-odds of High impact level of GTI to No impact level of GTI would be expected to increase by 2.409 unit while holding all other variables in the model constant (see Table 11). While the odds or "relative risk" ratio refers for a one unit increase in GGI score for High Impact of GTI relative to No Impact of GTI level given that the other variables in the model are held constant. If GGI score increase by one unit, the relative risk for High Impact of GTI to No Impact of GTI would be expected to increase by a factor of 3.58 times given the other variables in the model are held constant. So, given a one unit increase in GGI, the relative risk of being in the High Impact GTI group would be 11.118 times more likely when the other variables in the model are held constant. More generally, we can say that if a GGI score, we would expect that the increase in the GGI by one score likely to be in the High Impact GTI 3.58 times over No Impact GTI. We are 95% confident that the "true" population multinomial odds ratio lies between the 3.687 and 33.529 limits of the interval for High Impact of GTI relative to the No Impact of GTI (see Table 11).

Table 11
Multinomial Logistic Regression Parameter Estimates for GGI

Risk_of_Terrorism[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B) Lower Bound	Upper Bound
Low Impact	Intercept	.188	.759	.061	1	.804			
	GGI Average	.265	.145	3.372	1	.046	1.304	.982	1.731
	Intercept	-7.679	1.604	22.931	1	.000			

Medium Impact	GGI Average	1.275	.239	28.358	1	.000	3.580		2.239	5.724
High Impact	Intercept	-18.636	4.745	15.423	1	.000				
	GGI Average	2.409	.563	18.291	1	.000	11.118		3.687	33.529

a. The reference category is: No Impact.

Research question 2

The second research question investigates the relation between the LSI and the levels of the GTI. The Model Fitting Information table shows that the model fit is significant $\chi^2(3) = 22.779$, p < .001, which indicate that our model predicts more accurately than the null model (see Table 12). The lack of significance in the goodness of fit model indicates the good fit of the model (see Table 13). The value of the Nagelkerke in the R-square table is .352, which indicate a better fit of the effect size of the observations (see Table 14). The Likelihood Ratio Table indicates that the independent variable SLI are contributed meaningfully to the full effect (see Table 15). The Classification table shows that our model is 59.7% accurate (see Table 16). Accordingly, I reject the null hypothesis where the model accurately can predict only 59.7%, as the predictor (SLI) in this model explains 0.352 of the variation in the dependent variable (GTI levels).

Table 12
Model Fitting Information

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	322.492			
Final	299.712	22.779	3	.000

Table 13
Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	479.544	444	.118
Deviance	288.622	444	1.000

Table 14
Pseudo R-Square

Cox and Snell	.233
Nagelkerke	.352
McFadden	.168

Table 15
Likelihood Ratio Tests

Effect	Model Fitting Criteria -2 Log Likelihood of Reduced Model	Likelihood Ratio Tests Chi-Square	df	Sig.
Intercept	350.933	51.221	3	.000
SLI Average	322.492	22.779	3	.000

The chi-square statistic is the difference in -2 log-likelihoods
between the final model and a reduced model. The reduced model
is formed by omitting an effect from the final model. The null
hypothesis is that all parameters of that effect are 0.

Table 16
Classification

Observed	Predicted				Percent Correct
	No Impact	Low Impact	Medium Impact	High Impact	
No Impact	0	19	1	0	0.0%

Low Impact	0	95	1	0	99.0%
Medium Impact	0	35	0	0	0.0%
High Impact	0	7	1	0	0.0%
Overall Percentage	0.0%	98.1%	1.9%	0.0%	59.7%

This multinomial logit estimates for a one unit increase in SLI Average score for

Low Impact of GTI relative to no impact of GTI given the other variables in the model

are held constant. If the SLI average increase by one point, the multinomial log-odds of

low impact level of global terrorism to No impact level of GTI would be expected to

decrease by 0.029 unit while holding all other variables in the model constant (see Table

17). While the odds or "relative risk" ratio refers for a one unit increase in SLI score for

Low Impact of GTI relative to No Impact of GTI level given that the other variables in

the model are held constant. If the SLI score increase by one unit, the relative risk for

Low Impact of GTI to No Impact of GTI would be expected to decrease by a factor of

.971 given the other variables in the model are held constant. So, given a one unit

increase in SLI, the relative risk of being in the Low Impact GTI group would be 0.971

times more likely when the other variables in the model are held constant. More

generally, I can say that if an SLI score, we would expect to be more likely to be in the

No Impact GTI over Low Impact GTI (see Table 17). We are 95% confident that the

"true" population multinomial odds ratio lies between the .791 and 1.193 limits of the

interval for Low Impact of GTI relative to the No Impact of GTI (see Table 17).

The multinomial logit estimates for a one unit increase in the SLI Average score

for Medium Impact of GTI relative to No Impact of GTI given the other variables in the

model are held constant. If the SLI average increases by one point, the multinomial log-

odds of Medium impact level of GTI to No impact level of GTI would be expected to increase by 0.336 unit while holding all other variables in the model constant (see Table 17). While the odds or "relative risk" ratio refers for a one unit increase in SLI score for Medium Impact of GTI relative to No Impact of GTI level given that the other variables in the model are held constant. If SLI score increase by one unit, the relative risk for Medium Impact of GTI to No Impact of GTI would be expected to increase by a factor of 1.400 given the other variables in the model are held constant. So, given a one unit increase in SLI, the relative risk of being in the Medium Impact GTI group would be 1.400 times more likely when the other variables in the model are held constant. More generally, we can say that if an SLI score, we would expect that the increase in the SLI by one score likely to be in the Medium Impact GTI 1.400 times over No Impact GTI (see Table 17). We are 95% confident that the "true" population multinomial odds ratio lies between the 1.056 and 1.856 limits of the interval for Medium Impact of GTI relative to the No Impact of GTI (see Table 17).

The multinomial logit estimates for a one unit increase in SLI Average score for High Impact of GTI relative to No Impact level of GTI given the other variables in the model are held constant. If a subject were to increase SLI average by one point, the multinomial log-odds of High impact level of GTI to No impact level of GTI would be expected to increase by 0.946 unit while holding all other variables in the model constant (see Table 17). While the odds or "relative risk" ratio refers for a one unit increase in SLI score for High Impact of GTI relative to No Impact of GTI level given that the other variables in the model are held constant. If the SLI score increase by one unit, the relative

risk for High Impact of GTI to No Impact of GTI would be expected to increase by a

factor of 2.576 times given the other variables in the model are held constant. So, given a

one unit increase in SLI, the relative risk of being in the High Impact GTI group would

be 2.576 times more likely when the other variables in the model are held constant. More

generally, we can say that if an SLI score, we would expect that the increase in the SLI

by one score likely to be in the High Impact GTI 2.576 times over No Impact GTI (see

Table 17). The Classification table shows that our model is 59.7% accurate (see Table

16). We are 95% confident that the "true" population multinomial odds ratio lies between

the 1.207 and 5.497 limits of the interval for High Impact of GTI relative to the No

Impact of GTI (see Table 17).

Table 17
Multinomial Logistic Regression Parameter Estimates for SLI

Risk_of_Terrorism[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Low Impact	Intercept	1.741	.675	6.647	1	.010			
	SLI Average	-.029	.105	.077	1	.782	.971	.791	1.193
Medium Impact	Intercept	-1.719	1.015	2.867	1	.090			
	SLI Average	.336	.144	5.456	1	.020	1.400	1.056	1.856
High Impact	Intercept	-8.047	3.191	6.357	1	.012			
	SLI Average	.946	.387	5.990	1	.014	2.576	1.207	5.497

a. The reference category is: No Impact.

Research question 3

The third research question investigates the relation between the external

intervention index (EII) and the levels of the GTI. The Model Fitting Information table

shows that the model fit is significant $\square^2$ (3) = 15.084, p < .001, which indicate that our model predicts more accurately than the null model (see Table 18). The lack of significance in the goodness of fit model indicates the good fit of our model (see Table 19). The value of the Nagelkerke in the R-square table is .303, which indicate a better fit of the effect size of the observations (see Table 20). The Likelihood Ratio Table indicates that the independent variable EII are contributed meaningfully to the full effect (see Table 21). The Classification table shows that our model is 60.4% accurate (see Table 22). Accordingly, I reject the null hypothesis where the model accurately can predict only 60.4%, as the predictor (EII) in this model explains 0. 303 of the variation in the dependent variable (GTI levels).

Table 18
Model Fitting Information

Model	Model Fitting Criteria -2 Log Likelihood	Likelihood Ratio Tests Chi-Square	df	Sig.
Intercept Only	325.264			
Final	310.180	15.084	3	.000

Table 19
Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	415.774	429	.668
Deviance	301.862	429	1.000

Table 20

Pseudo R-Square

Cox and Snell	.191

| Nagelkerke | .303 |
| McFadden | .145 |

Table 21
Likelihood Ratio Tests

| Effect | Model Fitting Criteria | Likelihood Ratio Tests | | |
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	352.613	42.433	3	.000
EII Average	325.264	15.084	3	.002

The chi-square statistic is the difference in -2 log-likelihoods
between the final model and a reduced model. The reduced model
is formed by omitting an effect from the final model. The null
hypothesis is that all parameters of that effect are 0.

Table 22
Classification

| | Predicted | | | | |
Observed	No Impact	Low Impact	Medium Impact	High Impact	Percent Correct
No Impact	0	20	0	0	0.0%
Low Impact	0	96	0	0	100.0%
Medium Impact	0	35	0	0	0.0%
High Impact	0	7	1	0	0.0%
Overall Percentage	0.0%	99.4%	0.6%	0.0%	60.4%

The multinomial logit estimates for a one unit increase in EII Average score for

Low Impact of GTI relative to no impact of GTI given the other variables in the model is

held constant. When the EII average increases by one point, the multinomial log-odds of

the low impact level of GTI to No impact level of GTI would be expected to increase by

.003 unit while holding all other variables in the model constant (see Table 23). While the odds or "relative risk" ratio refers for a one unit increase in EII score for Low Impact of GTI relative to No Impact of GTI level given that the other variables in the model are held constant. If the EII score increase by one unit, the relative risk for Low Impact of GTI to No Impact of GTI would be expected to decrease by a factor of 1.003 given the other variables in the model are held constant. So, given a one unit increase in EII, the relative risk of being in the Low Impact GTI group would be 1.003 times more likely when the other variables in the model are held constant. More generally, we can say that if the EII score, we would expect that the increase in the EIII by one score likely to be in the Low Impact GTI 1.003 times over No Impact GTI. We are 95% confident that the "true" population multinomial odds ratio lies between the .807 and 1.247 limits of the interval for Low Impact of GTI relative to the No Impact of GTI (see Table 23).

The multinomial logit estimates for a one unit increase in EII Average score for Medium Impact of GTI relative to No Impact of GTI given the other variables in the model are held constant. When the EII average increases by one point, the multinomial log-odds of Medium impact level of GTI to No impact level of GTI would be expected to increase by .263 unit while holding all other variables in the model constant (see Table 23). While the odds or "relative risk" ratio refers for a one unit increase in EII score for Medium Impact of GTI relative to No Impact of GTI level given that the other variables in the model are held constant. If the EII score increase by one unit, the relative risk for Medium Impact of GTI to No Impact of GTI would be expected to increase by a factor of 1.301 given the other variables in the model are held constant. So, given a one unit

increase in EII, the relative risk of being in the Medium Impact GTI group would be 1.301 times more likely when the other variables in the model are held constant. More generally, we can say that if the EII score, we would expect that the increase in the EII by one score likely to be in the Medium Impact GTI 1.301 times over No Impact GTI. We are 95% confident that the "true" population multinomial odds ratio lies between the .997 and 1.697 limits of the interval for Medium Impact of GTI relative to the No Impact of GTI (see Table 23).

The multinomial logit estimates for a one unit increase in EII Average score for High Impact of GTI relative to No Impact of GTI given the other variables in the model are held constant. When the EII average increases by one point, the multinomial log-odds of High impact level of GTI to No impact level of GTI would be expected to increase by .634 unit while holding all other variables in the model constant (see Table 23). While the odds or "relative risk" ratio refers for a one unit increase in EII score for High Impact of GTI relative to No Impact of GTI level given that the other variables in the model are held constant. If the EII score increase by one unit, the relative risk for High Impact of GTI to No Impact of GTI would be expected to increase by a factor of 1.886 times given the other variables in the model are held constant. So, given a one unit increase in EII, the relative risk of being in the High Impact GTI group would be 2.576 times more likely when the other variables in the model are held constant. More generally, we can say that if the EII score, we would expect that the increase in the EII by one score likely to be in the High Impact GTI 1.886 times over No Impact GTI (see Table 23). We are 95% confident that the "true" population multinomial odds ratio lies between the 1.136 and

3.129 limits of the interval for High Impact of GTI relative to the No Impact of GTI (see

Table 23).

Table 23

Multinomial Logistic Regression Parameter Estimates for EII

Risk_of_Terrorism[a]		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Low Impact	Intercept	1.552	.647	5.745	1	.017			
	EII Average	.003	.111	.001	1	.048	1.003	.807	1.247
Medium	Intercept	-1.017	.849	1.434	1	.231			
Impact	EII Aveerage	.263	.136	3.764	1	.042	1.301	.997	1.697
High Impact	Intercept	-5.145	1.933	7.086	1	.008			
	EII Average	.634	.258	6.025	1	.014	1.886	1.136	3.129

a. The reference category is: No Impact.

Research Question 4

An adjusted multinomial regression model that has all the three indices: GGI, SLI,

and EII, was created to describe data and to explain how the interaction between the three

independent variables GGI, SLI and EII are related to the level of the GTI. The Model

Fitting Information table shows that the model fit is significant $\Box^2(3) = 104.865$, p <

.001, which indicate that our model predicts more accurately than the null model (see

Table 24). The lack of significance in the goodness of fit model indicates the good fit of

our model (see Table 25). The value of the Nagelkerke in the R-square table is .550,

which indicate a better fit of the effect size of the observations (see Table 26). The

Likelihood Ratio Table indicates that the independent variable EII are contributed

meaningfully to the full effect (see Table 27). The Classification table shows that our

model is 73% accurate (see Table 28). Accordingly, I reject the null hypothesis where the

model accurately can predict only 73%, as the predictor (the interaction of the GGI, EII, and SLI) in this model explains 0.55 of the variation in the dependent variable (GTI levels).

Table 24
Model Fitting Information

	Model Fitting Criteria	Likelihood Ratio Tests		
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	333.582			
Final	228.717	104.865	12	.000

Table 25
Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	349.853	462	1.000
Deviance	228.717	462	1.000

Table 26
Pseudo R-Square

Cox and Snell	.483
Nagelkerke	.550
McFadden	.314

Table 27
Likelihood Ratio Tests

	Model Fitting Criteria	Likelihood Ratio Tests		
Effect	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	246.297	17.580	3	.001
GGI Average	258.296	29.579	3	.000

SLI Average	242.291	13.574	3	.004
EII Average	235.176	6.459	3	.041
Interaction GGI SLI EII	234.100	5.383	3	.049

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Table 28

Classification

			Predicted		
			Medium	High	Percent
Observed	NO Impact	Low Impact	Impact	Impact	Correct
No Impact	3	17	0	0	15.0%
Low Impact	2	89	5	0	92.7%
Medium Impact	0	12	23	0	65.7%
High Impact	0	1	6	1	12.5%
Overall Percentage	3.1%	74.8%	21.4%	0.6%	73.0%

For Low Impact of GTI relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in GGI, the odds of GTI decrease by a factor of 0.713 when other factors were kept constant (see Table 29). While for Low Impact of GTI relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in SLI, the adjusted odds ratio GTI decreased by a factor of 0.497 when other factors were kept constant (see Table 29). Moreover, for Low Impact of GTI relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in EII, the adjusted odds ratio GTI decreased by a factor of 0.782 when other factors were kept constant (see Table 29). While for Low Impact of GTI relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in interaction between the GGI, SLI, and EII, the adjusted odds ratio GTI decrease by a factor of 0.990 when other factors were kept

constant (see Table 29). We are 95% confident that the "true" population multinomial odds ratio of the GGI, SLI, EII and the interaction between GGI, SLI, EII lies respectively between (859 - 3.413), (.289 - .853), (.442 - 1.383), and (.997 - 1.021) limit of the interval for Low Impact of GTI, relative to the No Impact of GTI (see Table 29).

For Medium Impact of GTI relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in GGI, the odds of the GTI increase by a factor of 8.209 when other factors were kept constant (see Table 29). While for Medium Impact of GTI relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in SLI, the adjusted odds ratio GTI decreased by a factor of 0.298 when other factors were kept constant (see Table 29). Moreover, for Medium Impact of GTI relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in EII, the adjusted odds ratio GTI decreased by a factor of 0.435 when other factors were kept constant (see Table 29). While for Medium Impact of GTI relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in interaction between the GGI, SLI, and EII, the adjusted odds ratio GTI increase by a factor of 1.014 when other factors were kept constant (see Table 29). We are 95% confident that the "true" population multinomial odds ratio of the GGI, SLI, EII and the interaction between GGI, SLI, EII lies respectively between (2.933 - 22.976), (.144 - .613), (.196 - .965), and (1.000 - 1.029) limit of the interval for Medium Impact of GTI, relative to the No Impact of GTI (see Table 29).

For High Impact of GTI relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in GGI, the odds of GTI increase by a factor of 20.176

when other factors were kept constant (see Table 29). While for High Impact of GTI

relative to No Impact of GTI, the adjusted odds ratio of GTI with every 1 unit increase in

SLI, the adjusted odds ratio GTI decreased by a factor of 0.188 when other factors were

kept constant (see Table 29). Moreover, for High Impact of GTI relative to No Impact of

GTI, the adjusted odds ratio of GTI with every 1 unit increase in EII, the adjusted odds

ratio GTI decreased by a factor of 0.232 when other factors were kept constant (see Table

29). While for High Impact of GTI relative to No Impact of GTI, the adjusted odds ratio

of GTI with every 1 unit increase in interaction between the GGI, SLI, and EII, the

adjusted odds ratio GTI increased by a factor of 1.022 when other factors were kept

constant (see Table 29). We are 95% confident that the "true" population multinomial

odds ratio of the GGI, SLI, EII and the interaction between GGI, SLI, EII lies

respectively between (3.286 - 123.867), (.057 - .627),(.049 - 1.088), and (1.001 - 1.043)

limit of the interval for High Impact of GTI, relative to the No Impact of GTI (see Table

29).

Table 29

Parameter Estimates

Risk_of_Terrorism[a]		B	SE	Wald	df	Sig.	Odds ratio	95% Confidence Interval for Exp(B) Lower Bound	Upper Bound
Low Impact	Intercept	2.379	1.800	1.747	1	.186			
	GGI Average	-.286	.352	2.339	1	.126	0.71	.859	3.413
	SLI Average	-.700	.276	6.425	1	.051	.50	.289	.853
	EII Average	-.246	.291	.714	1	.398	.78	.442	1.383
	Interaction GGI, SLI, EII	-.009	.006	2.100	1	.147	.99	.997	1.021
Medium Impact	Intercept	-3.843	2.709	2.012	1	.156			
	GGI Average	2.105	.525	16.072	1	.000	8.21	2.933	22.976
	SLI Average	-1.212	.369	10.785	1	.061	.30	.144	.613
	EII Average	-.833	.407	4.195	1	.051	.44	.196	.965
	Interaction GGI, SLI, EII	.014	.007	3.587	1	.048	1.01	1.000	1.029
High Impact	Intercept	-8.913	6.051	2.169	1	.141			
	GGI Average	3.005	.926	10.530	1	.001	20.18	3.286	123.867
	SLI Average	-1.669	.614	7.396	1	.057	.188	.057	.627
	EII Average	-1.462	.789	3.433	1	.064	.23	.049	1.088
	Interaction GGI, SLI, EII	.022	.010	4.402	1	.036	1.02	1.001	1.043

a. The reference category is: No Impact.

Results Summary

Research Question 1

Low Impact Level of GTI: The results indicate that the relation between the GGI and the

GTI at a low Impact level of the GTI is positive.

Medium Impact Level of GTI: The results indicate that the relation between the GGI and the GTI at the medium Impact level of the GTI is positive.

High Impact Level of GTI: The results indicate that the relation between the GGI and the GTI at a high Impact level of the GTI is positive.

Research Question 2

Low Impact Level of GTI: The results indicate that the relation between the SLI and the GTI at a low Impact level of the GTI is negative.

Medium Impact Level of GTI: The results indicate that the relation between the SLI and the GTI at a high Impact level of the GTI is positive.

High Impact Level of GTI: The results indicate that the relation between the SLI and the GTI at a high Impact level of the GTI is positive.

Research Question 3

Low Impact Level of GTI: The results indicate that the relation between the EII and the GTI at a low Impact level of the GTI is positive.

Medium Impact Level of GTI: The results indicate that the relation between the EII and the GTI at the medium Impact level of the GTI is positive.

High Impact Level of GTI: The results indicate that the relation between the EII and the GTI at a high Impact level of the GTI is positive.

Research Question 4

Low Impact Level of GTI and the adjusted GGI: The adjusted results indicate that the relation between the GGI and the GTI at a low Impact level of the GTI is negative relation.

Low Impact Level of GTI and the adjusted SLI: The adjusted results indicate that the relation between the SLI and the GTI at a low Impact level of the GTI is negative relation.

Low Impact Level of GTI and the adjusted EII: The adjusted results indicate that the relation between the EII and the GTI at a low Impact level of the GTI is negative relation.

Low Impact Level of GTI and the adjusted value of interaction between GGI, SLI, and EII: The adjusted results indicate that the relation between the interaction of GGI, SLI, and EII to the GTI at a low Impact level of the GTI is negative relation.

Medium Impact Level of GTI and the adjusted GGI: The adjusted results indicate that the relation between the GGI and the GTI at the medium Impact level of the GTI is positive relation.

Medium Impact Level of GTI and the adjusted SLI: The adjusted results indicate that the relation between the SLI and the GTI at the medium Impact level of the GTI is negative relation.

Medium Impact Level of GTI and the adjusted EII: The adjusted results indicate that the relation between the EII and the GTI at the medium Impact level of the GTI is negative relation.

Medium Impact Level of GTI and the adjusted value of interaction between GGI, SLI, and EII: The adjusted results indicate that the relation between the interaction of GGI, SLI, and EII to the GTI at the medium Impact level of the GTI is positive relation.

High Impact Level of GTI and the adjusted GGI: The adjusted results indicate that the relation between the GGI and the GTI at a high Impact level of the GTI is positive relation.

High Impact Level of GTI and the adjusted SLI: The adjusted results indicate that the relation between the SLI and the GTI at a high Impact level of the GTI is negative relation.

High Impact Level of GTI and the adjusted EII: The adjusted results indicate that the relation between the EII and the GTI at High Impact level of the GTI is negative relation.

High Impact Level of GTI and the adjusted value of interaction between GGI, SLI, and EII: The adjusted results indicate that the relation between the interaction of GGI, SLI, and EII to the GTI at High Impact level of the GTI is positive relation.

Model Limitation

This model is limited in the design. The few independent variables place a constraint on the model as there are theoretically more indicators that could interact with the different independent and dependent variables that were not examined.

Furthermore, a low degree of multicollinearity is a concern in the multinomial logistic model, which is present to some degree among the independent variables in this survey. Options of dealing with multicollinearity such as principal component analysis

were explored. However, due to the limited independent variables, the reduced

components pose yet another interpretation problem. An interaction model of the three

independent variables mitigated the challenge by acting as a confounder in the different

model.

       While the results of the analysis were presented in Chapter 4, chapter 5 includes

the interpretation of analysis results, description of the extent to which the results match

or conflict with the peer-reviewed literature or expand the scope of knowledge in this

area. As well, analyzing and interpreting the findings in the context of the theoretical

framework.

Chapter 5: Discussion

Introduction

The purpose of this quantitative, cross-sectional study was to examine the extent to which three independent variables (GGI, LSI, and EII) can predict the dependent variable the level of global terrorism (GTI). Furthermore, I investigated whether the interaction between the independent variables affects the results and, if so, whether the relationship is positive or negative.

In the data analysis, I found that there were four GTI levels (no impact, low impact, medium impact, and high impact), where no impact means that the GTI is equal to zero. The GTI no impact level was selected as a reference level. In the first research question, I attempted to identify the relationship between GGI, SLI, EII, and the interaction of GGI, SLI, and EII with the GTI level. I found that GTI levels differ in response to the GGI, SLI, and EII. Also, the response of countries to the independent variables differed according to the value of the independent variables and the level of the GTI in those countries.

Results Summary

Research Question 1

- Low impact level of GTI: I found that the relation between the GGI and the GTI at a low impact level of the GTI was positive.

- Medium impact level of GTI: I found that the relation between the GGI and the GTI at the medium impact level of the GTI was positive.

- High impact level of GTI: I found that the relation between the GGI and the GTI at a high impact level of the GTI was positive.

Research Question 2

- Low impact level of GTI: I found that the relation between the SLI and the GTI at a low impact level of the GTI was negative.

- Medium impact level of GTI: I found that the relation between the SLI and the GTI at a high Impact level of the GTI was positive.

- High impact level of GTI: I found that the relation between the SLI and the GTI at a high Impact level of the GTI was positive.

Research Question 3

- Low impact level of GTI: I found that the relation between the EII and the GTI at a low Impact level of the GTI was positive.

- Medium impact level of GTI: I found that the relation between the EII and the GTI at the medium Impact level of the GTI was positive.

- High impact level of GTI: I found that the relation between the EII and the GTI at a high impact level of the GTI was positive.

Research Question 4

- Low impact level of GTI and the adjusted GGI: The adjusted results indicated that the relation between the GGI and the GTI at a low impact level of the GTI was a negative relation.

- Low impact level of GTI and the adjusted SLI: The adjusted results indicated that the relation between the SLI and the GTI at a low impact level of the GTI was a negative relation.

- Low impact level of GTI and the adjusted EII: The adjusted results indicated that the relation between the EII and the GTI at a low impact level of the GTI was a negative relation.

- Low impact level of GTI and the adjusted value of interaction between GGI, SLI, and EII: The adjusted results indicated that the relation between the interaction of GGI, SLI, and EII to the GTI at a low Impact level of the GTI was a negative relation.

- Medium impact level of GTI and the adjusted GGI: The adjusted results indicated that the relation between the GGI and the GTI at the medium impact level of the GTI was a positive relation.

- Medium impact level of GTI and the adjusted SLI: The adjusted results indicated that the relation between the SLI and the GTI at the medium impact level of the GTI was a negative relation.

- Medium impact level of GTI and the adjusted EII: The adjusted results indicated that the relation between the EII and the GTI at the medium impact level of the GTI was a negative relation.

- Medium impact level of GTI and the adjusted value of interaction between GGI, SLI, and EII: The adjusted results indicated that the relation between the interaction of GGI, SLI, and EII to the GTI at the medium impact level of the GTI was a positive relation.

- High impact level of GTI and the adjusted GGI: The adjusted results indicated that the relation between the GGI and the GTI at a high impact level of the GTI was a positive relation.

- High impact level of GTI and the adjusted SLI: The adjusted results indicated that the relation between the SLI and the GTI at a high impact level of the GTI was a negative relation.

- High impact level of GTI and the adjusted EII: The adjusted results indicated that the relation between the EII and the GTI at high impact level of the GTI was a negative relation.

- High impact level of GTI and the adjusted value of interaction between GGI, SLI, and EII: The adjusted results indicated that the relation between the interaction of GGI, SLI, and EII to the GTI at high impact level of the GTI was a positive relation.

Interpretation of the Findings

Group Grievances

I found that countries will be assigned to the GTI low impact level, rather than the no impact level, if the value of the GGI increases. The relation between the GGI to the low-level impact of the GTI was a positive relation. The countries that fall under the low impact level had a higher probability to stay in the low-level impact of GTI with the increase of the GGI. The probability of a higher level of GTI increases three times in countries that fall under the GTI medium impact level, as well as increases by 11 times in countries that fall under the GTI high impact level. Although scholars talked about the

relationship between GGI and the level of GTI and also explained the forms of this relationship and its causes, they did not discuss the difference in this effect between countries, or the causes of the difference between one state and another (Boylan, 2016; Cunningham & Sawyer, 2017; Dowd, 2015; Gleditsch, 2014; Mirahmadi et al., 2016; Sampson, 2016; Yin, 2017). There needs to be an explanation of the disparity in the impact of GGI on GTI between states. The variation in results also strengthens and justifies the research topic and research questions.

When the relationship between GGI and the level of the GTI was examined according to the presence of the other factors (SLI and EII), the results changed. The relationship in countries that are within states that experience low levels of GTI, in the presence of the other factors, became a negative one. I found that the risk of the GTI level fell into the low impact category, rather than the no impact category of GTI decreasing as the GGI increased. The SLI and EII had a positive impact on the relationship between GGI and low impact levels of GTI.

The relationship between GGI and the medium impact level of GTI changed when the SLI and EII, were introduced. I found that the risk of the GTI falling into the medium impact category, rather than the no impact category, increased as the GGI increases. In countries with a high impact level of the GTI, the response to GGI changed when the SLI and EII variables were introduced. This indicated that the risk of the GTI level falling into the high impact category, rather than the no impact category, increases as the GGI increases.

I found that the relationship between GGI and the level of GTI was a positive relationship. In addition, the positive relationship was strengthened whenever the level of

terrorism increased. The relationship between GGI and the level of GTI, when the relationship was considered in the presence of the other factors (SLI and EII), was negative when the level of GTI was low. However, the relationship was positive when the level of GTI changed to a medium or high level. Here, I found that the relationship between GTI and GGI became stronger when the level of GTI rose.

In investigating the difference in the relationship between GGI and the level of GTI, I concluded that the relationship is different for two reasons:

1. First, the relationship varied depending on the level of GTI in countries.

2. Second, it differed if other variables that affect GTI are introduced.

At the time, I did not consider the interaction to be limited to these three factors, but for academic purposes, I only considered three independent variables. Table 30 shows the variance between the Unadjusted odds ratio and the adjusted odds ratio for all three levels of GTI.

Table 30

GGI relation to the Level of GTI

Impact Level of GTI	Unadjusted odds ratio	Adjusted odds ratio
Low	1.304	0.71
Medium	3.580	8.21
High	11.118	20.18

Note. The reference category is: No Impact

State Legitimacy

As a reminder, the higher value of the SLI index indicates the worse the state legitimacy is and vice versa. The results of the research concerning the relationship between SLI and the level of GTI indicate that the relationship varies according to the level of GTI. I found that the relationship between the SLI and low level of GTI was

negative. In countries that are flawed in their legitimacy, the increase in the SLI leads to reduce the risk level of GTI. I found that the relationship between the SLI index in countries with medium impact levels of GTI was a positive relationship, with a higher positive probability in countries with a high impact level of GTI. It can be noted that the probability of positive relationship increases as the level of GTI rises, despite the negative relationship between the SLI and the low impact level of GTI. This conclusion was supported by the literature, as presented in the second chapter of this paper. The literature pointed out that there was a relationship between the legitimacy of the state and terrorism and violence, especially state violence, which was linked to a negative relationship with terrorism (Armborst, 2014; Bamidele, 2015; Collins et al., 2016; Haverkamp, 2014; Johnson & Smaker, 2014; Jackson, 2014; Mamood et al., 2017; Schoon, 2015; Unver, 2017). However, the literature did not consider the interaction of the legitimacy of the state with the other factors (i.e., not exclusively, GGI and EII).

The study presents the considerations that must be taken into account in order to achieve more accurate results in dealing with one of humanity's most dangerous criminal acts, showing its impact on public peace and sustainable development. I found that the relationship between the SLI and the level of GTI differs when the other factors that affect the level of GTI are introduced. I found that the relationship between the SLI, the level of GTI was a negative one: the higher the SLI, the lower the level of GTI. The results consistently show that the adjusted probability of falling in the low impact level of GTI decreased with an increase in the lack of legitimacy (i.e., the SLI) of the state. In other words, I found that the relationship between the SLI and the level of GTI was a negative one, with lower legitimacy, leading to lower levels of GTI. Table 31 shows that

the probability of falling in the low impact level of the GTI and the medium impact level

of GTI decrease with the increase in the SLI after considering GGI and EII. Well, the

result also shows that the probability of falling into a high impact level of GTI decreased

with the increase of the SLI after considering GGI and EII. I found that the effect of the

interaction on the SLI has a positive effect as the value of the real effect has changed.

Here, then I can explain the stability of the dictatorial regimes that do not follow the

oppositional positions from the West and America specifically. Such as the Gulf states,

Jordan, Morocco, Mauritania, and Ethiopia, where all these countries fall under low

levels of terrorism, despite the shortcomings of the state legitimacy of those countries.

To summarize the relationship between SLI and the level of GTI, I found that

countries with weak legitimacy (a high value of the SLI) experience a low level of

terrorism if the other factors (GGI and EII) were taken into consideration. Which

contrasts with the relationship between SLI and the level of GTI if no other influences are

taken into account. Table 31 shows the variance between the Unadjusted odds ratio and

the adjusted odds ratio for all three levels of GTI.

Table 31
SLI relation to the Level of GTI

Impact Level of GTI	Un-adjusted odds ratio	Adjusted odds ratio
Low	.971	.50
Medium	1.400	.30
High	2.576	.188

Note. The reference category is: No Impact

External Interventions

The second chapter referred to the literature that investigated the relationship

between the EII and the level of the GTI, where literature examined EII in various forms

such as military interventions, financial interventions, political interventions, and their relationship with the GTI. This study has investigated the relationship between the external interventions in general and the level of the GTI, whereas the EII index scale includes all means of external intervention, such as military interventions, financial interventions, and political interventions. The conclusions in the literature were varied about the relationship between the EII with GTI (Rajah, 2014; Rahmanovic, 2017; Stevenson, 2014; Vlajnić, 2016), and other conclusions revealed a negative effect of external interventions (Fawcett, 2017; Kaufulu, 2017; Krieg, 2016; Sawyer et al., 2017; Shaffer, 2017; Toukan, 2017). However, the literature did not discuss the impact of external interventions in the presence of other factors. The study has investigated the impact of independent variables that interactively influenced the GTI and compared it with the results that it has obtained when the interaction between these variables are excluded.

I found that there was a difference in the relationship between EII and the Level of the GTI in the event of the presence or the absence of other factors that affect the level of the GTI. I found that the relationship between the EII and the low impact level of GTI was positive, where the odds ratio was 1.003, indicating that the risk of the GTI level falling into the low impact category, rather than the no impact category. In the relationship of EII with a medium impact level of GTI, I found that the risk of GTI level falling in the medium-impact category increased with the increase of EII compared to the no-impact category. I found that the relationship of EII with a high impact level of the GTI is positive, indicating that the risk of the GTI level falling into the high impact category increased with the increase of EII compared to the no-impact category. I have

noted from the previous results that the relationship is positive between EII and the level of GTI. The conclusion from previous results that the higher the level of the GTI, the stronger the relationship becomes. However, I found that the form of the relationship between the EII and the level of the GTI differed in case that the EII factor has been studied in the presence of the other factors affecting the level of GTI. I found that the relationship between the EII and the low impact level of the GTI has changed from its predecessor and became a negative relationship due to the presence of other factors. I found that the risk of the GTI level falling into the low impact category, rather than the no impact category, decreases as the EII increases. I found that the form of the relationship between EII and the medium impact level of GTI decreased from its predecessor when other factors influence were excluded. Where I found that the risk of the GTI level falling into the medium impact category, rather than the no impact category, decreases as the EII increases. As well, I found that the relationship between EII and a high impact level of the GTI is a negative relationship, indicating that the risk of the GTI level falling into the high impact category, rather than the no impact category, decreases as the EII increases. I concluded from previous results that the relationship changed to its exact opposite as the relationship became negative: the greater the extent of external interventions, the lower the level of GTI became. This result explains that the change in the relationship depends on interaction with the other factors. Table 32 shows the variance between the Unadjusted odds ratio and the adjusted odds ratio for all three levels of GTI.

Table 32
EII relation to the Level of GTI

Impact Level of GTI	Un-adjusted odds ratio	Adjusted odds ratio

Low	1.003	.78
Medium	1.301	.44
High	1.886	.23

The reference category is: No Impact

The Interaction Effect

According to research's question 4, the study has examined the interaction between the independent variables GGI, SLI, and EII and its effect on the dependent variable GTI and checked how the adjusted odds ratio of the relationship changed. However, to consider the impact of the interaction, the outcome of the interaction has been calculated and subjected to a statistical test. The value of the adjusted odds ratio of the interaction showed that the relationship between the interaction and a low impact level of GTI is a negative relation, indicating that the risk of the GTI level falling into the low impact category, rather than the no impact category, decreases as the interaction value increases. In addition, the relationship between the interaction and a medium impact level of GTI became a positive relationship, indicating that the risk of the GTI level falling into the medium impact category, rather than the no impact category, increases as the interaction value increases. Moreover, the relationship of the interaction between the independent variables and a high impact level of GTI became a stronger positive relationship, indicating that the risk of the GTI level falling into the high impact category, rather than the no impact category, increases as the interaction value increases. It can be seen that the interaction between GGI, SLI, and EII has a positive effect: as the level of GTI increases, the relationship becomes stronger, except in the case of a low impact level of GTI, in which case the relationship is negative (see Table 33).

Consequently, an examination of the relationship between the independent variables and the dependent variable may produce different results if other variables are considered. Which explains the situation in some countries where terrorism is spreading, and the major states' intervention to fight terrorism in these countries is counterproductive.

In investigating the difference in the relationship between GGI, SLI, EII and the level of GTI, we conclude that the relationship is different for two reasons: the relationship varies depending on the level of GTI in countries, and it differs if other variables that affect GTI are introduced.

At the time, the research did not consider that the interaction to be limited to these three factors, but for academic purposes, the research only considered three independent variables. Table 33 shows the variance in the adjusted odds ratio for between the three levels of GTI.

Table 33
The Interaction between the GGI, SLI and EII relation to the Level of GTI

Impact Level of GTI	Un-adjusted odds ratio	Adjusted odds ratio
Low	N/A	.99
Medium	N/A	1.01
High	N/A	1.02

The reference category is: No Impact

Theoretical Framework

This study has applied game theory to the political and military influences that exist between the conflicting parties under evaluation, by interpreting the practices of those parties in Syria. In particular, the study analyzes the internal conflict in Syria and

clarify the roles of the key players in the Syrian civil war. The study also explains the role of external interventions in supporting aggrieved groups struggling under the illegal regime in Syria.

The theoretical framework of both *game theory and political process theory* considers the exploitation of political opportunities. Merutiu (2015) believes game theory to be one of the most rational examples of interactive decision-making, since interactive decision-making takes into account the actions and reactions of all game participants. Game theory aims to rationalize the choice between different alternatives that arise from these conflicting positions and to address all conflicts, whether they are political conflicts in general or disputes relating to war and peace.

Draege (2016) has applied game theory to the current Syrian situation through the assignment of the following roles:

- Local players: the actual military confrontation between two or more parties, which may be states, armed militias, the regular military force, or the popular army.

- Regional players: countries directly linked to the local players through shared cultures or ideologies.

- Central players: the world's great powers (the United States, Russia, Germany, France, and England). These players may share interests or compete for influence over one or all parties from the first and second levels.

Thus, the decision-making options for the Syrian regime, as well as for the Syrian opposition, are non-independent and are linked to external factors that affect political decisions and the continuation of the conflict. The political "game" between the US and

Russian parties affects decisions on the ground in Syria. This rivalry has increased the effectiveness of the terrorist militias deployed in Syrian territory and on the western border of Syria (see Table 34).

Dam-de Jong (2015) also mentions incidents in which the US military admitted the accidental transfer of US equipment and weapons between terrorist militias. Dam-de Jong believes that these "mistakes" may be deliberate actions intended to influence the outcome of the conflict. Simpson (2014) also questions trade deals (such as the sale of oil or the purchase of arms) in Syria, Iraq, and Libya, which are run by warlords and regional powers, arguing that it would not have happened without the encouragement of the major powers. The existence of three factors (*group grievances*, *state legitimacy*, and *external interventions)* makes the possibility of the spread of terrorism inevitable if the competing major powers choose the option of fighting. In Tables 25–28, it can be observed that the variation in the relationship between the odds ratios of the levels of global terrorism supports the use of game theory to explain the choices of these competing major powers. Kaufulu (2017) suggests that, since Russia and America have no desperate need to reach an agreement with Syria, both sides will continue to satisfy a range of interests by prolonging the conflict through the consolidation and elimination of jihadists, the depletion of regional rivals, or the expansion of arms markets. Sousa (2015) argues that the process of intervention is determined by evaluating the cost of the conflict and its benefits, following the disclosure of potential risk preferences, and estimating the chances of winning or losing the battle. The Kaufulu and Sousa arguments shows the extent to which the US and Russian parties are involved in the current situation in Syria, as well as the competitive situation among them.

The results in Chapter 4 shows that there is a relationship between the three variables and the level of GTI, since the results vary depending on the GTI level. While the interaction between numbers is a mathematical formulaic, interaction in real life has different criteria and the chosen theoretical framework is an effective way of understanding it.

Little (2017) has applied game theory to international conflicts in the following three scenarios:

- Competitive or zero-sum struggles: conflicts in which the interests of the conflicting parties are totally at odds, meaning that one party will have an absolute win over the other.

- Cooperative conflicts: conflicts in which the interests of the parties are not completely separate. Interests overlap in a way that allows for compromise and concessions to be negotiated that distribute the gains between all the conflicting parties. Little believes that the cooperative conflict model is almost applicable to the US–Russian conflict in Syria in terms of bargaining, concessions, and military arrangements on the battlefield.

- Destructive conflicts: conflicts in which each party is intent on destroying the other. This type of conflict has become less frequent in the modern era.

Regarding the Syrian situation, I will assume that the goal of the armed groups and their allies is to control the land with the aim of achieving political gains, while the goal of the state and its allies is to regain control of the areas that were controlled by the armed groups. After the war began, and armed groups took control of areas of Syrian territory, the state had no choice but to fight these groups, but the continuation of the war

for many years, and the accumulation of its catastrophic effects, means that the choices are either to continue fighting or to stop fighting and commence negotiations. I will assume that, if the fighting continues, the players will, at best, receive 50% of the land (increasing or decreasing with the acquisition or loss of parts of the land during the war). If one player continues and the other stops, the first will gain the whole land and the other will lose it. In the event that both of them stop and negotiation begins, I will assume that the entire land will be returned to all citizens: the situation will be settled by local groups and efforts will be made to eliminate the terrorism that has spread in the region (see Tables 34, 35).

According to the analysis of non-cooperative gaming theory, the first case ("persistence, persistence") is the dominant case as long as there is no cooperation between the players. A player's capitulation will allow the other player to control the whole land if he continues to fight. The ideal situation for the state is the second case ("continuation, stop"), in which the state re-establishes control over all the land, thus creating the conditions that force the armed groups to stop fighting (and vice versa for armed groups).

The study suggests that the interaction between game theory and political process theory results in an activation of the political opportunity that may result from the interaction between the different factors. Since game theory is one of the most rational examples of interactive decision-making, it takes into account the action and reaction of all participants in the game. Game theory aims to rationalize the choice between the various alternatives that arise from conflicting positions, and to address all cases of conflict of interest, namely political conflict in general or conflicts related to war and

peace. Political process theory is also known as the structure of political opportunity theory. Political process theory reflects the external environment surrounding social movements and its basic premise is that external factors either reinforce or prevent the mobilization of social movements. The basic framework of social movements mobilizes action to achieve change. This theory includes five key elements that determine the success or failure of social movements: political opportunities, mobilizing resources and structures, manipulation processes, protest cycles, and means of protest.

Social movements consist of organized networks of aggrieved groups of people who are willing to implement protest measures to achieve social and political change. It can be seen that the steady rise in the adjusted odds ratio of the level of GTI increases when the value for GGI increase (see Table 30).

Alsoudi (2015) asserts that *opportunity* describes the relationship between popular interests and the current situation in the relevant region, suggesting that *force*, *repression* (facilitation), and *opportunity* (threat) provide the platform for collective action. Furthermore, Alsoudi adds that political authorities and allies may give differing political responses to the challenges posed by social movements. Niakooee (2016) argues that there is a correlation between the characteristics of a political system: the levels, forms, and consequences of protest, and political opportunities. The results of the research in Chapter 4 show that the relationship between GGI and the level of GTI increases in the case of interaction with the other influences (i.e., EII and SLI). Although the relationship is positive between GGI and the level of GTI, this relationship strengthens and rises to high levels in the event of its interaction with EII and the SLI. Which can be explained

through an integration of game theory and political process theory as political opportunities converging and playing an active role in decision-making (see Table 35).

Asseburg and Wimmen (2016) argue that political opportunity is the key to winning the political "game" in the Middle East, which is subject to changes and developments managed by the major players while regional countries fund their actions. Clements (2015) suggests that opponents could easily target civilian groups to reach their political goals. This is seen in terrorist operations such as ISIS in Syria, the Turkman Labor Party in Turkey, and the Irish National Liberation Army in the United Kingdom. Shadmehr (2014) believes that other factors exist that lead to the creation of political opportunity, including economic and social marginalization, and identity and ideological crises.

In 2005, the US Secretary of State, Condoleezza Rice, spoke of the concept of spreading *creative chaos* in the Middle East as a principle of President Bush's plan for a new Middle East (Khashanah, 2014). There is no doubt that Rice's recognition of the administration's true motives came too late, but it is very important because it provides a clear and accurate explanation for the current fragmentation of countries, especially Iraq, Syria, Yemen, and Libya, in the name of democracy and human rights. As a result of this American policy in the Middle East, the world has seen wars, failed states, displacements, and sectarian divisions (Anderson, 2016). The literature shows that the outcomes of EII are often different from the declared objectives if these interventions are biased, as well as when other conditions are available, such as low legitimacy or increased grievances of the groups.

Bartolucci and Gallo (2015) argued that, in the event of a government or political system's inability to carry out its functions, it is exposed to diverse pressure for reform and change from the public. This pressure begins as popular protest, which can escalade to civil war, as has happened in present-day Syria. If the distribution of power in the international system becomes disrupted, the behavior of the major states associated with the dichotomy will create a climate of international instability. This would justify the positive change in the relationship between the SLI and the level of GTI when the other factors (EII and GGI) are introduced.

The integration of game theory and political process theory justifies their use in the interpretation of the research problem and questions in this study. In addition, the conflict of interests between social movements and political entities is explained by the integration of game theory and political process theory when interpreting the empowerment of opposition movements and armed militias in Syria, Iraq, Yemen, and Libya. Furthermore, the integration of game theory and political process theory explains the mechanism of the engagement between EII and political process theory, as well as that of the engagement between social movements and game theory. Hence, game theory and political process theory can be combined to create a single, new theory called the *political process game theory*. At the end of this study, this new theory will be used as a suggestion for future studies. Although the relationship between the adjusted odds ratio for levels of GTI and EII is negative, it should be noted that the relationship between the interaction of the three independent variables and the adjusted odds ratio for levels of GTI is positive. This reinforces the assumption of the study: that it is better to study the

relationship between variables jointly with each other, in order to better understand the main factors that affect the level of global terrorism (see Table 30–33).

Here we return to the integration of game theory and political process theory, whereby the study has proved, through a multinomial logistic regression test, that the interaction between these two theories is realistic. Furthermore, the interaction has a real impact on the outcomes, as a result of the interaction between GGI, EII, and the SLI.

In short, the political processes theory explains the increase in the adjusted odds ratios of the levels of GTI in relation to GGI. Game theory explains the change in the adjusted odds ratios for levels of GTI (see Tables 30–33). The combination of the two theories explains the change in the adjusted odds ratios for levels of GTI in relation to the interaction between the three variables (see Table 30-33). Table 34 shows transactions value of the GGI, SLI, EII, GTI of the Syrian situation between 2006 and 2017. Table 35 shows The Game Theory Application on the Syrian situation.

Table 34
Syria, GGI, SLI, EII, GTI

Year	GGI	SLI	EII	GTI
2017	10	9.8	9.9	8.6
2016	10	10	10	8.59
2015	9.9	10	9.9	8.11
2014	8.6	10	9.8	8.11
2013	8.1	9.3	9.6	7.75
2012	7.9	9.2	9.5	7.17
2011	5.5	8.7	8.3	5.52
2010	5.8	8.3	8.6	2.12
2009	6	8.2	8.8	2.77
2008	6.3	8	8.8	3.47
2007	6.3	8	8.5	1.6
2006	6.2	8	9	2.25

Table 35

The Game Theory Application on the Syrian situation

	Armed groups and their supporters		
	Continued fighting	Stop fighting	
The			state
and its	Continued fighting	50/50	0/100
allies	Stop fighting	0/50	100/100

Limitations of the Study

This model is limited in its design. The small number of independent variables places a constraint on the model because there are, theoretically, more indicators that could interact with the different independent and dependent variables and were not examined. Furthermore, a low degree of multicollinearity is a concern in multinomial logistic models and is present to some degree among the independent variables in this survey. Options for dealing with multicollinearity, such as principal component analysis, were explored. However, due to the limited number of independent variables, the decreased components posed yet another interpretation problem. An interaction model of the three independent variables mitigated the challenge by acting as a confounder in the different model. A multiple linear regression test should have been performed, but because of the non-normal distribution of the continuous dependent variable, the dependent variable was divided into four levels and the statistical test was changed to a multinomial logistic regression.

In addition, a limitation of this research is the short study period, since a longer study period would possibly yield more accurate results. The study period was limited to

12 years due to the difficulty of retrieving earlier data. Since secondary data was used, the data could not be manipulated, resulting in weaker internal validity of causal inferences. However, the secondary data that was used helped to provide higher external research validity and reduce the data collection threats and determinants. The secondary data was obtained from reliable academic institutions that possessed a high degree of credibility and validity (i.e., the FFP, and the Institute of Economics and Peace). Since this study included 99.7% of the world's population, it did not rule out any country or population. The secondary data could not provide reliable results due to the lack of data available for calculating the study's indicators. In addition, the data was collected in order to answer different questions from the current research questions. Since this data was originally designed to measure the fragility of the state, the three indicators are only a portion of 12 indicators intended to calculate that fragility.

Recommendations

The current study has shown that the results when the interaction between the factors influencing levels of global terrorism is calculated are different from those when it is not taken into account. Therefore, the study recommends that the impact of the interaction between the multiple factors affecting the subject under consideration should not be overlooked. The impact of some factors may vary depending on the characteristics of the countries under examination, so it is important to compile as much information as possible on those countries and rank them within certain categories that can be easily differentiated. The current study has ranked countries according to the level of terrorism, but this ranking should not be confined to one phenomenon: there may be other sets of

phenomena that could differentiate those countries more accurately. For the current study, it might have given better results if the number of independent factors was increased, since the literature considered other factors that may have served the study. I would like to point out that there is extensive literature dealing with the phenomenon of global terrorism from a qualitative perspective, which may be an important basis for the preparation of further quantitative studies. Since the study also showed that there is an integration between the game theory and the political processes theory, the study suggest that the game theory and political process theory can be combined to create a single, new theory called the political process game theory.

Implications

The current study investigates the impact of the interactions between the independent variables and their impact on the level of terrorism, where the differences in terrorism levels between countries are primarily due to the variations in the factors that incite terrorism. Therefore, the impact of factors may differ from one country to another. This study seeks to demonstrate the different effects of these factors when studied separately, as well as whether they can be combined simultaneously with other factors in the same region and time period. This approach may pave the way for a new, more accurate terrorism research methodology that will assist in the planning of public security and sustainable development. This research approach could also help future studies to improve the predictability of terrorist threats. The integration of game theory and political process theory provides justification for their use in the interpretation of the research problem and questions at present. This integration has helped in interpreting the results and, specifically, in interpreting the interaction between the independent variables. The

multinomial logistic regression was a suitable model for dealing with and achieving more accurate results. The categorization of the dependent variable into four levels helped in reaching a more accurate interpretation. This methodology facilitated more accurate results, and the description and interpretation of the findings.

Conclusion

In this cross-sectional quantitative research study of the interaction between the GGI, the LSI, and the external intervention index, and their impact on the level of global terrorism, I found the following results: The interaction between the independent variables has a negative relationship for countries that have a low impact level of global terrorism, with an adjusted odds ratio of 0.99. The interaction between the independent variables has a positive relationship for countries that have a medium impact level of global terrorism, with an adjusted odds ratio of 1.01. The interaction between the independent variables has a positive relationship for countries that have a high impact level of global terrorism, with an adjusted odds ratio of 1.02. The study also found that the relationship between the independent variables and the dependent variable changed when the interaction between independent variables was considered. The relationship between group grievances and the level of global terrorism changed as follows: At the low impact level of global terrorism, the relationship changed from positive to negative, with an odds ratio of 1.304 and an adjusted odds ratio of 0.71. At the medium impact level of global terrorism, the relationship changed to a stronger positive relationship, with an odds ratio of 3.580 and an adjusted odds ratio of 8.21. At the high impact level of

global terrorism, the relationship changed to a stronger positive relationship, with an odds ratio of 11.118 and an adjusted odds ratio of 20.18.

The relationship between state legitimacy and the level of global terrorism changed as follows: At the low impact level of global terrorism, the relationship remained negative, but changed to a weaker relationship, with an odds ratio of 0.971 and an adjusted odds ratio of 0.50. At the medium impact level of global terrorism, the relationship changed from a positive to a negative relationship, with an odds ratio of 1.40 and an adjusted odds ratio of 0.30. At the high impact level of global terrorism, the relationship changed from a positive to a negative relationship, with an odds ratio of 2.576 and an adjusted odds ratio of 0.188.

The relationship between external interventions and the level of global terrorism changed as follows: At the low impact level of global terrorism, the relationship changed from a positive to a negative relationship, with an odds ratio of 1.003 and an adjusted odds ratio of 0.78. At the medium impact level of global terrorism, the relationship changed from a positive to a negative relationship, with an odds ratio of 1.301 and an adjusted odds ratio of 0.44. At the high impact level of global terrorism, the relationship changed from a positive to a negative relationship, with an odds ratio of 1.886 and an adjusted odds ratio of 0.23.

The study succeeded in using game theory and political process theory to interpret the interaction between the variables in order to strengthen the study's assumption, with the assumption being based on the need to take into account the interaction between variables in the search for the relationship between independent variables and the dependent variable. The study has proved, through a multinomial logistic regression test,

that the interaction between these two theories is realistic. Furthermore, the interaction

has a real impact on the outcomes, as a result of the interaction between group

grievances, external interventions, and the state's legitimacy.

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