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AN EMPIRICAL STUDY ON THE RELATIONSHIP BETWEEN GLOBAL TERRORISM AND TRADE ALONG WITH ITS IMPACT AND POLICY IMPLICATIONS

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Abstract
The deliberate use of violence or the threat of violence by individuals or subnational groups to achieve a political or social goal by intimidating a sizable audience beyond the immediate victim is known as terrorism. Terrorist occurrences typically take many different forms, including threats, bombings, kidnappings, suicide assaults, hijackings of aeroplanes, and assassinations. Although terrorists may have different motivations, their activities always follow a similar pattern. The goal of terrorist acts is to exert enough pressure on a government to force it to make political compromises. A besieged government will come to terms if it believes that the cost of giving in to terrorist demands will be lower than the consequences of predicted future terrorist activities. Therefore, if a terrorist organisation is able to increase the campaign's consequences, it should be able to accomplish its purpose more quickly. These repercussions might take many different forms, such as fatalities, demolished structures, increased worry, and numerous financial expenses.
Keywords: Trade-Terrorism Nexus, Global Security, Economic Impact, Counterterrorism Strategies, Policy Implications

1. Introduction

Some terrorist organizations have employed attacks that negatively impacted targeted economies, aiming to exert pressure on governments to concede to their political objectives. Jackson, Dixon, and Greenfield (2007) have provided a comprehensive overview of the literature on the use of economically focused attacks by terrorists to achieve their goals. The macroeconomic repercussions of terrorism on gross domestic product (GDP) and economic growth have been recognized, as indicated by studies such as Blomberg, Hess, and Orphanides (2004), and Gaibulloev and Sandler (2008, 2011). These adverse effects tend to be more pronounced in smaller countries grappling with terrorism, as observed in the research of Abadie and Gardeazabal (2003) and Eckstein and Tsiddon (2004), when compared to the average response in a global context (Blomberg, Hess & Orphanides, 2004; Sandler & Enders, 2008). Additionally, the impact of terrorism has been documented at the sector level, affecting industries such as tourism (Drakos & Kutan, 2003; Enders, Sandler & Parise, 1992), foreign direct investment (FDI) (Abadie & Gardeazabal, 2008; Bandyopadhyay, Sandler & Younas, 2014; Enders & Sandler, 1996), and bilateral trade (Blomberg & Hess, 2006; Mirza & Verdier, 2014; Nitsch & Schumacher, 2004).

Religious fundamentalist terrorists of today, who have been the predominant force in transnational terrorism since 1992 (Enders, Hoover & Sandler, 2016), are focused on disrupting the economies of targeted nations to achieve their political objectives (Sageman, 2004: vii). There is a limited number of studies that have empirically investigated the impact of terrorism on bilateral trade using a gravity model. In this model, trade volume increases with the product of the economic sizes of trading countries and decreases with the distance between them. Gravity models consider various trade facilitators (such as common language, regional trade agreements, and past colonial relationships) and inhibitors (such as being a landlocked country or being in conflict) (Blomberg & Hess, 2006; Glick & Rose, 2015).

According to Nitsch and Schumacher (2004), terrorist attacks on trading partners result in higher transaction costs, higher transportation costs, increased uncertainty, lost revenue, and higher business expenses (such as higher insurance rates and tighter border controls). All of these factors have a detrimental effect on trade. Transnational terrorism has a considerable but limited impact on global trade. According to research by Mirza & Verdier (2014), there was a 0.01% decrease in US imports from the nation where the terrorism occurred for every 1% increase in the number of prior terrorist incidents. According to Nitsch & Schumacher's (2004) research, trading partners that experienced a doubling of terrorist incidents had a nearly 4% decline in bilateral trade. Such a doubling indicates a significant increase in international terrorism. Egger & Gassebner (2015) found no evidence of a short-term impact of transnational terrorism on imports and exports for OECD nations and their trading partners when they examined the data at the monthly level.

2. Objectives of the Study

The objectives of the present study are as follows -

- To Investigate the Correlation Between Trade Flows and Terrorism Incidents
- To Analyze Economic Impact and Disruptions Caused by Terrorism
- To Examine the Reciprocal Influence
- To Identify Regional Variances in the Trade-Terrorism Nexus
- To Evaluate Existing Counterterrorism Strategies and Their Economic Implications

3. Preliminaries

'Terrorism involves the deliberate use or the threat of violence by individuals or subnational groups with the aim of achieving a political or social objective through intimidating a broad audience beyond the immediate victims' (Enders & Sandler, 2012: 4). This politically motivated violence can target people or property. A series of terrorist attacks may lead a population to pressurize its government into conceding to the terrorists' demands for the sake of attaining greater peace. Additionally, terrorist attacks prompt governments to allocate resources to counterterrorism, particularly in responding to transnational terrorism, which may necessitate an enhancement of border protection, thereby slowing down the flow of trade and increasing the costs of imports and exports.

Terrorism can be categorized into two types. Following the definitions in Enders, Sandler & Gaibulloev (2011), which were used to analyze the Global Terrorism Database (GTD) data for various recent studies, domestic terrorism is perpetrated by a country's citizens and impacts only the host or venue country, its institutions, citizens, property, and policies. The perpetrators and victims in domestic terrorism are all citizens of the venue country (Enders, Sandler & Gaibulloev, 2011). Examples of domestic terrorism include the bombing of the Alfred P Murrah Federal Building in Oklahoma City by Timothy McVeigh and Terry Nichols on April 19, 1995; the bombing of Centennial Olympic Park in Atlanta by Eric Robert Rudolph on July 27, 1996; and the bombing campaign in the United States by the Unabomber from 1978 to 1995.

On the other hand, a transnational terrorist incident impacts the property of another country, such as its Foreign Direct Investment (FDI). If the nationalities of one or more victims or perpetrators differ, the incident is considered a transnational terrorist attack. Furthermore, if a victim's or perpetrator's nationality is not that of the venue country, then the attack is considered transnational. Examples of transnational terrorist attacks include the kidnappings and subsequent beheadings of American, British, and Japanese hostages by Islamic State (IS) terrorists. Although domestic terrorist attacks outnumber transnational terrorist attacks by at least six to one, empirical evidence suggests that they do not have the same economic consequences.

Why might terrorism have a detrimental impact on trade between nations? Firstly, both types of terrorism contribute to increased economic uncertainty, elevating the costs of traded goods, particularly when compared to goods manufactured in countries facing less terrorism. Secondly, terrorism raises the costs of conducting business by elevating wages in industries prone to terrorism, increasing insurance premiums, and boosting security expenses, thereby diminishing the competitiveness of goods. Thirdly, terrorism, especially of the transnational variety, is likely to impede the smooth flow of goods. Fourthly, trade may decline due to income or asset losses resulting from terrorist attacks. Fifth, terrorism may cause government spending to be redirected from more beneficial public investments to less successful security measures, which would lower demand for imports, exports, and economic growth (Blomberg, Hess & Orphanides, 2004; Blomberg & Hess, 2006). This distraction is particularly problematic for transnational terrorism because it may be necessary to project military force to a foreign nation that is harbouring a terrorist organisation in addition to the requirement to protect borders. Increased security measures are required for all imports from trading partners in the event of terrorism that comes from or takes place on their soil since weapons and operatives may arrive through a third nation. The United States began closely examining cargo containers from all trading partners after the September 11, 2001 attacks (Enders & Sandler, 2012). The cost of all imports increased as a result of these extra security measures. Presumably, because there isn't a sizable transnational terrorist organisation residing in the US, trading partners scrutinise US exports less. Forces that lower imports compared to exports could result from this security mismatch.

4. Essential Concepts

Research conducted over the past decade has demonstrated that internal conflicts can lead to substantial economic consequences, resulting in diminished growth within a country engulfed in conflict (e.g., Collier and Hoeffler, 2004; Collier et al., 2003; Collier and Sambanis, 2002) and in neighboring nations (Murdoch and Sandler, 2002, 2004). However, it is essential to distinguish civil wars from terrorism. Civil wars, typically involving a minimum of 1000 deaths and potentially tens of thousands of casualties, represent a broader conflict than terrorism. In contrast, terrorist incidents, on average, result in a single death (Sandler, 2003). Consequently, a country may experience terrorism consistently over ten years, yet the impact may involve relatively few deaths and modest property damage. Civil wars may originate from insurrections attempting to overthrow the government, or they may arise from deep-seated grievances between groups (hatreds). Conversely, terrorism is a method that may or may not be connected to other types of political violence, such as insurrections or civil wars. Terrorism usually results in a small loss of life and property. There are certain exceptions, such the train bombings in Madrid on March 11, 2004, or the downing of Pan Am flight 107 on December 21, 1988, which claimed the lives of between two and three hundred people. However, even in these instances, the death toll is regarded as insignificant in comparison to the majority of internal conflicts, indicating that the macroeconomic effects of terrorist attacks are not predicted to be as great as those of civil wars.

A few events could cause this forecast to change, including a massive attack like the one that occurred on September 11, 2001, a protracted terrorist campaign that resulted in numerous fatalities, or a severe attack on the primary sector of a developing country (cf. Yemen shipping example). It is unrealistic to assume that a small number of terrorist attacks in the majority of nations will have an impact on those nations' economic growth. This is a crucial realisation because it suggests that risk indices that include terrorism and internal conflicts might only be detecting major disruptions linked to the former. Additionally, the most likely effects of terrorism are frequently microeconomic factors peculiar to a given industry.

5. Cost distinction

Several distinctions in costs related to terrorism losses can be identified. Direct costs encompass immediate losses from a terrorist attack, including damaged goods, the value of lives lost, injuryrelated expenses (including lost wages), destroyed structures, damaged infrastructure, and decreased short-term commerce. On the other hand, indirect or secondary costs involve subsequent losses tied to the attack, such as increased insurance premiums, heightened security expenses, greater compensation for high-risk locations, and costs associated with long-term changes in commerce induced by the attack. Indirect costs may manifest as diminished growth in gross domestic product (GDP), lost Foreign Direct Investment (FDI), alterations in inflation, or increased unemployment. Distinguishing between direct and indirect costs involves making a judgment, and any such distinction might be perceived as arbitrary by certain researchers.

Fortunately, making this distinction is not essential to characterize the economic impact of terrorism, as it can be represented through well-defined macroeconomic variables (e.g., real per capita GDP growth) or microeconomic variables (e.g., reduced tourist receipts). These variables serve as indicators of the consequences of terrorism in terms of aggregate or sectoral activity. If the losses in output, casualties, and damaged infrastructure are significant, they can impact the economy's productive capacity with corresponding macroeconomic or microeconomic repercussions. Identifying these impacts is more crucial than merely quantifying losses if policy interventions are to mitigate the economic effects of terrorism. Therefore, our focus is on establishing connections between terrorism and macroeconomic as well as microeconomic variables that policies can target for enhancement.

6. Domestic versus transnational terrorism

There are two primary categories of terrorism: international and domestic. Domestic terrorism originates locally and only affects the host nation, its institutions, people, assets, and laws. Both the victim and the terrorists in a domestic terrorist attack are nationals of the host nation. The April 19, 1995 bombing in Oklahoma City and the kidnapping of members of Parliament by terrorists from Colombia are two instances of domestic terrorism. Ethno-nationalist conflicts—such as the Tamil struggle in Sri Lanka—are typically linked to domestic terrorism, unless the rebels want to attack foreign individuals in order to attract international attention. There are often eight times as many domestic terrorist incidents as international ones. (Enders and Sandler, 2006).

Conversely, transnational terrorism encompasses multiple nations and has global ramifications due to its victims, targets, supporters, institutions, terrorists, or aftermath. For example, 9/11 is seen as a transnational terrorist event since the terrorists were foreign nationals, the operation was organised and funded outside, the casualties were from a variety of nations, and the effects of the events (such as financial and security ones) were felt all over the world. Examples of transnational terrorism include the political killing of a foreign national on a city street or a hijacking that begins in one nation and ends in another. Transboundary externalities, or the uncompensated consequences of policies or acts in one country on people or property in another, are frequently the result of transnational terrorist strikes. As a result, there could be spillover expenses, which would increase a terrorist incident's economic impact outside of the nation of origin. For example, the 9/11 collapse of the World Trade Centre buildings affected British financial institutions and claimed the lives of numerous British citizens. Chen and Siems (2004, Table 2, Figures 2-3) showed that the average returns in international stock markets were negatively impacted by 9/11. Remarkably, in the wake of 9/11, the 11-day cumulative average abnormal returns were larger on the stock markets of London, Frankfurt, Paris, Toronto, Amsterdam, Switzerland, Italy, and Hong Kong than they were on the New York Stock Exchange. The four 9/11 explosions had an impact on global capital markets.

When choosing the right data to evaluate the economic effects of terrorism, it is essential to distinguish between domestic and global terrorism. For example, when a nation is impacted by both internal and transnational terrorism, it becomes imperative to include both types of terrorism in the measurement if one hopes to investigate the relationship between the rise in real per capita GDP and the prevalence of terrorism. This notion also holds true for an investigation of the effects of terrorism on macroeconomic variables that is nation-specific. However, transnational terrorist attacks are given more weight when examining the impact of terrorism on a host nation's net foreign direct investment (NFDI) since they pose a direct danger to the interests of foreign investors. The coefficient on terrorism may be biassed if only transnational terrorist acts are taken into account when determining GDP growth and if domestic attacks are also connected with transnational incidents. Furthermore, the terrorism coefficient may offer only a limited understanding of the underlying quantitative link when the frequency and/or intensity of domestic terrorism greatly exceeds that of transnational terrorism.

7. Causality

The relationship between terrorism and the macroeconomic variable that serves as a stand-in for the effects of terrorism is the subject of one last preliminary. Economic conditions may be both the primary cause and an effect of terrorism, if economic downturns can engender grievances that lead to terrorist acts. Panel estimates have recently been used by researchers to demonstrate that economic conditions, especially downturns, can lead to transnational terrorist attacks. A researcher would be wise to check for and/or adjust for a potential endogeneity bias in light of this information.

8. Macroeconomic Effects of Terrorism

The United States, with its robust and diverse economy, is expected to endure most terrorist events with minimal macroeconomic consequences. In numerous years, the U.S. witnessed few terrorist incidents on its soil, such as in 1998, 2000, and the post-2001 years, where no such events occurred (Sandler and Enders, 2004; U.S. Department of State, 1999-2004).

Additionally, the expansive range of economic activities in the U.S. allows for the absorption of the impact of an attack by reallocating activities to sectors unaffected by the incident. The immediate costs of typical terrorist acts, such as kidnappings, assassinations, or bombings, are localized, resembling ordinary crimes. Presently, crimes like identity theft possess greater potential economic consequences for developed countries than terrorism. In most developed nations, terrorism tends to prompt a shift from sectors susceptible to terrorism to relatively secure areas, thereby not significantly affecting the entire macroeconomy.

Table 1: Countries having adverse effect on Trade due to Terrorism Attacks from 2011-2021

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Afghanistan	3	3	3	4	3	3	2	2	1	1	1
Iraq	1	1	1	1	1	1	1	1	2	2	2
Somalia	5	7	7	7	8	5	3	3	3	3	3
Burkina Faso	113	113	111	108	52	30	21	15	7	6	4
Syria	20	4	4	5	6	7	7	8	6	5	5
Nigeria	8	5	5	3	2	2	4	4	4	4	6
Mali	41	23	19	21	16	13	10	9	8	7	7
Niger	49	57	44	34	20	19	18	19	14	12	8
Pakistan	2	2	2	2	4	4	5	5	5	8	10

Source: START GTD, IEP calculations

If the airline industry becomes precarious, resources will move from the airline sector to other comparatively safer sectors. Admittedly, a terrorist act of the magnitude of 9/11 can instill uncertainty and impact a broad spectrum of sectors, resulting in macroeconomic repercussions. However, as demonstrated below, developed countries are well-positioned to take measures to mitigate these impacts.

This portrayal contrasts sharply with small economies like Colombia, Israel, and the Basque region of Spain where terrorism is pervasive and interferes with day-to-day activities. Terrorism can lower GDP and impede development for these economies, particularly in the case of protracted operations (as has been the case in Israel after September 27, 2000). Extended acts of terrorism cause people to anticipate future developments, which raises risk premiums and restricts activity in industries where terrorism is likely to occur.

It is possible for investors, both domestically and internationally, to choose to allocate their funds to safer ventures elsewhere. Terrorists can feel more confident to carry out other acts to inflict financial damages if they are successful in scaring off investments.

9. US experience in light of 9/11

Following the 9/11 attacks, the United States experienced a remarkable economic recovery. The third quarter of 2001, corresponding to the tragic event, revealed that the real GDP remained largely stable throughout 2000 but saw slight declines in the first and third quarters of 2001. Notably, real GDP began a significant growth trajectory in the fourth quarter of 2001.

The Conference Board's measurement of consumer confidence had sharply declined just before the onset of the 2001 recession, but in the aftermath of 9/11, confidence surprisingly surged. Some attribute this increase to the patriotism of the American public. The revival of economic activity was particularly driven by robust consumer demand for durable goods, especially significant or "big-ticket" items, which experienced a surge in the fourth quarter of 2001.

The unemployment rate, which was already on the rise before 9/11, saw a dramatic increase after the attacks. However, given that unemployment is a lagging indicator, it is suggested that the rate might have increased even without 9/11, prompting speculation about the potential impact on unemployment in its absence.

The consensus among experts is that well-coordinated macroeconomic policies played a crucial role in mitigating the shock from 9/11 in the United States. The financial markets were disrupted, with bond market trading suspended for a day and stock market trading resuming only the following week. During uncertain times, risk-averse investors tend to increase their holdings in highly liquid assets. Responding to this surge in demand for liquidity, the Federal Reserve took swift action by significantly reducing the Federal Funds rate, ensuring the availability of funds for investment and other needs.

Fiscal policy also played a supportive role in the recovery. The first tax cut since 1985 was enacted in May 2001, months prior to 9/11. Subsequently, in response to the direct impact of 9/11, the US Congress approved a $40 billion supplemental appropriation for emergency spending, addressing needs such as search and rescue efforts and heightened security at various locations. This surge in government spending, along with the initiation of the war in Afghanistan on October 7, 2001, contributed to a substantial increase in government deficits.

While acknowledging that government deficits may have long-term undesirable effects, it is emphasized that US fiscal and monetary policies played a vital role in rebuilding consumer and business confidence, ultimately aiding in the economic recovery.

10. Israel-Palestine War 2023

Long-term effects of the Israel-Palestine conflict will depend mainly on how long the conflict lasts, even though direct effects on the world's oil and gas supply are still unclear. On October 7, an attack by the Palestinian political and military group Hamas ignited the long-running conflict between Israel and Palestine. For more than a month, Israel has been bombing the Palestinian Gaza region in retaliation to Hamas, and the rising death toll has kept the commodities market unsettled. Following additional production cuts by Saudi Arabia and Russia, oil prices surged to nearly $98 per barrel in mid-September. The International Energy Agency (IEA) noted that the volatility of oil prices could result in "higher for longer" interest rates, which would slow down the growth of the economy and demand for crude oil.

11. Conclusion

Global terrorism has had a substantial economic impact, particularly witnessing a significant rise since the September 11, 2001 attacks in the United States. The most pronounced increase occurred during the period of 2011–2014, following post-Arab uprising conflicts in Syria, Libya, Yemen, and Egypt, along with heightened conflicts in Iraq, Afghanistan, and Pakistan due to the emergence of the Islamic State terrorist group in the Middle East. The economic repercussions of terrorism reached a peak of $111 billion in 2014.

To assess the global economic impact of terrorism, a cost accounting method, known as the bottom-up approach, is employed. This approach considers the costs associated with death, injuries, property damage, and GDP losses resulting from terrorist activities. The analysis utilizes data from the global terrorism database, covering the years 2000 to 2023.

Iraq stands out as the most affected country by terrorism from 2003 to 2023, primarily due to the high-intensity conflicts following the US invasion in 2003. Despite a decline in terrorism since 2014 following the defeat of ISIL, Iraq remains one of the most terrorism-affected countries globally.

In 2018, Afghanistan surpassed Syria and Iraq as the country most affected by terrorism. Ongoing conflicts involving the Taliban, ISIS, and government forces, coupled with a reduction in international troops, contributed to this shift. The economic impact of terrorism in Afghanistan reached 22% of its GDP in 2023.

The most severely impacted region by terrorism, with $434 billion in economic losses since 2000, is the Middle East and North Africa. At $133 billion, Sub-Saharan Africa is the second most affected region, and at $125 billion, South Asia is the third most affected. The main causes of the economic damage, casualties, and property loss resulting from terrorism in these locations include bombings, explosions, and armed attacks. Targeted policy implementation, such disarming or bomb detection, may have a good impact on lowering terrorism-related violence and related expenses in these areas.

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